PROGRAMME REVIEW REPORT

FACULTY OF MEDICINE
UNIVERSITY OF KELANIYA

30th May to 02nd June 2006

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In keeping with the Quality Assurance and Accreditation (QAA) framework currently implemented in the University system in Sri Lanka, the Quality Assurance and Accreditation Council of the University Grants Commission, Sri Lanka appointed a panel of senior academics from the Universities of Colombo, Peradeniya and Ruhuna to undertake a programme review in Medicine at the Faculty of Medicine, University of Kelaniya.

The Review Panel comprised of:

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Prof. Manouri Senanayake

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1. THE PURPOSE AND AIMS OF THE REVIEW PROCESS

The purpose of the programme review was the evaluation of the quality of the study programme in Medicine at the Faculty of Medicine University of Kelaniya. This was carried out during the site visit by the review team from May 30th to June 2nd 2006 by discussion of issues and analysis of evidence gathered. The findings were then compared with the Self Evaluation Report (SER) presented by the Faculty. The aim was to express a judgment as required by the QA Programme on the quality of the eight aspects listed below.

1. Curriculum Design, Content and Review
2. Teaching, Learning and Assessment Methods
3. Quality of students, including student progress and achievement
4. Extent and Use of Student Feedback (Qualitative and Quantitative)
5. Postgraduate Studies
6. Peer Observation
7. Skills Development
8. Academic Guidance and Counseling

The review processes adopted were:

meetings with the Dean and Faculty Management Committee, Academic and non academic staff, undergraduate and postgraduate students;

observation of teaching/learning sessions (lectures, a tutorial, practicals, ward classes);

inspection of academic facilities (lecture halls, laboratories, clinical settings in the professorial units of the Colombo North Teaching Hospital, Family Health Centre), learning support facilities (library, computer centre, skills laboratory), student welfare facilities (hostels, canteens, sports complex and gymnasium) and

perusal of documents (handbooks, curriculum documents, reports, records etc).

2. BRIEF HISTORY OF THE UNIVERSITY AND THE FACULTY

The University of Kelaniya has its origins in the Vidyalankara Pirivena, which was founded in 1875 as a centre of learning for Buddhist monks. This Pirivena became the Vidyalankara University in 1959, later the Vidyalankara Campus of the University of Ceylon in 1972, and finally the University of Kelaniya in 1978. The University now has 6 faculties and a total of about 8200 students.

The Faculty of Medicine of the University of Kelaniya came into existence in 1991, with the absorption of the privately run North Colombo Medical College into the University of Kelaniya. It is situated on a 35-acre campus, about 15 kilometers northeast of the main Kelaniya campus at Dalugama. The Faculty has 14 departments of study directly involved in the MBBS study programme. It also has several other academic units, centres and research laboratories, which are involved in teaching, service and research activities that are not directly related to the undergraduate teaching programme. The Faculty of Medicine currently has almost one thousand students.

3. AIMS AND LEARNING OUTCOMES

3.1. Aims

The MBBS study programme at the University of Kelaniya aims to produce a medical graduate who has:

A. A knowledge and understanding of health and disease and knowledge of prevention and management of the latter, in the context of the individual as a whole, in his or her place in the family and the community.
B. The skills to communicate effectively, make informed decisions, and develop appropriate professional relationships.
C. The necessary attitudes, which enable him or her to be aware of the responsibilities of a doctor and in particular to have a commitment to high standards of professionalism.
D. The knowledge, attitudes and skills necessary to deliver Primary Health Care.

3.2. Learning Outcomes

The undergraduate on completion of the 5-year training period should:

1. Have knowledge of the normal structure and function of the human body.
2. Be able to diagnose, treat and prevent diseases common in Sri Lanka.
3. Be able to recognize serious disease in the early stages.
4. Possess knowledge of other diseases, which illustrate important principles in medical science or are of major public health importance in a global context.
5. Be competent to deal with medical emergencies with the available resources and be aware of what can be done in ideal circumstances.
6. Be able to carry out basic medico-legal procedures
7. Have knowledge of the principles of behavioural science as applied to health and the practice of medicine.

8. Have knowledge of the limitations of their professional skills and available facilities and be able to recognize conditions where referral is necessary.
9. Possess knowledge of health statistics and demographic data with emphasis on trends with special reference to Sri Lanka
10. Have knowledge of the social, economic and cultural factors relevant in the practice of medicine in Sri Lanka.
11. Possess management and communication skills to function effectively in a health team and with other sections of the community and be able to take a leadership role when necessary
12. Be able to assess evidence both as to its reliability and relevance and to appreciate that conclusions are reached by logical deductions
13. Be capable of continuing self-education, keeping abreast of advancing knowledge and developing an aptitude for medical research
14. Be able to respond to patients and their families with empathy and to counsel them when necessary
15. Have knowledge of the interaction between people and their environment and the responsibility of the medical profession in promoting a healthy environment
16. Realize the importance of ethical and legal issues and professional rights relating to individual doctor-patient relationships, interactions with other health professionals and with society as a whole

4. FINDINGS OF THE REVIEW TEAM

4.1. Curriculum Design, Content and Review

The Faculty currently has seven batches of students. The three senior batches are following a traditional discipline based MBBS programme and the 4 junior batches follow the new, integrated, organ system based curriculum introduced in 2004 for which approval has been given by the University Senate and the Sri Lanka Medical Council. The latest batch of students (AL 2005) was admitted 2 weeks ago.

The new curriculum integrates the content around organ systems in 2 of the 3 phases. However, core curricular contents have not been identified. Phase 1 is preceded by an orientation programme meant to equip students with necessary IT and English skills and has contents of the Behavioural Science, Mental Health and Ethics Strand (BSMHES). This strand, in principle, is a positive feature and runs through first 4 years of the programme. The Community health strand is interrupted at times (for example, in Alimentary System module in term 4) and teaching of preventive aspects of diseases lacks integration with the relevant modules.

The learning objectives are stipulated in the Clinical Appointment Handbooks for the 3rd and 4th year students in the new curriculum. The students in the old curriculum have not been provided with such a document.

In the new curriculum, Psychiatry has been introduced as a separate subject with a professorial rotation in Phase 3. The final year programme (now termed Phase 3) is unchanged and has little horizontal integration in the clinical teaching

programme or vertical integration with the modules. Phase 3 has **not** been implemented yet.

The Foundation module and nine other modules, Community Health strand, BSMHES and English and IT courses in Phase 1 have been reviewed through a student opinion survey in 2005. Based on these results the BSMHES is being modified. Some module committees have taken student feedback into consideration. It was also noted that Psychiatry, essentially a clinical discipline, is taught in the BSMHES which requires review. Focus on ethics is diluted by not being introduced in its own right as a specific 'module'

An external evaluation of the BSMHES has been carried out by an independent reviewer and the Faculty Board has been apprised of its recommendations. The reviewers suggest this report be considered for review of BSMHES.

The faculty has already planned for a major review of the curriculum in 2010.

The overall judgment for this aspect is **satisfactory.**

4.2 Teaching, Learning and Assessment Methods

A diversity of teaching / learning methods are being used in the new curriculum that include as lectures, tutorials, practicals, small group discussions (SGD), FiLMs, problem based tutorials (PBT), problem based learning (PBL), video and poster presentations and seminars. The establishment of a skills laboratory and the Family Health Unit are noteworthy achievements.
Lectures remain the main method of instruction. The provision of 20% - 50% of the time for Self Directed Learning (SDL) is a good practice.

These teaching methods are envisaged to achieve the stated aims and learning objectives. All students had been given a handbook containing Aims and Learning outcomes of the study programme, its organization and contents. A mission statement for the faculty would have reinforced direction and commitment of both students and staff.

The review team observed lectures, ward teaching sessions, laboratory and computer teaching sessions. The reviewers did not have an opportunity to observe any SGD, PBL or PBT sessions.
The learning environment comprised of several well equipped and spacious laboratories and clinical settings with an adequate caseload. Some short-comings found were: the observed lecture took place in a hall flooded with rain water while mopping was in progress, inadequate computers and microscopes, and a crowded laboratory. Ward teaching was witnessed to be well organized and conducted by senior academics in the Departments of Obstetrics and Gynaecology, Medicine and Paediatrics with students having written learning objectives and checklists of procedural skills. Students were involved in patient care and Labour Room duties. Students following the Surgery Professorial appointment were not engaged in any organized teaching/learning activity in both clinic and ward settings when the reviewers visited. Most of the teaching in the BSMHES is carried out as lecture which is not appropriate to achieve the

objectives and to develop the envisaged skills. More small group learning activities need to be added.

The review of the learning environment also included the library, computer center as well as hostel and recreational facilities. Copies of recommended textbooks in the library were inadequate. Both library and computer centre closing times need to be reviewed to meet student requirements. A significant proportion of students have been provided hostel facilities. There is a need to improve the existing facilities to create a more conducive learning environment. The provision and utilization of sports facilities was commendable but a dearth of opportunity for musical activities were noted.

Student assessment includes both continuous and summative assessments. The clinical disciplines allocate 20% of marks to continuous assessments (CA) while only some pre and para-clinical disciplines carried out CA in the old curriculum. The quantum of marks allocated for CA at the first and second examinations for Medical Degrees has increased in the new curriculum. The assessment techniques used are MCQs, SEQs, OSCEs, OSPEs, poster presentations, research projects, 'long' and 'short' clinical cases. This range of assessment methods ensures that knowledge and skills are evaluated. Some effort is made at assessing attitude by allocating positive or negative marks for professional conduct, commitment to patient care etc during final year clinical appointments e.g. in Paediatrics.

Examination questions are subject to scrutiny within departments and module committees and preparation of model answers with marking schemes in the new curriculum are good practices. Perusal of Unit 1 question papers of the first examination for Medical Degrees in the new curriculum showed integration between Phase 1 subjects within questions with the stems specifying clinical scenarios. However, non-core content areas have been assessed instead of core curricular areas (e.g. Q2 Sept 2005, and Q2 Nov 2006). This is not in keeping with the aims of the study programme (SER p2).

The overall judgment for this aspect is **satisfactory.**

4.3 Quality of Students, including Student Progress and Achievement

The quality of students as indicated by the mean Z scores achieved at the G.C.E. Advanced Level examination showed an improving trend. The admission preference (first or second choice) of students admitted to Medical Faculty Kelaniya showed an increase of 6% between the last two years of intake. There are no direct measurements to substantiate this apparent improvement.

Progress rates of students from 1999/2000 to 2001/2002 are satisfactory. Drop-out rate from the batch at the end of the course which was 9.7 % in 1997/2000 has declined to 2.6 % in 2001/2002. Student achievement profiles as indicated by their Final MBBS examination results show the percentage of students getting classes to be 20 to 25% in the last five years.

The new curriculum has 9 modules implemented in the Phase 1 addressing normal structure and function. The same modules are taught in the Phase 2 covering the abnormalities of structure and function giving students opportunity to re-visit the subjects taught and providing for a chance for an incremental development of competences and progress.

The establishment of a Young Researcher's Forum where students present their research and the publication of abstracts (2005, 2006) has given opportunity for students to enhance their academic and professional skills and scholarship.

Student initiative and participation is improving the learning environment, specially in the hostels and the canteens was not evident.

The overall judgment for this aspect is **good.**

4.4. Extent and Use of Student Feedback (Qualitative and Quantitative)

Student feedback has been obtained formally and informally through focus group discussions and self-administered questionnaires. Individual lecturers, module Chairpersons/Secretaries and Medical Education Centre (MEC) have monitored student feedback on a regular basis. This is seen in several teaching programmes; examples are Family Medicine and modules. The feedback obtained by the MEC at the completion of Phase 1 of the first batch of students has provided useful information. In the case of the BSMHES, this feedback has led to a review of their teaching programme.

The student feedback of teachers has been on a voluntary basis. There is no evidence that this information had been formally conveyed to students, curriculum committee and the Faculty Board. There has been no evaluation of corrective measures taken, if any. There is a need to formalize student evaluation of teachers.

There was no evidence of an evaluation or student feedback being obtained regarding implementation of the Peripheral Clinical Appointments. For example, an imbalance in the allocation to Peripheral vs. Ragama Hospitals for the five long appointments in 3rd and 4th years had not been addressed.

The culture of obtaining student feed back is a good practice giving the faculty a chance to make minor changes early in the programme.

The overall judgment for this aspect is **good.**

4.5. Postgraduate Studies

The review team met several categories of postgraduates. They were PGIM trainees (non clinical and clinical) and candidates registered for higher degrees by research (MPhil, PhD)with the Faulcty of graduate Studies. Some of the PGIM trainees were academic staff members of the faculty while others were from the Ministry of Health and had been assigned to Professorial Units at the North Colombo Teaching Hospital or to other departments in the faculty.

Non faculty PGIM trainees were faced with limitations imposed on borrowing facilities at the Faculty library. All trainees expressed dissatisfaction that the Journal Section in the library and the Computer Centre closed too early for them to have adequate access. There was an inadequacy of books in the library room, computers, and no Internet access in the Teaching Hospital. The inadequacy of support from the medical faculty library to PGIM trainees is therefore magnified.

Postgraduate academic activities include journal clubs, morbidity mortality meetings, clinico pathological conferences etc. and are organized at regular intervals. Postgraduate trainees get opportunities to actively contribute to the undergraduate teaching programme which benefits their own learning and professional development.

The clinical research laboratories established by the faculty in areas such as fertility, gastroenterology, molecular medicine and thalassaemia have facilitated postgraduate studies and research and can considered as strengths.

Research students who are mainly faculty academic staff expressed satisfaction with supervision, infrastructure support available to them. Time for research was made available to them by relieving them of some of their teaching duties. A major constraint for research was experiencing delay in procurement of equipment and consumables by the faculty administration.

The overall judgment for this aspect is **good.**

4.6. Peer Observation

Peer observation is not a formal, established practice. This process is not formally in place in departments or module committees of the faculty. The quality of teaching is not systematically assessed by this method.

Informal observation of junior academic staff by seniors takes place in an ad-hoc manner and appears to be intra-departmental. The SER states that peer observation is of limited use *"particularly because senior staff generally do not subject themselves to peer observation"* (SER p 22).

Peer evaluation of educational material for student-centered learning such as FiLM and PBL material is not apparent during or after their use. Some attempt has been made during the 'Basics of Medical Education' programme for medical teachers to inculcate the need for peer review and observation, but it has not been taken further as a faculty policy.

The overall judgment for this aspect is **unsatisfactory.**

4.7. Skills Development

The learning objectives of the faculty clearly state the skills that should be acquired during the study programme. Formalized programmes have been

established in the Orientation Module to address basic competencies in English and IT skills. The modules too have identified skills that should be learnt. The clinical skills laboratory and Department of Pathology provide support during Phase 1. There are other general laboratories that provide opportunities for skills development.

Introduction of Clinical Appointment Booklets for 3rd and 4th years (new curriculum) giving detailed objectives and checklists of skills to be acquired is good practice. The skills checklists of the training in surgery in the 3rd and 4th years require repetition of several skills; the justification for which is that these are essential skills. This is good practice. Currently there is no checklist of skills or log book that final year students have to complete during their training course.

Feedback from recent graduates and students led us to conclude that the clinical appointments in Negombo and Gampaha Hospitals have several weaknesses. They do not provide the expected level of opportunities for skills development in the early (3rd and 4th year) clinical training. For example, due to logistical difficulties exposure to casualty and emergency admissions are curtailed. As a result many students claim they were not fully prepared to make best use of the professorial appointment.

Establishment of a clinical skills laboratory is a positive feature. Possibly due to logistical constraints and the lack of integration in planning, organizing and implementing skills development activities, it is not being put to best use. This is evident from the entries in the log books maintained in the skills laboratories where the variety of use has been very limited. The full potential available has not been utilized. For example, of the total number of occasions it has been used the vast majority has been for CPR, and by the Department of Obstetrics and Gynaecology.

In the skills laboratory a checklist for each procedure is essential to ensure that students follow the correct steps in developing the desired skills. This was not available.

Another weakness in the use of this skills development facility was teacher led demonstrations replacing opportunity for hands-on skills training. A case in point is the instance of observing a lumbar puncture in the skills laboratory. This is not putting the skills laboratory to best use. Observation is best on 'real' patients and the laboratory setting should provide training for skills development in a protected environment, before students go to the real life situations. Some skills being practiced in the skills laboratory by final year students may not be appropriate.

The availability of side laboratories in Professorial units e.g. Medicine and Paediatrics, is a positive feature.

Opportunities have been made available in the new curriculum for the acquisition of transferable skills – i.e. English and IT. However, the facilities and time allocated for students to acquire these skills seem inadequate. Computers for hands-on training were found to be inadequate to develop effective IT skills. The communication skills training for taking histories is carried out in the Family Medicine programme at the Family Health Centre, where each student is videoed when taking a history and then feedback for improving communication is provided at a meeting where the vide is reviewed.

The PBL activities, and SGDs which help students to develop communication and problem-solving skills, medical-social skills were not observed by the reviewers. If these activities are properly facilitated by trained staff, acquisition of these skills can be expected. The observation of an external reviewer in 2005 on the need to increase the allocation of time for SGD, seminars, group assignments, debates and role-plays etc, in the development of social and behavioural skills need to be taken note of. A tutorial is a small group teaching/learning method. The tutorial observed by the review team comprised of a group of 40 students. A smaller number of students would have made the tutorial more effective.

The overall judgment for this aspect is **satisfactory.**

4.8. Academic Guidance and Counseling

Each student is allocated a student adviser (3 to 4 students/adviser) at the commencement of their course. The students expressed the view that the medical course is highly stressful. The feeling was that as they go through the course each year becomes more stressful than the previous one. The academic guidance and counseling services have not been in keeping with their needs. We find that this has been an "on-going matter of concern" (SER p.25) for the faculty.

Some students expressed the view that they had little opportunity to access their advisers as they were either not available when required or were too busy to give them time. As a result, many students did not avail themselves if this facility, but sought the help of other staff members who were more accessible.

The students have not been adequately notified of the counseling service that is available to them. This is exemplified by the fact that the students were unaware or uncertain of the identities of the 3 designated student counselors. This applied even to students who had been in the faculty for 4-5 years. Counseling services need strengthening.

On inquiry it was not apparent that the counselors had undergone any special training in counseling. Academic Guidance was provided on a ad hoc basis only.

Academic staff indicated their availability for academic guidance. This was confirmed by students who were appreciative of this support. A formal program for academic guidance and counseling has not been instituted and neither is there a counseling centre

The overall judgment for this aspect is **satisfactory.**

5. CONCLUSIONS

The Faculty of Medicine University of Kelaniya has introduced a new partially integrated curriculum with effect from January 2004. There are also students who are following the old traditional curriculum in the final and fourth years. The judgments expressed in each of the 8 areas under review are given below refers to both curricula where relevant.

Aspect	Judgment
1. Curriculum Design, Content and Review	Satisfactory
2. Teaching, Learning and Assessment Methods	Satisfactory
3. Quality of Students, including Student Progress and Achievement	Good
4. Extent and Use of Student Feedback	Good
5. Postgraduate Studies	Good
6. Peer Observation	Satisfactory
7. Skills Development	Satisfactory
8. Academic Guidance and Counseling	Satisfactory

Good practices

1. A culture of conducting a major curriculum review and of obtaining student feedback on teaching and the implemented curriculum is evident. The feedback received has been taken into consideration by some of the committees and persons

2. The curriculum has been documented and the students are made aware of the aims, objectives of the study programme and the contents in the student handbook. In other phases and stages in the curriculum too student handbooks and documents are utilized to indicate the expected learning outcomes and skills to be acquired. This is observed specially in the new curriculum.

3. Using a diversity of teaching and learning and assessments methods in the curriculum to impart necessary knowledge and develop skills and to assess acquisition of learning outcomes is a positive feature

4. Allocation of specific time, in the time tables for self directed learning is also likely to be helpful to students

5. The SEQs used in assessments in the new curriculum have integrated across the subjects taught and also shows the clinical relevance

6. Examination questions are subject to scrutiny, model answers are written for each question and conference marking is carried out and these practices are likely to improve the quality of assessments

7. Introducing students to research, implementation of a project by all students and providing a forum to present research finding (Young Scientists Forum) which would help in developing qualities of problem solving, critical thinking, time management, communication and team work skills is commendable.

8. Steps have been taken to conduct staff development to impart the required skills for implementation of the new curriculum. Non academic staff to have been provided opportunities to undertake activities for continuing professional development

9. Establishment of centers of excellence to enhance clinical diagnosis, support research in many relevant fields

10. The steps taken to establish facilities to support student learning such as the computer center, clinical skills laboratory, sport facilities, transport and hostels and canteens by the Dean and the Management Committee are commendable

11. Allocation of students to Student Advisors and appointment of Senior Student Counselors is a positive feature

Weaknesses

1. The core curriculum has not been documented

2. The weakness in the BSMHE in terms of including family medicine and psychiatry requires attention.

3. Using a large proportion of the time for large groups teaching in the BSMHE such as lectures, rather then small groups methods is inappropriate for the this strand.

4. Peer observation is not a feature observed in the study programme

5. Academic guidance and student counseling appear to be ad hoc and the formal system set up by appointing student advisors and senior student counselors is not functioning optimally

6. The facilities available in the library, clinical skills laboratory and the computer center are not adequately utilized

7. The early closure of the computer centre at the end of the formal teaching hours, has posed problems of access to students both undergraduate and postgraduates

8. Utilization of the skills lab among the junior batches of students before they go into real life situations in clinical and community settings is not observed.

9. The allocation of student to rotations implemented in peripheral hospitals appear to be disadvantageous to some students (having to do 5 appointments while other had only 1)

10. The clinical training in the 3rd and 4th years have not prepared student adequately for the professorial appointments

11. The learning environment in the faculty lecture halls, hostels and the hostel canteens requires to be improved.

12. Student participation and contribution to maintaining a good environment n in the hostels and the canteens appear to be minimal

6. RECOMMENDATIONS

1. The core curricular contents need to be identified

2. The Community Health and the BSMHE strands to be reviewed and contents, organization and implementation (including the teaching learning methods and assessments appropriately revised.

3. Learning and teaching in the Skills Laboratory be integrated with modular teaching and clinical training, to ensure that its use precedes practice on real patients. A check list made available for all procedures and skills training undertaken in the Skills Laboratory would help to standardize the learning

4. Student for the peripheral clinical rotations and the CNTH rotations in the third and fourth years be equitably distributed

5. Peer review and student evaluation of teachers need to be formalized. Outcomes and results of peer review and student evaluation of teachers need to be utilized for staff development programmes to address shortcomings and to improve the study programme

6. Attempts should be made to improve the learning support facilities and access to such facilities i.e. computer centre, library and skills laboratory

7. Students should be given more responsibility and motivated to maintain a healthy environment conducive to learning