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REPORT

OF THE INTERNATIONAL GROUP OF EXPERTS

**ACCREDITATION OF THE
FACULTY OF MEDICINE
UNIVERSITY OF GENEVA**

2006

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INTRODUCTION AND BACKGROUND

The present Report has been structured according to the format recommended by the OAQ, published in the Guide to External Evaluation: Recommendations for Experts. The aim of the Report is to provide an assessment of the unit seeking accreditation, and the concluding recommendation as a response to the request for accreditation of the Program of Basic Medical Education of the Faculty of Medicine, University of Geneva.

The accreditation process

According to the Article 2 of the *Guidelines for academic accreditation in Switzerland of October 2003*: “Public and private academic institutions and their programs in Switzerland are candidates for accreditation. Clearly defined academic units are to be accredited. Programs qualify for accreditation if they lead to an academic or professional degree at university level”. Applications for accreditation should be submitted to the Body for Accreditation and Quality Assurance of Swiss Universities, OAQ (Art.10).

Accreditation procedures of the OAQ are based on evaluations carried out in 3 steps (Art.9):

The first step is self-evaluation carried out by the unit seeking accreditation, in this case, the Faculty of Medicine of the University of Geneva. The experts received the self-evaluation report at the beginning of April 2006, which allowed the expert panel time to study the report in a detailed manner before the on-site visit.

The second step is an on-site assessment of compliance with the relevant quality standards by an independent group of experts (peer review). The group of experts consisted of the following five members:

Prof. Michael J. Field (peer leader), Associate Dean and Head, Royal North Shore Hospital, University of Sydney (Australia),

Prof. Jacques A. Bury, Director of ADSAN, Agence pour le développement et l'évaluation des politiques de santé (Switzerland),

Prof. Thomas Fleiner, Director Institute of Federalism, University of Fribourg (Switzerland),

Dr. Laurence Howard, formerly Sub-Dean, Faculty of Medicine, Leicester Warwick Medical School (UK),

Prof. David J. Steele, Assistant Dean for curriculum and evaluation, Director Office of Medical Education, Florida State University College of Medicine (USA).

The scientific collaborators liaising with the OAQ were Ariane Nussbaum, Monika Risse and Anne Crausaz Esseiva.

The visit and the interviews on site were held from May 12 through May 15, 2006. They covered discussions with representatives of all groups of the Faculty of Medicine of Geneva, including academics, administrative staff and students. An open consultation hour was introduced, allowing any interested people to meet with the expert panel. A visit of the teaching facilities (in the University and in the Hospital) and the library was also organised (see schedule for the site visit and list of people interviewed in Appendix 1). Discussions were held in a friendly, open and trustful atmosphere. All information asked for during the interviews was promptly provided if not already available. The Faculty should be warmly commended for its commitment to the accreditation process. The on-site visit ended with a public oral presentation of the preliminary findings of the external evaluation (debriefing session).

The third and last step in the accreditation process is the decision of accreditation that will be made by the Swiss University Conference (SUK/CUS).

The unit seeking accreditation

The Faculty of Medicine of the University of Geneva was founded in 1876 and contains 3 branches: Clinical Medical Science, Basic Medical Science, and Dental Medicine. Some of the research activities are also supported by other institutes, units or foundations related to the Faculty of Medicine in various domains. During this accreditation procedure, only the Clinical Medical Science and the Basic Medical Science sections were evaluated.

Since 1995, the Faculty of Medicine of Geneva has offered a new undergraduate medical curriculum. The main educational principles of this new curriculum are to promote student-centred and active learning, to orientate students toward community health care priorities, and to allow an early acquisition of clinical skills. Undergraduate medical education consists of a six year curriculum: 1st year, basic medical education, 2nd and 3rd years, pre-clinical program based mostly on Problem Based Learning (PBL), followed by a 3 year clinical program. As a result of the decision to renew the curriculum, the Faculty of Medicine established a Unit of Development and Research in Medical Education (UDREM) in 1994. UDREM's goal is to ensure a quality educational and evaluational program.

A pilot accreditation of the five Faculties of Medicine of Switzerland, including the Faculty of Medicine of Geneva, was carried out on the request of the SUK/CUS in 1999. The pilot accreditation was based on a self-evaluation report and an experts' report containing recommendations, which were taken into account by the current expert panel in this accreditation procedure.

ACCREDITATION REPORT

In the following sections, the Expert Group records its observations on the Human Medicine program of the Faculty of Medicine, under the specific headings prescribed in the document *Quality Standards for Medical Education in Switzerland* (2003, revised 2005). This document is based on the Global Standards for Quality Improvement published by the World Federation of Medical Education, as modified by the Deans of Swiss Medical Schools and issued by the OAQ.

Recommendations of the Expert Group are shown in bold characters in the text, and summarised under “areas for further development” at the end of the Report.

1 MISSION AND OBJECTIVES

1.1 Statements of mission and objectives

The Faculty bases its activities on the statement of “Role and functions” contained in the Statutes document “Règlement d’Organisation de la Faculté de Médecine”. However, as noted in the Auto-Evaluation Report prepared for the external accreditation review, this statement does not capture some important aspects of the Faculty’s current goals, such as the intent to foster life-long learning. It also includes no reference to the educational process employed by the Faculty to train medical doctors.

It is suggested that it is timely for the Statutes document to be updated in this regard, or for a separate statement of current mission and objectives be developed to guide the Faculty’s ongoing affairs.

1.2 Participation in formulation of mission and objectives

Most key stakeholders have had adequate opportunity to contribute to the Faculty’s role definition and goals. However, the community, while proud and supportive of its medical school, appears to have relatively little input. Indeed, some community representatives who met with the Expert Group expressed their wish that the Faculty do more to engage consumers and members of the public in developing the Faculty’s mission and programs. In particular, there was great willingness for representatives of patient support groups to take part in student education. It was further suggested that more could be done to publicise the vital role played by the University Hospital in training future medical practitioners, particularly in respect of experience in women’s health. It is **recommended** that a stronger communication and consultation strategy be developed between the Faculty and representatives of community groups.

1.3 Academic autonomy

The Faculty enjoys a fair degree of academic autonomy, within the constraints of the University statutes and the relevant Federal law. The considerable achievements in curriculum redesign over recent years are evidence of the effectiveness of the Faculty's internal exercise of academic autonomy with respect to its educational program.

The Faculty is well aware of the implications of the proposed changes to Federal law which have been debated in the Parliament. The new law provides mainly the goals to be achieved with regard to medical education. There will be only one final Federal examination for the students, and faculties will have much more autonomy with regard to the student assessments. Preparation for this new system will require considerable input of time and resources by faculties, and this challenge is well-known to the staff of the Faculty of Medicine at Geneva.

1.4 Educational outcome

The Expert Group was impressed by the extent to which Faculty members were aware of the requirement that curriculum outcomes are now expected to be guided by the document *Swiss Catalogue of Learning Objectives for Undergraduate Medical Training*. To obtain specific data on the perceived competence of its graduates in the Hospital residency system, the Faculty Education Unit (UDREM) has initiated a follow-up evaluation project which should provide invaluable information in this regard over the years to come. Continued funding for this project has been hard to obtain, but is regarded by the Expert Group as essential.

While there is every reason to believe that the Faculty's graduates have been provided with an excellent basis in knowledge and skills for clinical practice, the most impressive feedback the Expert Group got from the alumni was their conviction that with the reformed educational system they have learned how to learn.

2 EDUCATIONAL PROGRAM

2.1 Curriculum models and instructional methods

The medical curriculum is a hybrid model, taking advantage of many advances in international best practice in medical education. Curriculum design is based on sound principles of system-organisation, integration of preclinical with clinical science, student-centred learning, and progressive clinical skill development and independence. Formats for education include plenary lectures, problem-based learning ("APP"), laboratory exercises, discussion forums, clinical clerkships and elective experiences. By any standard, the educational program is well conceived, with clear structure, organisation and documentation. The generally high level of student satisfaction with the overall program, as evidenced by positive course evaluations, indicates that the program is being well implemented.

The Faculty has developed a high level of expertise in the delivery of problem-based foundation courses in years 2 and 3. As in most PBL courses, there is the problem of maintaining consistency across tutors. Student comments indicated that clinicians were often able to make the session more interesting and relevant because of their experience. In spite of this, the Faculty should be congratulated on its efforts to train all tutors in PBL skills and to brief tutors adequately regarding the content of each case. However it is perceived by many staff that some of this material has become sclerosed (or even ossified) over the decade since the program was originally developed, and several senior academics expressed a desire to adopt a less inflexible approach to teaching of certain content areas which may be less well suited to the problem-based format. The Education Committee was seen as receptive to suggestions for change, and it is **recommended** that some flexibility be offered in the coming phase of curriculum renewal, allowing alternative approaches to be adopted.

A particular plea was made by students, and some staff, for the “big picture” of each system-based block in years 2 and 3 to be made clearer before detailed study of individual cases is undertaken. Students noted that in many learning units, the introductory lecture session is devoted primarily to logistical issues and instructions about course requirements. It is **recommended** that the senior academic in charge of each unit be encouraged to prepare an overview presentation at the start of the relevant block, to orientate the students to the main issues to be encountered and to provide a conceptual road map of the material that will be covered and how it relates to other learning units in the medical curriculum.

2.2 Scientific method

The scientific basis of medicine strongly underpins the faculty’s medical curriculum. Opportunities are taken at several points in the course to reinforce a scientifically-oriented reasoning approach, and some students undertake electives in basic and clinical research. However, the Expert Group was shown very little to convince it that the formal discipline of evidence-based medicine was taught explicitly in the curriculum. While discussion of this analytical approach in PBL cases was encouraged, and exposure in the clinical years was expected, the Expert Group considers that this is inadequate to teach this important set of concepts and skills. It is **recommended** that formal instruction in the techniques of clinical epidemiology and evidence-based medicine be introduced or reinforced in appropriate segments in the course.

Students commented that they had no real understanding of the role of alternative and complementary medicine, despite the acknowledged widespread use of these modalities in the community. The Expert Group suggests that discussion of these approaches could best be done in the context of teaching critical appraisal of clinical interventions, with a view to giving students confidence in assessing the scientific merit of these therapies.

2.3 Basic biomedical sciences

The Faculty has many strengths in the basic biomedical sciences, and this is reflected in a well balanced and well presented foundation program in years 1 to 3 of the course. Since the 1999 pilot accreditation, the year 1 curriculum has been developed to incorporate a range of clinical reference points to increase the relevance of the basic sciences to professional practice. The system-based units in years 2 and 3 continue to cover a wide range of material in a truly integrated fashion, though most teaching units still have too many objectives. The Expert Group supports the Faculty's intention to reduce the number of core learning objectives in these units, while relegating more detailed topics to options, a process which will be necessary to bring the curriculum in line with the requirements of the Bologna declaration.

There has been a reduction in the availability of clinicians to participate in the delivery of teaching in the early course units (years 1-3), compared to their contribution in the early years of the reformed curriculum. Nonetheless, the curriculum is well informed by clinical insights in the early years, and both students and staff consider that these courses prepare students well for their clinical years.

One gap in basic sciences content was drawn to the attention of the expert group, namely that there is little specific teaching on human nutrition included within the curriculum. It is **recommended** that this gap be filled, either through focused input into a PBL case, or through an appropriate teaching session in years 4 and 5.

2.4 Behavioural and social sciences and medical ethics

The Expert Group is impressed with the commitment of the Faculty to integrating the social and behavioral sciences and medical ethics across the curriculum. The Faculty is commended for introducing a course in Person Health and Society in year 1. This unit of study employs a human development context for introducing students to the important role of behavior and social forces in health and disease across the life-cycle. This course appears to lay a good foundation for the Community Health Training Program (CHTP) that is integrated into years 2 through 5 of the curriculum. CHTP is a well conceived program consisting of graduated exercises and exposure to principles of prevention, public health, health systems and economics, occupational medicine, and other social and behavioral topics relevant to the practice of medicine. The Expert Group also commends the Faculty for the month-long community health experience as this provides students an opportunity to investigate in detail a public health issue of their own choosing. The requirement that students prepare a written and oral report reinforces a number of important generic skills, including problem identification, critical thinking, oral and written communication, and working effectively as members of a team.

An excellent longitudinal strand of teaching in aspects of medical ethics is delivered in years of 1, 3, 4 and 5 of the program. This incorporates important legal dimensions, and generally places presentations of important ethical principles within a clinical context. Student interest and participation in these sessions is generally enthusiastic. The Faculty

members who are responsible for the integration of ethics across the curriculum have done an excellent job of designing a coherent longitudinal program of instruction in this important discipline.

2.5 Clinical sciences and skills

The structure of the present curriculum ensures that students have early exposure to clinical concepts and experiences, through the content of problems discussed in years 2 and 3, and through the clinical skills development program which is effective and well evaluated by students. The well-organised series of attachments (AMCs) to a range of important clinical disciplines in years 4 and 5 gives every student direct experience of patient care, for the most part in the context of a major teaching hospital. The Expert Group was impressed by the well organised and balanced program provided by tutors in this part of the course, and by the extent to which students become involved in the daily activities of their clinical teams. There were, however, some areas where further development could occur, as follows.

First, while there is a highly successful and well received AMC in community medicine, this presents ambulatory medicine largely within a teaching hospital milieu, and does not satisfy fully the requirement for the medical course to include a significant student experience in community-based primary care (family medicine) where opportunities to make initial patient assessments and practise preventive medicine are best encountered. While geographic factors and structural issues within the health-care system apparently make this difficult in the Geneva area, the Expert Group believes that a renewed effort to give students this exposure is essential, especially given the fact that many graduates will eventually practice in a community setting (despite the noticeable trend of decreasing interest in community-based practice in recent years). The Group believes that significant progress in this area will not occur until a senior academic appointment is made in General Practice/Family Medicine. It was suggested to the Group that such an appointment should be considered when the chair of community medicine shortly becomes vacant, or by seeking new resources to create a new chair in this discipline. It is **recommended** that this matter be pursued as a matter of priority, particularly in light of the future healthcare needs of the community.

Second, students have no opportunity to experience working in interdisciplinary teams alongside fellow health-care students, e.g. from nursing or allied health courses. This is likely to reduce their confidence in taking part in such teams after graduation, despite the proven benefit of a team approach to patient care. It is **recommended** that opportunities be explored for students to participate in interprofessional peer teams during their undergraduate studies, within the teaching hospital environment or outside it.

Third, the students reported dissatisfaction with their experience in a limited number of specialty disciplines. Specifically, in obstetrics it was difficult for students to have first-hand involvement in childbirth, and their clinical skills in gynaecology were perceived as being inadequate. Some reasons for these limitations were explained to the Expert Group, but there is nonetheless scope for some new approaches to teaching in this area to be

considered, perhaps involving participation by community volunteers as gynaecology teaching assistants. It is **recommended** that a review be conducted of students' first-hand experience in obstetrics and gynaecology with a view to increasing student satisfaction in this area.

2.6 Curriculum structure, composition and duration

There is a high level of horizontal and vertical integration in the curriculum, thanks to the extensive collaboration between basic sciences and clinicians in planning and delivering the program. Regular review by the Preclinical and Clinical Curriculum Committees ensures that coverage of all important syllabus material is adequate, including biomedical, psychosocial and public health components. The Faculty is to be commended for encouraging students to take options in the medical humanities (art, literature and philosophy), although in reality there is little spare time for students to pursue studies outside their core course material.

The clinical curriculum is structured to give all students opportunities to experience a wide range of disciplines in modern practice settings, although the imbalance with respect to hospital experience over practice in a community environment has already been noted. Some disciplines based in less acute hospitals should also be given more attention in the students program. In particular, it is **recommended** that exposure to rehabilitation and palliative medicine be enhanced, by increased use of other institutions and facilities associated with the Faculty.

The attention of the Expert Group was drawn to one aspect of the structure of years 4 and 5 which was seen as unsatisfactory. Student education in the hospital setting consists of both clinical immersion work as well as structured sessions of formal teaching. Both students and clinical supervisors are sometimes frustrated by the need for students to leave the ward environment at various times to attend these sessions. It is **recommended** that the arrangements for timetabling scheduled teaching in the hospital be reviewed, and that consideration be given to rationalising these sessions into defined blocks to avoid this difficulty.

2.7 Program management

An effective and stable structure is in place to manage the ongoing development and implementation of the medical curriculum, with a strong Education Committee chaired by the Vice-Dean for medical education, supported by a Preclinical and a Clinical Curriculum Committee. There is student representation on these bodies, and all are advised by the professional educators in UDREM. Input from discipline specialists is welcomed and accommodated in curriculum decision-making, but the overall program is centrally coordinated and well integrated as a result.

The Curriculum Committee receives reasonable resources to carry out its functions, though additional funding is being sought from a variety of sources to drive educational initiatives. An important need has been identified to improve longitudinal awareness by

teachers in the clinical years of the curriculum content delivered earlier in the program (and, to a lesser extent, in the reverse direction). Engagement of a new cohort of younger clinical teachers in this process may be necessary as the original cohort of senior clinicians involved in the curriculum reform withdraw from active involvement.

Finally, the Expert Group had the impression that as a result of its sound educational management structures, the Faculty was well prepared for the implementation of the Bologna process.

2.8 Linkage with medical practice and the health care system

Various mechanisms are described in the self-evaluation report for ensuring that sound linkages are formed between undergraduate education and subsequent clinical training, and these appear in most fields to guarantee an effective link with postgraduate specialty training. As was detailed in paragraph 2.5, the only concern is about the links with subsequent training in general practice, a matter of some concern to community representatives who met with the Expert Group.

Important insights into the interface between the Faculty's training programs and the healthcare system should be provided by the Graduate Follow-up Project being developed by UDREM. The Expert Group strongly **recommends** that this project be properly financed and implemented as soon as possible, to provide a basis for future modifications to the education program to ensure that it continues to meet societal needs.

Despite the different initiatives taken by the Faculty, many students still complain of not getting enough information concerning their future career pathways (admission to postgraduate specialties, stages to be spent abroad, and others issues). Some students indicated that this information is only obtainable on person-to-person enquiry and is very much dependent on who is asked for advice. The Group was not able to countercheck these remarks and seeks only to pass them on to the Faculty.

3 ASSESSMENT OF STUDENTS

3.1 Assessment methods

The Faculty has done a great deal over recent years to develop its system for student assessment. However, two incompletely resolved areas were brought to the attention of the Expert Group. First, there has been an uneven effort by the various course units in years 2 and 3 to develop and evaluate a wide range of examination test items, including adequate material for formative assessments. The Expert Group was impressed with the efforts made in some learning units for staff members from different disciplines to collaborate in the development of truly integrated examination items, and encourages the leaders of units where this is not being done to explore the feasibility of adopting this approach to examination development and quality control. Second, in the latter half of the course there had been relatively little staff development in the preparation and

standardisation of oral and written assessments, largely because the final examination has been conducted externally as a Federal test for many years.

With the advent of the new legislation governing medical education, there will be a need for greater local input into the graduating examination, and this will require increased expertise in the development of reliable assessment instruments. Therefore, in regard to assessment, the Expert Group **recommends** that institutional and international best practices be identified and implemented in all course units in both early and late curriculum segments. It is recognised that this is likely to require additional resources to be made available to UDREM.

The Expert Group commends the Faculty of Medicine for taking steps to improve the overall quality of its assessment methods. It is noted that examination experts from the US National Board of Medical Examiners recently presented workshops at the Faculty of Medicine on question writing methods. The Expert Group is also impressed by the calibre and expertise of UDREM staff in their ongoing monitoring and evaluation of student assessment methods. They employ state-of-the-art techniques to assure that assessment is valid and reliable.

3.2 Relation between assessment and learning

The Expert Group notes the degree to which assessment is aligned with explicitly stated learning objectives for each of the learning units in the medical program. The several spontaneous references by various Faculty members to the *Swiss Catalogue of Learning Objectives for Undergraduate Medical Training* suggests that agreed-upon national standards are guiding curriculum development and student assessment.

The auto-evaluation report prepared by the Faculty identified the following weaknesses: (1) a heavy reliance on fact-based multiple choice questions (MCQ) which may promote surface learning and “cramming” for examinations; (2) a majority of examination questions are at lower taxonomic levels, stressing recall of information rather than application or synthesis; (3) a relative lack of standardization in the oral examinations that are employed during the clinical years of training; and (4) a perception on the part of the Faculty that assessment is ultimately the province of the Federal examination and therefore requires less time and effort. The Expert Group **recommends** that resources be found to better enable interested Faculty members and staff of UDREM to take the steps necessary to remedy the problems identified in the auto-evaluation.

In addition to the weaknesses identified in the auto-evaluation, the Expert Group also feels that there may not be sufficient opportunities for formative evaluation in many of the learning units comprising the medical program. Although students do receive frequent and well structured feedback from tutors based on their participation in PBL small groups, not every learning unit provides opportunities for students to take practice exams or quizzes that would enable them to better assess their own level of preparation for the two high-stakes summative examinations that they take each year during the first 3 years of the medical program. The Expert Group **recommends** that each learning unit provide

students with formative opportunities to self-assess their strengths and weaknesses in a given learning unit, utilising assessment methods similar to those employed as part of the summative assessment process.

During the site visit, some Faculty members expressed concern about the fact that pass-fail decisions are based on the student's global performance. Consequently, a student may do poorly or even elect to not prepare for certain content areas, and still pass the examination. The Expert Group agrees that this is problematic and **recommends** that the Faculty of Medicine re-examine its student progression policies and consider the advisability of requiring a minimal level of competency in all content domains covered by the examination in order to achieve a passing grade.

Finally, the Expert Group commends the Faculty of Medicine for its use of objective structured clinical examinations (OSCEs) to assess student clinical and communication skills. As currently employed, student performance on a four station OSCE is criterion-referenced and accounts for 50% of the unit grade. The Faculty member responsible for developing and implementing the OSCE program is very well versed in this assessment methodology and has established an impressive record of research on this form of test. If the Faculty of Medicine were to decide to use OSCEs for high-stakes barrier assessments, it would be necessary to make resources available to expand the number of cases to 10-12 stations per examination to avoid the problem of case specificity which undermines generalisability of test results.

4 STUDENTS

4.1 Admission policy and selection

According to the Swiss system of access to higher education, students who successfully complete secondary education have a right to get admitted to university. Thus, universities in general do not choose their students according to any kind of admission test, interview or other means of selection. Moreover, in Switzerland to date there has not been a division of university studies between college and graduate education. With the new Bologna system, medical education is also expected to be divided somehow into bachelor and master components. However, this division will be adapted to the specificities of the traditional medical education system in Switzerland.

With regard to admission policy, only the medical faculties of the Universities of Zurich, Berne and Basel have introduced some kind of admission criteria in order to limit access to medical education. The medical faculty of Geneva has not to date imposed any restriction on access. For this reason, the Geneva Faculty of Medicine is presently constrained in its ability to modify the large-scale formats employed in the first year education program, which is also used as a tool for radical selection of students to match the clinical capacities of later years of the medical course. Overall, some 50% of students fail after the first year and must seek alternative career paths.

Although the medical faculty itself has no capability to change the legal basis of the present system, it would still be appropriate to examine this emotionally and politically-charged issue further. If a rational basis for introducing an admission test could be defined and accepted by the relevant authorities, it would open up opportunities for promoting improvements in the educational model used for the first year of the medical course, and for creating a more unified student cohort over the whole duration of the course. It is **recommended** that an investigation be conducted into the effectiveness of the alternative admission policies adopted elsewhere in Switzerland, with a view to evolving an alternative method for student selection at Geneva.

4.2 Student intake

The issues related to the Faculty's optimum first year intake are referred to above. There is currently a discrepancy between the ideal intake into the year 1 program (207 students) and the total number, including repeating students, who need to be accommodated (up to 374). There is a further discontinuity with the number able to be accommodated in clinical training (106 students in human medicine). While it may be possible to develop methods for increasing the clinical training capacity (such as expanding community-based teaching), there remains a need for resolution of this issue at the level of the year 1 admission policy.

4.3 Student support and counselling

Students receive support and counselling through three specialist advisors, covering all six years of the course. These advisors cover the full range of problems, academic, social and health, which are encountered by students. In addition, the University operates a Social Affairs Office and a Health Service which can be readily accessed by students.

In the early years, the advisor is frequently asked about academic progress, and she is able to review this by accessing the PBL tutor reports on student performance, which are written for each unit. It is at this early stage of a student's career at university that they feel most vulnerable, and the continual exposure through the PBL tutorial system means that they are observed on a very frequent basis by members of Faculty. In later years, the two advisors are often used to give career advice. The Faculty Office also provides a service to advise students about year 6 electives.

Although students are informed, both by oral and written means, of the support services which are available, they tend not to use them fully. From student evaluation of these services, however, there appears to be a general level of satisfaction in the way they are run. One lone voice at the open session, that of a junior student, highlighted the need for more guidance for students concerning care of their own health.

4.4 Student representation

Formally, the organisation of student representation fully responds to the accreditation standards. In practice there are some weaknesses in implementation of an appropriate and working system of student involvement in Faculty affairs, but the Faculty and the students are not only fully aware of these but they are also engaged together in trying to improve the situation. The two major issues are the lack of interest from the majority of students, and some deficiencies in the area of transparency: designation of students' representatives, feedback from them to the students, communication processes between students representatives and the Faculty and its various committees, among others. Nevertheless the essential features are in place: student participation in all committees, systematic evaluation of courses and tutors by students, and feedback mechanisms between the Faculty and the students are all in place.

The Expert Group noted that the Faculty is considering ways to formally recognise the involvement of students in academic affairs, e.g. by granting an ECTS credit equivalent to an "elective". This would be perfectly justified on two grounds: first, it could be conceived as an academic activity, for instance by requiring a formal report on their activities to be prepared by participating students, assessed by UDREM, and second, it constitutes a valuable training experience for future involvement by graduates in health system organisations.

5 ACADEMIC STAFF

5.1 Recruitment policy

A transparent procedure is used to recruit senior academic staff, placing emphasis on both research achievements and teaching capabilities and interests. The needs of the curriculum are taken into account by input from the Steering Committee of the Education Committee. As in medical schools around the world, there is sometimes difficulty in recruiting basic science staff with a sufficiently broad background to enable them to participate fully in the undergraduate teaching program, and in some cases a clinician is appointed with responsibility for teaching relevant aspects of the preclinical curriculum.

5.2 Staff policy and development

The Faculty is fortunate to include a wide range of excellent staff, with expertise in all components of the educational program. Although there are clearly tensions between the responsibilities of academics in teaching and research (and, in the case of clinicians, in clinical service), the Faculty clearly takes educational contributions seriously and values teaching as a component of the criteria for promotion.

In the clinical disciplines, a strong relationship exists with the University Hospital in that all senior clinical staff hold dual appointments with the Faculty, leading to a high level of support for the student teaching program. The support of the senior executives of the

University Hospital in this regard is very much valued by the Faculty. In the earlier parts of the course, much of the teaching is done by tutors and ‘intermediate body’ staff who do not hold specific academic titles or have a clear stepwise career path within the Faculty structure. While there is a Renewal Committee which follows the progression of promising staff members, the Expert Group had the impression that the absence of a traditional (Anglo-American) system of intermediate academic titles served to reduce staff morale, and also led to unfair comparisons being made in the competitive international arena where recognised academic titles act as a marker of career success. It is **recommended** that the University give consideration to introducing a system of sub-professorial titles to enhance the recognition of this important group of teaching staff.

While the Faculty’s staff recruitment and development policies are explicitly gender-neutral or actively supportive of women in academia, a clear need for childcare facilities to assist female members of staff in their careers was reported to the Expert Group.

6 EDUCATIONAL RESOURCES

6.1 Physical facilities

The range of physical facilities for supporting teaching in the medical course was regarded by the Expert Group as generally excellent and of world standard. Of particular note were the well-equipped medical library, the practical laboratory classrooms for acquiring basic science knowledge and skills, and the good student access to computers. A number of rooms used for PBL tutorials are smaller than ideal size for this activity, and are without windows or decoration.

6.2 Clinical training resources

The availability to medical students of the patients, staff and facilities of the University Hospital (HUG) is of inestimable value in their clinical education. This large (1200 bed) institution is well-equipped and well-funded, and is located in the immediate vicinity of the University’s Centre for Medical Sciences. The management and clinical staff of the Hospital are aware of their mandate for educating medical students and postgraduate doctors alike, and students are well-integrated into the fabric and day-to-day operations of the facility.

While the HUG is a major centre for inpatient and ambulatory care and provides opportunities for many key aspects of the students’ clinical education, opportunities could also be sought to increase use of other hospital facilities associated with the Faculty, specifically those caring for patients requiring geriatric and psychiatric services. As previously mentioned, there is also considerable scope for expanding the Faculty’s relationship with community-based private practitioners, where a less specialised and high-tech setting for clinical service delivery could be experienced by students. The initiative of using patients or former patients as co-trainers in some situations should be encouraged.

The Faculty's Clinical Skills Laboratory is a well set-up facility for developing students' confidence in learning communication and physical examinations skills. The teaching staff have made excellent use of audiovisual equipment, mannequins and standardised patients in developing this centre, and students clearly greatly appreciate their learning experiences in this environment.

6.3 Information technology

A strong IT infrastructure has been progressively developed by the Faculty, though its use for educational purposes has to date been supportive (a mechanism for communication and document storage) rather than central to the students' learning. There has been relatively little innovation in the development of interactive learning programs, although the Expert Group was impressed with the progress made in the Virtual Microscope project, and UDREM is contributing to the Swiss virtual campus project. Students placed in the University Hospital have full access to the patient management system and medical informatics system available to Hospital staff.

A particular need which remains unmet is a web-based content management system, to hold an accessible and searchable record of current curriculum content. Such a tool would be welcomed by both staff and students, and would improve communication of the Faculty's program to the various stakeholders. Resources to develop a system, or to modify an existing system, have been sought but without success to date, yet such a mechanism will be essential for the ordered revision of the curriculum which the Faculty plans to undertake, in particular to prepare for achieving compliance with the Bologna process. It is **recommended** that funding be provided to support the development of a searchable curriculum database to address this need (see also section 7.1).

6.4 Research

The Faculty has an excellent record of research productivity, and high total impact factors have been achieved by Faculty members with outstanding reputations in both basic science and clinical research fields. Some staff reported that the increased teaching loads associated with the current curriculum had reduced time available for research, but others felt that teaching commitments could be fairly well circumscribed leaving research time unaffected.

Several academic staff members reported that the educational program was informed by their current research activities, although there was no defined policy or mechanism for doing this. There is a stated priority to increase the number of research-active students through a series of programs in both the Faculties of Medicine and Science. Certainly students have the opportunity to undertake options in vacation projects with various research groups, and a small number of enthusiastic and talented students undertake a combined MD-PhD program. However in general, it was felt that most students have limited exposure to the research dimension of medical science during their studies. It is **recommended** that steps be taken to increase the visibility of faculty research activities to students.

The Faculty has reorganised its research groups in an imaginative way, bringing together people from many different disciplines. There still appear to be very large numbers of groups in both basic medical sciences research and clinical research. Further rationalisation may well be advantageous. The Expert Group noted, however, that joint facilities were being encouraged to increase the efficiency of resource allocation. Funding is awarded by both external and internal mechanisms, and research priorities are reviewed every four years by the Faculty Council on the advice of the External Scientific Advisory Board. Four to six priorities are usually selected but the current priorities for the period 2005-2008 include seven priority areas.

6.5 Educational expertise

The Faculty is fortunate to have a strong engine of educational leadership and development in UDREM. The Expert Group is of the opinion that this unit is clearly of international standing, and continues to contribute crucial educational expertise to underpin the successful implementation of the Faculty's educational program. An important goal which has been recognised by the unit is a need to expand their educational research program to become an internationally-acknowledged leader in medical education, though the Expert Group notes that an impressive record of scholarly publication has already been established. The auto-evaluation report points out that the senior members of the UDREM staff all have multiple roles and responsibilities, which limits the time they can devote to educational research pursuits. The report also comments that the existing staff do not have access to research assistants, which further undermines their productivity and inhibits the development of junior people interested in medical education.

The Expert Group **recommends** that the Faculty of Medicine identify additional resources for UDREM, from either internal or external sources, so that it can continue to provide the high quality support to the curriculum that it has provided to date. These resources will also be needed if UDREM is to act on recommendations made elsewhere in this report regarding improvements in student assessment methods.

6.6 Educational exchanges

Opportunities for educational exchange exist at various levels: with other Swiss medical schools, with under-developed countries, and to a lesser extent with schools of a similar standard such as those within the European Union.

In regard to the latter, the Faculty should be congratulated on inaugurating an exchange program with Leiden and Karolinska. In regard to the low and lower middle income countries, students clearly expressed their satisfaction in being able to take advantage of the long-established working relationship between the Faculty and the medical school in Cameroon. The Expert Group did not investigate the relations with the other Swiss medical schools but is certainly supportive of the trend for more close collaboration

between the respective universities, which should be reflected also as far as possible in increased student exchanges.

The Faculty acknowledges that there are limitations inherent in integrated PBL curricula in providing opportunities for student transfer between medical schools. However, it is expected that increased flexibility in this regard may come about as a result of the reorganisation of the curriculum required to accommodate the Bologna criteria. This is a highly desirable goal if Geneva is to become a truly international faculty in terms of student exchange.

7 PROGRAM EVALUATION

7.1 Mechanisms for program evaluation

The Faculty of Medicine relies primarily on student performance in examinations (internally-produced and Federal exams), student evaluations of their learning experiences, and feedback from teachers and unit directors, to evaluate its educational programs. All are appropriate sources of information for program monitoring and improvement. During the course of the site visit, it was evident to the Expert Group that some learning units do an exemplary job of providing tutors opportunities to meet to discuss course material and student performance, as well as to collaborate in the development of examination items. However, it is also clear that similar opportunities are not provided in other units. Among its other functions, UDREM is responsible for systematically reviewing all forms of evaluation data and providing unit directors and the appropriate committees with the data needed to make decisions about program effectiveness, and to identify aspects of the program that need to be improved.

One potential weakness related to program evaluation is the lack of an organised and up-to-date database or inventory of topics addressed by the various learning units across the curriculum. Several Faculty members noted that they are sometimes not sure what the students have been taught prior to entering their courses or what they can reasonably expect that students will be taught in the units that follow. This can lead to the development of unintended redundancies and the development of unnoticed gaps in the curriculum. The development of such a database would require additional resources for UDREM but would be a useful tool in program planning and quality improvement.

7.2 Teacher and student feedback

As noted above, students are given opportunities to provide systematic feedback on learning units and tutors. The questions and categories employed in these evaluation instruments are appropriate and consistent with international standards. This feedback is shared with unit directors, tutors, and appropriate curriculum committees. Tutors who receive poor evaluations on three consecutive occasions are required to participate in an individualised program of remediation.

The Expert Group commends the Faculty of Medicine for recently initiating the systematic collection of feedback data from its graduates. This will undoubtedly provide useful information about the views of alumni on their preparation for the postgraduate phase of medical education and medical practice.

7.3 Student performance

The Expert Group noted that the section on student performance in the auto-evaluation report provided very little information on student performance on the Federal examination required of all graduates of Swiss medical schools. This gap was rectified during the site visit. Data provided at that time reveals that the global pass rate of Geneva students on the Federal examination is excellent. It is also apparent that Geneva students tend to achieve slightly lower scores than their peers at other Swiss schools on several components of the examination. While this observation is worthy of further consideration, the Expert Group is not overly concerned about these trends given the fact that students matriculating at the University of Geneva Faculty of Medicine take the examination at the end of the fifth year of study, rather than in the sixth year as is done at the other Swiss medical schools.

7.4 Involvement of stakeholders

The different internal stakeholder groups within the Faculty are regularly involved in the various committees and decision-making processes. However, as mentioned in section 1.2, the Expert Group noted the absence of community and consumer representatives at all levels of Faculty affairs, and also the limited involvement of nonmedical health professional groups and health system managers, other than those of the University Hospital (see also 8.5).

It is accepted that this participation is not currently part of the local culture, but it is a widespread practice in many countries with which the Faculty would wish to compare itself, and the Expert Group **recommends** it should be seriously considered in the future.

8 GOVERNANCE AND ADMINISTRATION

8.1 Governance

Systems of governance and administration of the Faculty's teaching and research programs are well defined and apparently effective. There has been widespread acceptance of the move some years ago to reduce departmental autonomy in favour of management through interdisciplinary committee structures for teaching, and key research groups for research.

The Expert Group formed the impression that the Faculty could do more to increase its communication with all those involved in the structure or delivery of the medical course. While this includes relations with external parties such as community doctors and

members of the general public, there was also a strong suggestion that internal communications could be better managed, including information exchange between tutors, professors, and clinicians involved in all parts of the course. This issue will be increasingly important as a further round of curriculum change is implemented, in part in response to the requirements of Bologna compliance. It is **recommended** that the Faculty review its communication policy, and consider greater use of all available media (including newsletters, conferences and the Faculty intranet) to keep stakeholders informed.

8.2 Academic leadership

The Faculty is strongly led by the Dean with effective delegation of responsibility for Education and Research to the respective Vice-Deans. With regard to the undergraduate medical program, the Dean's office provides support and resources to enable the Education Committee, through its Steering Committee, to develop and implement the agreed medical curriculum, and good communication and representation channels exist to solve any problems which may arise.

The Expert Group was impressed by the strong corporate identity which permeated the Faculty, with considerable enthusiasm and goodwill being expressed by all staff for the common purposes of the Faculty. Most expressions of criticism or concern which were voiced were directed constructively towards finding solutions to further improve the effectiveness of the Faculty in carrying out its mission and objectives.

8.3 Educational budget and resource allocation

A well-defined and substantial fraction of the Faculty budget derived from the Department of Education is directed towards teaching in the medical course. In addition to the component of academic salaries attributable to teaching, there is additional direct support for the running costs of the Education Committee and UDREM, and a component of the library budget is also directed to educational functions. An additional source of support for the Faculty's educational mission is derived from the Department of Public Health through its funding of the Geneva University Hospitals, in that a fraction of the clinical staff salary budget is effectively directed towards undergraduate medical teaching. The Faculty receives considerable additional funding from external sources in support of its research mission, in the form of grants for Faculty members submitting successful research proposals.

The allocation of resources to medical education is carried out in a transparent manner, and has an element of responsiveness to verified performance and demonstrated need. The Faculty has successfully shifted its internal budget allocation process from a department-based to a centralised mission-based system, with the result that educational functions are much better integrated and coordinated than in the previous system. While the overall level of resourcing of the medical course must be considered to be good, there will be a need to explore sources of additional funds, including external funds, if the Faculty is to respond effectively to a number of the challenges identified in this review.

8.4 Administrative staff and management

The structure of the administration is well described in the self-evaluation document and there appear to be few obvious tensions between the administration and academics. Faculty members were grateful for the support given by the administrative staff across the whole of the curriculum and were conscious of their own limitations in this area. For example, some academics felt burdened by the administrative load associated with organising their teaching, yet were unwilling to give up these tasks to the appropriate support staff. The Expert Group offers the suggestion that it may be useful for UDREM to provide clear guidelines to academic staff regarding the extent of administrative support available to them in carrying out their core duties.

8.5 Interaction with the Health sector

There is an exceptional level of cooperation and shared purpose between the Faculty and the University Hospital, due to a great extent to the strong relationship between the Dean and the General Director. It is understandable that relations with the Health sector are very much centred on the major teaching hospital, given the dominance of a hospital-based system of healthcare in the local environment of western Switzerland.

However, other components of the health sector have a less clear relationship with the Faculty, and indeed no mention of these elements was made in the Faculty's submission. By way of illustration, a family medicine practitioner from the community who attended the open consultation session expressed a desire for closer interaction with the Faculty, preferably through an appropriate academic department and senior academic appointment in primary care (see section 2.4). For the benefit of the training of future medical doctors, many of whom will not practice within the University Hospital setting, it is **recommended** that all possible efforts are made in order to diversify the interactions between the Faculty and the health system at large. This would include a range of community and ambulatory services, health promotion agencies, preventative and rehabilitation services, social services, and other health professional groups.

9 CONTINUOUS RENEWAL

It is now over a decade since the major reforms to the Geneva medical course were introduced in the mid-nineties. The Faculty is aware of the importance of updating the curriculum, and several academic groups reported their interest in contributing to this renewal. To some extent this will be necessary to adapt the current curriculum to the requirements of the Bologna process. The opportunity should also be taken to review longitudinal integration, particularly with a view to narrowing the perceived gap which is seen to have developed between the preclinical and clinical years of the course. This process of renewal will be greatly facilitated by the development of a computerised database of curriculum content, as recommended earlier.

From the evidence provided in the Faculty's self-evaluation report, and the information provided during the course of the four day site visit, the Expert Group is satisfied that the Faculty has the commitment, resources and determination to undertake this process of continuous renewal successfully, for the ultimate benefit of the community it serves.

SUMMARY OF STRENGTHS AND WEAKNESSES

The following were considered by the Expert Group to be areas of *special strength* in the program of the Faculty of Medicine:

1. The strong leadership shown by the Dean and the Vice-Dean (Education) in furthering the educational mission of the Faculty, and the high level of support for the Faculty's corporate identity expressed by staff, students and alumni.
2. The well-organised, structured and documented curriculum, exemplifying sound educational principles of content integration, goal orientation, and self-directed learning.
3. The excellent balance achieved in the curriculum between basic and clinical science, clinical skill development, a public health and population perspective, and medical ethics and professionalism.
4. The effective implementation of a problem-based approach to learning within a hybrid curriculum model, taking optimum advantage of several pedagogical methods.
5. The high level of expertise available in the Medical Education Unit (UDREM) to support the educational program through curriculum development and delivery, student assessment, program evaluation and staff development, while building an increasing reputation for scholarly publishing and research.
6. The excellent physical facilities available to support implementation of the medical course, in both the University Medical Centre and the University Hospital.
7. The mutually-supportive beneficial relationship between the leaders of the Faculty of Medicine and the University Hospital.
8. The impressive research programs and achievements of Faculty members, providing opportunities for engagement of medical students in high quality research.
9. The progress which has been made since the pilot accreditation review of 1999 in introducing a component of training in ambulatory care into the clinical curriculum.
10. The level of awareness and preparedness among key Faculty figures for important anticipated changes in the educational environment, particularly the impact of the new law governing medical education to be introduced within a few years, and the implications of achieving compliance with the requirements of the Bologna Declaration.

The Expert Group identified a number of areas where *further development could occur* in the Faculty's program. These are given below, together with references to specific recommendations for quality improvement given in sections of this Report:

1. There is insufficient involvement of consumers and community members in the educational activities of the Faculty, and more could be done to improve communication with all stakeholders (see sections 1.2, 7.4, 8.1).
2. The application of the problem-based learning method in certain areas is rather rigid, and some flexibility could be considered in the coming phase of curriculum renewal (2.1).
3. The opportunity should be taken for the senior academic leading each learning unit in years 2 and 3 to give an overview presentation of the scope of learning to be covered at the commencement of each unit (2.1).
4. There is insufficient formal instruction in the techniques of clinical epidemiology and evidence-based medicine, including their application to the assessment of the role of complementary and alternative therapies (2.2).
5. There is little specific teaching on clinical nutrition in the curriculum, an important deficit which should be filled (2.3).
6. There is insufficient exposure of students to family medicine as practised in community settings, and this will only be adequately addressed with the appointment of an academic leader to champion this discipline (2.5).
7. Students have no opportunity to work in interprofessional teams of peer students, and arrangements for addressing this should be explored (2.5).
8. Students are dissatisfied with their clinical experience in obstetrics and gynaecology, and a review of training in this discipline should be carried out (2.5).
9. There is little student experience of some clinical areas which are not well represented in the main University Hospital, and opportunities for all students to take part in rehabilitation and palliative medicine services in other facilities should be expanded (2.5).
10. Arrangements for timetabling scheduled teaching sessions in the University Hospital should be reviewed in order to reduce the frustration currently reported by staff and students with the current system of scheduling these sessions (2.5).
11. The Graduate Follow-up Project is crucially important to planning for the Faculty's future yet it appears to be under funded, a situation which needs to be remedied (2.8).

12. There is insufficient expertise and hands-on experience among many Faculty members in developing reliable and valid student assessment instruments, and UDREM is likely to need additional resources to address this problem in relation to the requirements of the new law governing medical education (3.1, 3.2).
13. Admission of students to year 1 is still largely unrestricted, leading to unwieldy first year class sizes and an impaired educational experience; it is recommended that an investigation be conducted into the effectiveness of the alternative admission policies adopted elsewhere in Switzerland, with a view to evolving an alternative method for student selection at Geneva (4.1).
14. Many staff of the 'intermediate body' receive no formal recognition of their status in the academic hierarchy by means of academic titles. To avoid disadvantaging this group of staff in the international arena, it is recommended that the University give consideration to introducing a system of sub-professorial titles (5.2).
15. There is no widely accessible curriculum database, and resources should be provided to support the development or acquisition of a searchable web-based curriculum content management system (6.3, 7.1).
16. Most students have limited exposure to the research dimension of medical science during their studies, and it is recommended that steps be taken to increase the visibility of faculty research activities to students (6.4).
17. The expansion in the roles and responsibilities of UDREM mean that additional resources should be found, either internally or externally, to support its increased workload (6.5).
18. The Faculty has limited interactions with components of the health care system other than the University Hospitals, and it is recommended that the range of these interactions be diversified as widely as possible (8.5).

OVERALL RECOMMENDATION

As a result of its evaluation of the Human Medicine program of the Faculty of Medicine, University of Geneva, the International Group of Experts **recommends** that accreditation be granted without conditions, for the maximum period available under the Guidelines of the SUK/CUS, namely 7 years.