

SUBJECT REVIEW REPORT

DEPARTMENT OF ORAL MEDICINE



***FACULTY OF DENTAL SCIENCES
UNIVERSITY OF PERADENIYA***

04th to 06th April 2006

Review Team :

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1. Subject Review Process

The purpose of this subject review is to assist the Department of Oral Medicine and Periodontology in evaluating the quality of education in relation to the disciplines taught in the Department. It constitutes a peer review from an external perspective and is based on the self-evaluation report provided by the Department. The primary focus was to assess the effectiveness of the learning opportunities provided to students in achieving the stated aims and learning outcomes.

The Department comprises four administrative Divisions and teaches five disciplines, namely, Oral Medicine, Diagnostic (Dental) Radiology, Periodontology, Microbiology, and Pharmacology. Thus the exercise amounted to a simultaneous review of 5 subjects; understandably, it was a complicated task and the production of this final report was tedious.

The subject review commenced with a close scrutiny of the self-evaluation report produced by the Department. This was followed by a visit to the Department lasting 3 days from 4th to 6th April 2006. The agenda of the visit is given as Annexe A.

The first item of the agenda was a meeting with the Dean of the Faculty of Dental Sciences, Professor R. L. Wijeweera. Dr. G.J. Panagoda, Head of the Department of Oral Medicine and Periodontology, Dr. M.A.M. Sitheequa, Head/ Oral Medicine, Dr. Arjuna Ellepola, Head/ Pharmacology and Dr. Vidya Varathan, Head/ Radiology were associated. This discussion focussed on recent achievements of the Faculty, plans for future development and in particular the setting up of a Dental Education Unit to support the ongoing curriculum reforms. The Dean highlighted the internal, faculty level mechanisms in place for improving the quality of the educational programmes.

This was followed by a meeting with the academic staff of the Department. The Heads of Divisions made presentations on the relevant aspects of the self-evaluation report followed by discussions to clarify issues.

The rest of the programme consisted of observing lectures (1), practical classes (1) and tutorials (1); discussions with junior academic staff, technical and nursing staff, student counsellors, postgraduate students, and second year students; inspection of teaching/ learning facilities including the lecture rooms, laboratories, clinics, the Reading Room and the Computer Assisted Learning Laboratory; observation of clinical practice; and scrutiny of numerous documents.

The formal review process ended with a wrap up meeting with the staff of the Department. At this meeting the reviewers presented a summary of their findings.

This report is based on the findings of the review process outlined above. We hope that the Department will find it useful to strengthen their self-evaluation of the teaching programmes and effect necessary improvements.

2. Brief history of the University, Faculty and the Department

2.1. University of Peradeniya

The University of Peradeniya (UOP) is the heir to a sixty-year-old university tradition which commenced with the foundation of the University of Ceylon in Colombo on 15th July, 1942 under the Ceylon University ordinance No. 20. The University of Ceylon was shifted to the present site of the University of Peradeniya on 06th October 1952.

The University of Ceylon continued to function as two campuses in Colombo and Peradeniya until 1967 when they were split into two separate and independent universities. Thereafter, the University of Peradeniya continued to function as the University of Ceylon, Peradeniya until the University of Sri Lanka Act No.1 of 1972, under which it was renamed as the University of Sri Lanka, Peradeniya Campus. A significant change that occurred after the University Act No. 16 of 1978 was the restoration of University's autonomy under the new identity, University of Peradeniya.

In terms of the student intake, infrastructure facilities, trained staff, number of faculties and institutes, the UOP is the largest University in Sri Lanka.

2.2.Faculty of Dental Sciences

The Dental School, forerunner to the Faculty of Dental Sciences, was established in 1943 as the Department of Dental Surgery in the Faculty of Medicine of the University of Ceylon in Colombo. Due to lack of space for expansion, it was moved to Augusta Hill, Peradeniya in 1954. However, until 1965, the pre-clinical subjects for the dental undergraduates continued to be taught at the Faculty of Medicine, Colombo. With the establishment of the Faculty of Medicine at Peradeniya in 1961, the Dental School came under the Faculty of Medicine, Peradeniya, and the BDS Degree was awarded by the University of Ceylon, Peradeniya.

In 1974, under the University of Sri Lanka Act No.2 of 1972, the Medical, Dental and Veterinary Schools were amalgamated into the Faculty of Medical, Dental and Veterinary Sciences of the Peradeniya Campus, University of Sri Lanka, with a Chairman in each school. The Chairman of the Medical School was also the Dean of the Faculty.

The promulgation of the Universities Act No. 16 of 1978 gave university status to the constituent campuses in the University of Sri Lanka. The Dental School still remained as a section of the Faculty of Medical, Dental and Veterinary Sciences. In 1980, five departments were established in the Dental School, and in October 1986 it became an independent faculty.

In 1990, the Faculty of Dental Sciences was expanded into six departments of study, namely, Community Dental Health, Restorative Dentistry, Oral Medicine and Periodontology, Oral Pathology, Oral Surgery and Prosthetic Dentistry. The Department of Basic Sciences comprising the divisions of General Anatomy, Dental Anatomy, Physiology and Biochemistry was established in 1995.

In 1997 the Faculty of Dental Sciences received substantial Japanese Grant Aid and acquired new premises, a brand new teaching hospital and modern equipment. The Faculty now has state-of-the-art facilities for the training of dental graduates which include clinics and laboratories for advanced dental treatment, wards, an Out-patient Department, an operation theatre for treatment of oral cancer, facial deformities and trauma, and an Intensive Care Unit.

The FDS is the only higher educational institute which offers an undergraduate course leading to the Degree of Bachelor of Dental Surgery (BDS) in Sri Lanka.

2.3. Department of Oral Medicine & Periodontology

The Department of Oral Medicine and Periodontology was established in 1986 and comprised the Division of Oral Medicine and the Division of Periodontology. Teaching Microbiology and Pharmacology was handled by the relevant departments of the Faculty of Medicine, University of Peradeniya until the beginning of the 1990's. When the Faculty of Medicine was no longer able to continue teaching dental students due to increasing workload, the FDS recruited its own academic staff under the Department of Oral Medicine and Periodontology to teach these subjects. Subsequently, when the FDS

moved to its new premises in 1998, increased facilities enabled the formation of separate Divisions of Microbiology and Pharmacology each with its own administrative Head. The Dental Radiology Unit too was established under the Division of Oral Medicine in the new Dental Hospital in 1998. With time, academic staff dedicated to teaching dental radiology was recruited and Dental Radiology became an independent unit attached to the Division of Oral Medicine.

Microbiology and Pharmacology are taught during the 2nd year of the undergraduate programme while Oral Medicine, Periodontology and Dental Radiology are taught during the 3rd and final years. The Divisions of Oral Medicine and Dental Radiology (OM & DR), and Periodontology are located in the premises of the Dental Hospital while the Divisions of Microbiology and Pharmacology are located in the administrative building of the Faculty of Dental Sciences.

3. Aims and Learning Outcomes

The Vision/ Mission, Aims and Learning Outcomes for each Division are reproduced below as presented in the self-evaluation report produced by the Department.

3.1.Divisions of Oral Medicine and Radiology

3.1.1. Mission

The mission of the Divisions of Oral Medicine and Dental Radiology is to strengthen the process leading to the Faculty of Dental Sciences becoming a centre of excellence in education, research and clinical care in oral medicine and dental radiology thereby producing dental surgeons who:

- Possess knowledge, skills and attitudes that enable them to recognize oral medical problems and decide whether to treat or refer them to appropriate specialist.
- Are competent in dental radiography and interpretation in order to provide oral health care of high quality, at the same time ensuring safety of staff and patients from radiation exposure.

3.1.2. Aims

The discipline of Oral Medicine is concerned with the diagnosis of orofacial diseases and their management by the use of pharmacological, conservative and other non-surgical methods. As it also incorporates the methodology of diagnosis of orofacial diseases in general, the discipline of Diagnostic (Dental) Radiology is linked to it in the Division. Dental Radiology is concerned mainly with obtaining radiographic images of dento-facial structures and their interpretation for aiding diagnosis. Acquiring these areas of knowledge and related skills would enable the dental graduate to provide oral health care of a high quality to the public.

In the above context, the **aims** of the **Division of OM & DR** are to:

- 1.1.1. Provide course units that impart knowledge and skills in the diagnosis and medical management of orofacial diseases
- 1.1.2. Provide learning opportunities on the application of radiological investigations in the diagnosis and management of orofacial diseases with special emphasis on the diagnosis and management of diseases of the teeth.
- 1.1.3. Inculcate a caring attitude in the minds of the students towards patients with orofacial diseases.
- 1.1.4. Encourage the students not to consider dental/orofacial problems in isolation but to be concerned with the patient as a whole, as a total person having the particular dental/ orofacial health problem(s).

- 1.1.5. Encourage students to develop the skills and enthusiasm needed for self-learning and life-long learning.
- 1.1.6. Provide a clinical environment that is conducive to keen learning and acquiring adequate clinical skills.
- 1.1.7. Support the teaching staff in their career development including provision of feedback and peer advice and provide opportunities for effective teaching, learning and quality assurance

3.1.3. Learning outcomes

On successful completion of the course units including the clinical training offered by the division the students should have:

- 3.1.1 gained knowledge, conceptual understanding and skills of diagnosing and managing the various oro-facial diseases using non-invasive and non-surgical methods
- 3.1.2 gained knowledge and understanding of and acquired necessary skills in dental radiography
- 3.1.3 acquired the ability to apply the knowledge and skills gained as above to diagnosis and management of patients with oro-facial diseases
- 3.1.4 acquired the knowledge and skills needed to assess the medical fitness of patients presenting with a dental/oral complaint and dental management of a medically compromised patient.
- 3.1.5 gained a working knowledge in radiation safety.
- 3.1.6 developed a range of personal skills to take an adequate history from the patient, carry out a useful clinical examination, determine the appropriate special investigations and interpret the results of such investigations to arrive at a diagnosis.
- 3.1.7 acquired knowledge and skills needed to plan and prescribe appropriate treatment for the patients diagnosed with an oro-facial medical disease.
On successful completion of the course units (some of which are taught jointly with the Departments of Oral Surgery and Oral Pathology) in the oral medicine curriculum and clinical practice in the oral medicine clinic and the dental radiology unit, students should be able to demonstrate knowledge and understanding of and (wherever relevant) the necessary skills related to the:
- 3.1.8 General principles of oro-facial diagnosis including those of history taking and physical examinations and the application of radiological and laboratory investigations.
- 3.1.9 Management of dental patients who have illnesses or treatment that compromise their fitness (the medically compromised patients) to have dental treatment in safety.
- 3.1.10 Biological effects of radiation and the basis and implementation of radiation protection measures.
- 3.1.11 Principles and techniques of dental radiography.
- 3.1.12 Infective diseases that affect the oral mucosa, their diagnosis and management.
- 3.1.13 Causes, principles of diagnosis and treatment of oro-facial pain.
- 3.1.14 Common disorders that affect the temporomandibular joint, the principles of diagnosis of and methods of treating such disorders.
- 3.1.15 Non-neoplastic diseases that affect the salivary glands, their effects on oral health, their diagnosis and management.
- 3.1.16 Potentially malignant lesions and conditions that affect the oral mucosa and their diagnosis and management.
- 3.1.17 Malignant lesions affecting oral mucosa with particular emphasis on recognizing them early and the sequelae of non-surgical treatment of such lesions.

- 3.1.18 Mucocutaneous diseases that affect the oral mucosa including their diagnosis and management.
- 3.1.19 Immunologically mediated oral diseases and oral manifestations of immunodeficiency states and the principles of management of the oral effects.
- 3.1.20 Oral manifestations of haematological, and gastrointestinal diseases and the principles of their diagnosis and treatment.
- 3.1.21 Application and interpretation of radiological investigations in the diagnosis of the sequelae of dental pulp disease, of salivary gland diseases, maxillofacial injuries, cystic lesions and osteodystrophies affecting the jaws.
- 3.1.22 Neurological problems affecting the face such as facial paralysis and facial sensory loss including their diagnosis and principles of their management.
- 3.1.23 Inherited and developmental diseases affecting the oral mucosa.
- 3.1.24 Principles of (pharmacological) therapeutics as applicable to clinical practice in dentistry.

To help to achieve the outcomes listed above programme offers a learning experience that is intended to enable students to:

- Benefit from a curriculum in which the design and teaching are enhanced by the collective effort of staff, students and central university services.
- Have a manageable workload.
- Be provided with clear details of the academic programme, content, objectives and assessment methods
- Build upon their learning by progressively developing knowledge skills and understanding based on a multidisciplinary approach
- Receive fair, appropriate assessments for progression and grading and feedback for individual progress

3.2.Division of Periodontology

3.2.1. Mission

"To be competent, confident & committed to promote oral health by establishing a functionally and esthetical acceptable periodontium"

3.2.2. Aims

Broad objective – To cater for a training to acquire knowledge to diagnose and plan treatment, enabling good grasp of operative skills to provide successful periodontal treatment and to promote research to obtain new knowledge, and in turn this can be applied to improve the standards of patient care.

Aims – To give the students training to,

- 1) Gather at least the minimum knowledge required to understand periodontal disease conditions from normal.
- 2) Gather the required knowledge and learn skills to, collect relevant history by clerking, obtain supportive information through request of relevant special investigations and by carrying out a general examination on the patient.
- 3) Carryout a thorough periodontal examination on a patient aiding periodontal diagnosis.
- 4) Learn periodontal charting and record of periodontal findings and the importance of record-keeping during the follow-up period of patient.

- 5) Draw up a comprehensive treatment plan for the patient for the rest of the period of follow-up, identifying the limitation if any, in providing particular treatment procedure/s.
- 6) Carry out non-surgical periodontal therapy and preventive treatment procedures on patients.
- 7) Carryout periodontal reviews at different time intervals and to help the patient in establishing a proper periodontal maintenance care programme.
- 8) Make appropriate recommendations in choosing / using the correct plaque control devices.
- 9) Prescribe appropriate antimicrobial agents (local & systemic) for the cases needing such antimicrobials, and to learn proper monitoring of the use of antimicrobials by the patients.
- 10) Decide on the length of time between follow-up visits / during "recall-period" of patients.
- 11) Identify the periodontal problems needing specialized advanced periodontal treatment to do appropriate referral / to seek advice.
- 12) Promote research leading to new knowledge for better standards of patient care.

3.2.3. Learning Outcomes.

On the successful completion of the course module offered by the division, the students should have,

- 1) Gained knowledge on clinical and radiological features aiding diagnosis of different periodontal disease conditions, in comparison with the normal clinical anatomy and normal radiological features of the periodontium.
- 2) Gained knowledge on etiology, risk factors, pathogenesis and progression of periodontal disease in relation to etiological, risk and pathogenic factors.
- 3) Learned recommended classification system of periodontal disease to aid diagnosis.
- 4) Learned to gather relevant medical and dental history, in offering the best periodontal treatment for the patient.
- 5) Grasped appropriate interpersonal communication skills, to help build a good rapport with the patient, which in turn is necessary for motivation of a patient.
- 6) Developed skills to motivate and deliver oral health instructions appropriately to improve the periodontal status / help periodontal problems of the patient.
- 7) Gained skills in thorough periodontal examination and charting, and to diagnose periodontal disease and to plan treatment accordingly.
- 8) Learned the indications, contraindications and recommendations to be made in selecting plaque control devices / tools.
- 9) Gained skills in carrying out non-surgical periodontal procedures such as scaling, root planning and curettage; and preventive periodontal procedures such as plaque demonstration methods, professional plaque control and chair-side motivation for good oral hygiene standards of the patient.
- 10) Developed skills to carryout basic periodontal surgical procedures such as open flap procedures for root planning, gingivectomy procedure (specially localized cases), frenectomy, and removal of epulids as appropriate.
- 11) Learned to carryout periodontal reviews and to decide on the time interval of recall periods, and to modify or make alterations in the treatment plan accordingly.
- 12) Gained knowledge and skills to identify local and systemic modifiers of periodontal disease and to do necessary interventions / refer / seek advice.
- 13) Learned the rationale of antimicrobial therapy in periodontal disease, and to make decision on their use, based on indications and also to decide on the correct timing & duration antimicrobial treatment in each situation.

- 14) Learning the necessary precautions / Interventions to be made in the management of medically compromised patients, and to do appropriate referral for advice when in doubt.
- 15) Gained knowledge to identify periodontal problems which are difficult to be managed, and to seek appropriate referral / seek advice from subject specialists.

3.3.Division of Microbiology

3.3.1. Vision and Mission

The vision of the Division of Microbiology is to make the Faculty of Dental Sciences a centre of excellence in education and research in microbiology and oral microbiology.

The Mission of the Division of Microbiology is to create, preserve and disseminate knowledge in microbiology / oral microbiology. Microbiology is the scientific discipline that has arisen from analyzing the nature of microbes and host-microbe interactions. The department will work hard to infuse knowledge and attitudes necessary for life-long learning by undergraduate and graduate students training to be life scientists and health professionals. This mission will be achieved by recruiting appropriate academic and support staff, encouraging critical self-assessments and creating an intellectually stimulating environment.

3.3.2. Aims

The division of microbiology teaches three major areas during the 2nd year of the programme. These areas are 1) General Microbiology 2) Medical Microbiology 3) Oral Microbiology. The division of microbiology continues to follow the traditional curriculum, where evaluation is done at the end of the course. During the course, the lectures, practicals and tutorials are conducted to achieve the following objectives

1. Pathogenic microorganisms involved in human diseases (both obligatory and opportunistic). An introduction to the structure, physiology, and genetics of micro-organisms, with special consideration given to bacteria and viruses of medical importance and their role in human disease.
2. The pathogenic features and virulence of organisms
3. Disease and complications of organisms
4. Laboratory Diagnosis of Disease. Considers the characteristics of bacterial agents of infectious disease in humans. Host-parasite interactions are emphasized with respect to pathogenesis and the innate immune response. The role of the laboratory in the control of infectious disease is discussed.

All the above objectives are discussed in relationship to pathogenesis of a disease. The principles of human virology are covered, including classification, cell-virus relationships, basic techniques in virology, transmission of viruses, and study of viral disease.

5. Giving practical skills in relation to aseptic techniques
6. The principles and applications of techniques used in microbiology are covered with an emphasis on problem solving.
7. Explores ways in which microbial pathogens interact with their hosts from a molecular and genetics perspective. Topics include: general pathogenic mechanisms of bacteria, viruses and parasites; bacterial virulence factors and their genetic regulations; molecular genetic approaches to studying pathogenesis; and various model systems which have been used to understand pathogenic mechanisms

Emphasizes the fundamental aspects of immunology dealing with the structure, genetics and function of antibody molecules, and the cellular and molecular

regulation of immune responses. A portion is devoted to regulation of the immune response to tumours and particular parasites. Explores microbial interactions with the host and its immune system. Various models of bacterial, viral and parasitic immunopathogenesis will be covered as well as intervention through vaccines or immune modulation.

3.3.3. Learning Outcomes

On successful completion of course on microbiology, practicals and tutorials the students of the 2nd BDS programme should have knowledge in following:

1. Basic principles of microbiology and immunology
2. Medically important microbes involve in important human diseases including oral diseases and their virulence factors and pathogenic mechanisms of these organisms.
3. Cross infection control and safe handling of infectious material, sample collection etc
4. Skills and laboratory diagnosis of important diseases (Eg: Staining and identifications)

3.4.Division of Pharmacology

3.4.1. Vision and Mission

The vision of the DOP is to make FDS a centre of recognition in education and research in Pharmacology and Therapeutics relevant to Clinical Dental Practice, in Sri Lanka.

The mission of DOP is intended to provide the student with adequate knowledge and skills in the correct and effective usage of drugs in the management of surgical and non-surgical dental and oral conditions. It further intends to provide the students with the necessary knowledge on the usage of drugs in the management of medical conditions / emergencies, drug interactions relevant to dentistry, and oral manifestations of drugs. The students are also exposed to Clinical Pharmacology with the intension of providing them with the knowledge and skills on the practical application and evaluation of drug therapy in a clinical setting.

3.4.2. Aims

The DOP teaches the following areas during the 2nd year of the programme. These are 1) General Pharmacology 2) Drugs used in management Dental and Oral Diseases 3) Drugs used in the management of Medical conditions / emergencies with special emphasis on drug interactions and oral manifestations of such drug therapy and 4) Clinical Pharmacology. Evaluation is done at the end of the course. During the course lectures, tutorials and clinical sessions are conducted to achieve the following objectives. Furthermore two in course assessments are held to help the students to face the final examination with confidence.

3.4.3. Learning outcomes

- On successful completion of the 2nd BDS programme should have knowledge in the following:
- Principles of Pharmacodynamic and Pharmacokinetic concepts
- How drugs produce undesirable effects including drug interactions
- How such effects may be avoided or minimized
- The principles of managing these effects when present
- Drugs that are used in dentistry
- Drugs used in the management of important systemic disorders that are of concern to dentistry
- Drugs that produce oral side effects

- Drugs used in systemic disorders which may influence dental management of a patient
- Application of drugs in the management of medical emergencies which may occur in the dental clinic
- Special vulnerable groups of patients in whom certain drugs, especially drugs used in dentistry, have to be used with caution.
- Evaluate drug therapy and give reasons for therapeutic failure.

4. Findings of the Review Team

4.1. Curriculum Design, Content and Review

4.1.1. Curriculum design and content

Oral Medicine, Radiology and Periodontology

The curriculum of Oral Medicine, Radiology and Periodontology extends over a period of two years in the third and final years of the BDS Degree Programme. The Divisions have identified the missions, aims, and learning outcomes. The modular design and horizontal integration with relevant disciplines are clear strengths. However, the curriculum design falls short of the standard course unit system for understandable reasons. In general, the emphasis on clinical demonstrations and clinical practice supported by lecture discussions and tutorials to impart the relevant knowledge and skills is conducive to achieving the expected learning outcomes.

The Division of Oral Medicine and Periodontology has identified the lack of integration of the lecture programme with clinical training as a drawback. A substantial increase in student – teacher interaction and group discussions during clinical appointments may alleviate this problem to some extent and help enhance the effectiveness of clinical training.

The step taken by the Division of Radiology to record and verify exposure to practical skills is commendable. The other Divisions too may like to consider introducing measures to quantify clinical training to ensure that each student receives adequate exposure to the full spectrum of clinical cases and acquires the requisite skills. Further, making the core curriculum explicit would strengthen the programme and help to streamline teaching/ learning and assessment.

The staff explained that a curriculum reform has been undertaken recently, and discussions with the head of newly established Unit of Dental Education corroborated this. Although informal student feedback has been taken into account in the curriculum review, active student participation in the review process was not evident. The importance of receiving feedback from the students and newly passed out graduates in curriculum reform was highlighted during the discussions.

Microbiology and Pharmacology

The curriculum of Microbiology and Pharmacology is taught in the second year of the BDS Degree Programme. The missions, aims and learning outcomes have been identified. The curriculum content has been revised recently and appears to be compatible with the learning outcomes. It is encouraging to note that steps are being taken to convert the teaching of these two disciplines into course units based on the semester system; the introduction of in-course and modular assessment is expected to improve student learning.

4.1.2. Curriculum Review

The panel of reviewers wish to commend the recent establishment of a Unit for development of Dental Education and the steps being taken to undertake a major curriculum reform in the disciplines under review.

4.2. Teaching, Learning and Assessment Methods

4.2.1. Teaching/ Learning

Teaching and learning strategies used by the Department comprise lectures, tutorials, laboratory practicals and individual and group learning in clinical settings. These teaching and learning methods supported by satisfactory physical facilities are designed to achieve most of the learning outcomes particularly in areas of knowledge and clinical/ practical skills.

The panel of reviewers formed the impression that the focus on development of soft skills was inadequate. This was evidenced during an interactive session with a group of 2nd year students; we managed to coax a few students to speak up; students' general lack of communication skills, self confidence and ability to engage in a meaningful dialogue were noted. The Department may wish to revisit the objectives/ learning outcomes in relation to soft/ transferable skills and attitudes and consider introducing additional learning opportunities to impart these skills.

Discussions with 2nd year students revealed that the location of the Medical Library a few kilometres away from the Faculty of Dental Sciences had created problems. The hours of opening, in particular the lending hours, were not dental-student friendly; students also had difficulty accessing the library when they had free time during the day. The reviewers visited the 'Reading Room' in the Dental Faculty premises and noted that the Reading Room has failed to attract students due to the limited number of relevant titles available and the incessant noise from vehicular traffic. The Faculty and University administration may like to consider investing adequately in the Dental Faculty Reading Room and upgrading it to a respectable dental library as a complement to the Medical Library.

During discussions with students, it transpired that they had not received learning objectives/ outcomes at the commencement of the training programme; students also commented that handouts were not provided and expressed the view that these could help enhance their learning.

Meetings with the teaching and technical/ nursing staff were collegial and informative. In particular, the teaching staff was forthright and open to suggestions and demonstrated a capacity for critical introspection. Their enthusiasm and commitment to continuous improvement need to be highlighted.

Oral Medicine, Radiology and Periodontology

The senior students of the Faculty were in vacation and consequently the reviewers did not have an opportunity to observe teaching/ training sessions. However, during a tour of the department, the reviewers noted that the Divisions possess excellent physical resources to conduct the teaching/ training programmes satisfactorily.

At the time of the visit, there were no permanent staff members in Periodontology and staff strength appeared inadequate in Oral Medicine. The junior academic staff pointed out that they were overworked with teaching/ clinical responsibilities and did not have adequate time for self development. Some of the lecturers were abroad either on study leave or sabbatical and the current situation should improve on their return.

Microbiology and Pharmacology

The reviewers had the opportunity to observe a lecture, a tutorial and a laboratory class in Microbiology during the visit. No teaching sessions in Pharmacology could be observed.

The lecture was taken by a visiting professor. In spite of the noise, students seemed to be concentrating on the lecture; there was not much student interaction with the lecturer though. The lecturer explained the objectives of the lecture at the outset. The lecturer's expertise and experience adequately compensated for poor transparencies and we were satisfied that the learning outcomes were achieved.

The laboratory class was well structured and conducted. Students were briefed on the staining techniques and guided throughout. The session ended with a discussion where the lecturer prompted the students to interact and ask questions. The same lecturer took the tutorial and this too was interactive.

The reviewers wish to conclude that all teaching sessions observed were well planned, conducted satisfactorily and were conducive to achieving the learning outcomes.

4.2.2. Assessment methods

The assessment methods used, namely, theory, practical and clinical examinations, are appropriate to test the learning outcomes in relation to knowledge and practical and clinical skills. However, in-course assessments do not occur in Microbiology and Pharmacology and the in-course assessments in Oral Medicine and Periodontology are neither comprehensive nor properly timed. This is probably a consequence of lack of adequate staff as continuous assessments are labour intensive. This is an aspect that deserves special consideration during the curriculum review.

The use of external examiners appeared to be limited to the clinical examinations in Oral Medicine and Periodontology. There was no evidence that the external examiners played a key role in moderation and setting standards. The Divisions may consider assigning a greater significance to external examiners and obtaining their reports to ensure fairness of assessment and maintenance of standards.

4.3. Quality of Students Including Student Progress and Achievement

Student selection and admission are handled centrally by the UGC and in view of the competition to enter the BDS Degree programme the cut off point for admission is high and students tend to have fairly high Z scores. It is therefore understandable that the students have a high academic potential.

The pass rate of students in all disciplines, though variable from cohort to cohort, appears to hover around 70 - 80%; it is only a small percentage that receives distinction level passes and the failure rate at times can be as high as 30%. Therefore, there is ample room for improvement of student achievement in view of the high calibre of the entrants as discussed above.

Poor English language competency may be one of the factors that limit student achievement. Although the intensive course in English seems to have some impact, this is clearly inadequate to eliminate the language barrier. Interestingly, the Division of Periodontology has identified lack of interest and incorrect attitudes as reasons for poor clinical performance in a minority of students.

The Division of Periodontology stated that the failing students are provided with special guidance and additional opportunities for clinical training. It appears that most of the

students who fail pass at the second attempt. The reviewers did not come across adequate statistics to compute a drop out rate. Close monitoring of pass/fail rates and drop out rate is useful to identify root causes of poor performance and effectiveness of past interventions.

Student motivation and support mechanisms would help improve student performance. The department may consider establishing formal mechanisms to identify weak students (formative assessments) and institutionalise remedial measures. A comprehensive programme to inculcate good 'study skills' covering effective reading, listening, note taking, and time management is likely to prove beneficial.

4.4.Extent and Use of Student Feedback – Quantitative and Qualitative

Clinical and practical training sessions, by nature, are interactive and offer excellent opportunities to obtain informal feedback from students. Faculty also has a student mentoring scheme where students are assigned to lecturers for guidance. Two student representatives sit at the Faculty Board meetings and contribute to the discussion of matters relating to students. We also came across evidence of receiving student feedback on the Oral Medicine programme through a structured questionnaire administered after the final examination.

However, there was no evidence that this student feedback was substantial and it appeared at best to be ad hoc. This was corroborated by the sentiments expressed by the students we met during the review visit. Students expressed the view that they find it difficult to convey their difficulties to the administration and get the burning issues resolved. The problems in relation to the library were highlighted as an example.

While the students have a need to express their views on the teaching/ learning process and the support facilities provided and the staffs are willing to receive feedback and be supportive, there appears to be a gulf between the two sides. We feel that formal and structural mechanisms need to be instituted to bridge the gap and create a supportive environment.

The Department may consider having regular (fortnightly) meetings with batch/ group representatives, administering questionnaires at the end of each clinical appointment/ semester to receive formal feedback, and allocating time in the timetables for student mentoring. Students seemed reluctant to express their views particularly in relation to quality of teaching. Acceptance of anonymous feedback may help address this problem. Improvement of staff-student rapport through social interaction may facilitate the receipt of student feedback.

The feedback received from students need to be properly documented, analysed and referred to the relevant authority for prompt action. Keeping the students informed of the action being taken in relation to each issue may help win their confidence and generate further feedback.

The panel noted with interest the student evaluation of teachers undertaken in 2002/ 2003 with assistance from an expert from JICA. The plan to revive this practice with the recently established Teacher Evaluation Unit is noteworthy.

4.5.Postgraduate Studies

The Divisions of Oral Medicine & Radiology and Periodontology contribute to the postgraduate training programmes conducted by the Postgraduate Institute of Medicine. The programmes are MS (Oral Surgery), MS (Restorative Dentistry), MS (Orthodontics) and Diploma in Hospital Dental Practice (DHDP).

The reviewers met two students in the MS (Restorative Dentistry) programme, one completing the MS (Oral Surgery) programme and several students following the DHDP programme. MS students expressed satisfaction with regard to the training provided and the facilities available for training. However, DHDP students were not happy about the level of clinical exposure and the library facilities provided.

The Divisions stated that they offer research degree programmes leading to full-time and part-time MPhil and PhD degrees. However, at the time of the visit none of the Divisions had postgraduate students in the research degree programmes.

Presently, a few lecturers are undergoing postgraduate training abroad. It is also encouraging to note that the Division of Microbiology has plans to introduce an MSc programme in Microbiology in collaboration with the Faculties of Medicine and Science. The Division of Microbiology also has an Oral Microbiology-Industry Collaborative Research Unit; this is an exemplary arrangement to generate much needed funds for research.

The Divisions have good facilities for research and the Dental Hospital being a referral centre provides excellent opportunities for clinical research. The Divisions also have a few lecturers with a strong research background. With the introduction of a research agenda and improvement of staffing, it is clear that the Department has the potential to emerge as centre of excellence in oral research.

4.6. Peer Observation

There appears to be informal discussions among teachers to address issues in relation to learning and improve teaching. However, presently, none of the Divisions practise peer observation. Introduction of peer observation could be the responsibility of the newly established Teacher Evaluation Committee that has been assigned the task of improving the quality of teaching. The reviewers wish to point out that the lecturers can learn so much from each other in a collegial setting.

4.7. Skills Development

The stated learning outcomes of the Department are intended to develop clinical/practical skills and to some extent transferable skills. Nonetheless, the training programmes and assessments seem to focus on acquisition of knowledge and clinical/practical skills and the focus on development of transferable/ soft skills such as communication and analytical skills appears to be inadequate.

The practical sessions in Microbiology and Radiology appear to be satisfactory in imparting the required subject related skills. The clinical rotations system in Oral Medicine and Periodontology too allows incremental acquisition of clinical skills provided there is a mechanism to make available adequate opportunities to students in an appropriate sequential manner. Measures to quantify clinical training such as the use of log books may help ensure that all students are exposed to the full spectrum of clinical skills they need to acquire.

The teaching/learning process is based mainly on lectures, tutorials and clinical/practical sessions. Introduction of more student centred learning and assessment approaches such as individual and group projects, student seminars, self-study assignments and journal clubs may help impart transferable skills more effectively.

4.8.Academic Counselling and Guidance

Faculty of Dental Sciences has several student counsellors and a mentoring scheme where students are assigned to staff members for guidance. Lecturers also express their availability to discuss student problems, academic or otherwise. However, these measures do not seem to attract many students to seek advice from the academic staff.

Students do not seem to perceive that there is a caring and supportive atmosphere. Creation of such an environment conducive to student learning and well-being requires much effort, time and constant attention.

The Department may consider organising an orientation programme at the commencement of each study programme. During the orientation, students entering the programme can be given an introduction to the divisional facilities and staff, and an overview of the teaching programme. Students may also be issued with a folder containing time tables, structure of the teaching programme, aims and learning outcomes of the teaching programme, assessment methods, recommended texts, and other guidelines to facilitate their learning.

5. Conclusions

Based on the observations made during the visit by the review team and discussed above, the eight aspects were judged as follows:

Aspect Reviewed	Judgement
Curriculum Design, Content and Review	Good
Teaching, Learning and Assessment Methods	Satisfactory
Quality of Students Including Student Progress and Achievement	Satisfactory
Extent and Use of Student Feedback – Quantitative and Qualitative	Satisfactory
Postgraduate Studies	Satisfactory
Peer Observation	Unsatisfactory
Skills Development	Satisfactory
Academic Counselling and Guidance	Good

6. Recommendations

Recommendations are given under each aspect of the review discussed above for consideration by the Department. In particular, the reviewers wish to draw the attention of the Department to the following:

- Creating a caring and supportive atmosphere for students as perceived by the students.
- Taking further steps to motivate students to learn English and follow the academic programmes enthusiastically.
- Instituting concrete measures/ mechanisms to receive constant feedback from students with a view to improving the teaching/ learning process and supporting the curriculum reform.

- Improving the academic guidance and support for students including the introduction of a comprehensive orientation/ induction programme at the commencement of academic programmes each year.
- Placing greater emphasis on the acquisition of soft/ transferable skills and providing more group and individual activity based learning opportunities to impart these skills.
- Enhancing the acquisition of clinical skills by introducing measures to quantify clinical training and to ensure the exposure of each student to the full spectrum of clinical skills.
- Identifying the root causes for the low academic achievement of students (relative to the high academic potential of entrants) and effecting appropriate interventions.
- Introducing a comprehensive scheme of in-course/ continuous assessments with a view to directing student learning and improving effectiveness of assessment. Incorporating assessment of soft skills into the assessment scheme.
- Redefining the role of external examiners and using their input to ensure fairness of assessment and maintenance of standards.
- Introducing a staffing policy that will ensure the constant availability of personnel (of right competence, in right numbers) to support the academic programmes satisfactorily.
- Capitalising on the excellent facilities, diverse clinical material, and staff with strong research background to introduce a well-defined research agenda and a research culture and to develop postgraduate programmes.
- Expediting the commencement of student and peer evaluation of teachers with a view to enhancing the quality of teaching.

Finally we wish to commend the Faculty on the establishment of a Dental Education Unit. The Faculty may like to take further steps to strengthen this Unit with adequate personnel, staff training, facilities and finance to spearhead the curriculum reform and enhance the quality and standards of the academic programmes.

21st August 2006

AGENDA OF THE REVIEW VISIT
DEPARTMENT OF ORAL MEDICINE AND PERIODONTOLOGY

03rd April 2006

07.30 – 08.30 p.m - Private Meeting of Reviewers

04th April 2006

09.00 – 09.30 a.m - Welcome Meeting with Dean, Heads of Department/ Divisions

09.30 – 10.00 a.m - Discuss the Agenda of the Review

10.00 – 10.45 a.m - Micro practical (P1) Observation

10.45 - 12.30 a.m` - Department Presentation on the Self-Evaluation report

12.30 - 01.30 p.m - Lunch Break

01.30 - 02.00 p.m - Observation Department Facilities (Microbiology/
Pharmacology)

02.00 - 02.30 p.m - Microbiology Lecture (L1) Observation

02.30 - 03.00 p.m - Meeting with Department Academic Staff

03.00 - 04.00 p.m - Meeting with Students – Observation of Department Facilities
(Other Facilities)

04.00 - 05.00 p.m - Meeting with Staff

05.30 – 06.00 p.m - Brief Meeting of Reviewers

DAY- 2

09.00 – 10.00 a.m - Observation of Clinics/ Clinical Practice

10.00 - 11.00 a.m - Scrutiny of Documents (Working Tea)

11.00 – 12.00 noon - Meeting with Technical and Nursing Staff

12.00 – 12.30 p.m - Meeting with Postgraduate Students

12.30 – 01.30 p.m - Lunch Break

01.30 – 02.30 p.m - Meeting with Head of Dental Education Unit

02.30 - 04.30 p.m - Scrutiny of Documents

04.30 - 05.00 p.m - Brief Meeting of Reviewers

DAY -3

09.00 - 09.30 a.m - Academic Guidance and Counselling – Meeting with Counsellors

10.30 – 11.00 a.m - Reviewers Private Discussion (Working Tea)

11.00 - 12.00 noon - Wrap-up Meeting with Head & Staff

12.00 – 01.00 p.m - Lunch Break

01.00 – 05.00 p.m - Reporting Writing