

ADEE School visitation report

April 2019



Tehran University of Medical Sciences
School of Dentistry
Tehran

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Acknowledgements

The visitation team would like to thank Tehran University of Medical Sciences and in particular the School of Dentistry, for hosting an ADEE site visit. We appreciate the time and effort that has been spent by staff in preparing for the visit and in completing the self-evaluation document. We would particularly like to commend the School for their openness and honesty in the document, but especially during the visit which helped us enormously, giving us a true insight into the undergraduate teaching programme, within the national and cultural context.

Particular thanks are offered to the Dental School Dean, Dr Amirreza Rokn, the visit coordinator, Dr Pouyan Aminishakib, the Management Board and the Self-Assessment report committee.

The team also wish to express their gratitude for the extremely warm welcome and hospitality which they received during their visit.

Prologue

The process of preparation for an ADEE visitation and for the production of a self-assessment report is the most important part of an ADEE visit. The more faculty that contribute to the process, the greater the validity of the visit. The periodically repeated exercise of a self-assessment by a school enables the school to advance forward with dental education. The School of Dentistry in the Tehran University of Medical Sciences is regarded as a leading institution in Iran. It is to be commended on its leadership, clear strategic plan and the commitment of the staff. The visiting team were impressed with the enthusiasm and dedication of the management board, the self-assessment report committee and other staff to the delivery and evolution of the curriculum and the learning and wellbeing of the students. There are several areas within which ADEE would recommend development in order to drive forwards the quality of dental education that is provided, and to allow TUMS School of Dentistry to continue to be recognised as one of the leading dental schools in the country.

The observations of the ADEE team of visitors are given by four individual dental educators working as a team in order to give perspectives from different countries, and different academic and professional backgrounds. The nature of the ADEE visit is a peer review and its main focus is to give professional feedback to the school.

ADEE aims to advance dental education in Europe through convergence towards higher standards. This is achieved through peer influence and the exchange of ideas and best practices. All the visitors are influenced by the ADEE curriculum documents "The Graduating European Dentist".

The team's comments are offered to the school for their consideration and debate. They have purposely avoided detail and minimized comments on individual departments, and that relate to individual staff, in order to avoid unhelpful comparisons. The team recognise that there are a number of potential resources within Europe and the wider world that may help to facilitate improvements and new initiatives, and ADEE is happy to facilitate access to these. On behalf of ADEE, we hope that you have found the process useful.

Introduction and general remarks

Tehran University of Medical Sciences and Health Services (TUMS) is the oldest and most well-known medical centre in Iran. TUMS School of Dentistry is a well-established school (1934), and is nationally recognised in the fields of education, scholarship/research and advanced health care studies amongst the 46 dental schools in Iran. Originally, the School of Dentistry was located on the main university campus, but in 2009 it was re-located to the present position to the new building. The old building has become a research campus, which is still used by the Dental Faculty. In addition, a new campus, located out of the centre of the city, was established in 2011 to cater for international undergraduate students. The School currently admits 90 students to its 6-year undergraduate Doctor of Dental Surgery (DDS) programme.

School Goals

- Training expert healthcare providers and researchers
- Lead in Science & Technology
- Engage with Ministry of Health & Medical Education (MoHME) partners
- Provide healthcare services

Staff representation during the visit

The visiting team was able to meet with the Senior Management Team, Heads of Department, and to visit the research and international campuses.

School facilities

Physical and clinical facilities

The School is currently based in a dedicated building near the centre of Tehran, a relatively short distance away from the main university campus. The building comprises two connected buildings, the first of which is mainly dedicated to the clinical facilities, but also houses classrooms, and the second, the conference halls, restaurant, CSSD, simulation labs and technology labs as well as classrooms and the library. The buildings are spacious with sufficient facilities for the undergraduate and postgraduate students.

There is a separate research campus located in the city centre, which houses two academic departments, Biomaterials and Dental Public Health and contains six separate well-equipped research laboratories

In addition, there is a separate campus dedicated to international students which is located in an area of the city which is approximately 45 minute drive from the School of Dentistry (see p.14).

Current clinical treatment facilities are spacious with good quality dental units and chairs. During the day, separate clinical areas cater for undergraduate and postgraduate students. In the evening, Faculty clinics run in all departments for staff who are not allowed to work in private practice (type B).

A well-equipped Radiology Department supports all clinical areas and the Diagnostic clinic on the ground floor triages patients before allocation to the appropriate level of student or to staff. Digital X-rays are used throughout the building, but further infrastructure is required to allow these to be displayed at the chairside in clinics throughout the building. Students are also trained in analogue X-rays to prepare them for working in practice.

Clinical support and maintenance of facilities

There is a large number of support staff, ensuring that clinical facilities are clean and well-maintained. However, dental assistants are limited in number, meaning that students are often working on their own. Some departments have arrangements for students to work in pairs, but this is ad hoc, rather than as a well organised programme of chairside support.

Dental technicians fabricate fixed and removable prostheses and are well trained (within the School) to provide support for students in this field. The technicians help both faculty members and students for laboratory procedures during practical courses.

Cutting-edge technology (i.e. CAD-CAM & endodontic microscopes) is available and supports the clinical training of both undergraduate and postgraduate students.

Supporting clinical facilities (Centralised Sterilisation Service Department (CSSD) Patient Archiving and Communication System (PACS) are in place. The Hospital Information System (HIS) which has education, research and assessment modules, is being developed.

Teaching and Learning facilities

The School has three conference halls and several classrooms which are sufficient for the didactic element of teaching. There are also small rooms and spaces adjacent to or on the clinics which allow case discussion for students during clinical sessions.

The OMF Pathology Department has a training laboratory with 50 light microscopes and an extensive archive of microscope slides. There is also a multi-headed microscope which is used to support teaching.

The panel recommends that the organisation of the School's spaces might benefit from a more student-based approach as a way to enhance their learning experience.

Library facilities and texts

The library and the IT services seem to follow the present needs regarding the retrieval of up-to-date scientific information.

The library is small and traditional and is housed within the School of Dentistry. There is an adjoining computer cluster room with 15 computers. There is a wide range of electronic journals and databases which students can access from here, or the main library at the university or from home.

Research facilities

The research campus, which is located near the main university campus, contains six separate well-equipped laboratories which are used by postgraduate students in the main, but undergraduate students are able to access them too for their research projects.

Patient-base

The School of Dentistry and the International campus serve patients from across Tehran. Caries and periodontal disease are widespread amongst the Iranian population and need for dental care is high. Because the cost of treatments is low compared with private practice, there is a good supply of patients for both undergraduate and postgraduate students. The majority of patients are self-referred for specific

complaints, although some are referred for more specialist services (e.g. oro-facial pain, cleft lip & palate etc).

Patients are triaged and allocated to the relevant department, where they are then treated by Faculty or students depending on clinical needs. The generally high needs of patients means that treatment is mainly focussed on individual procedures, undertaken in separate departments, rather than prevention based and holistic patient care.

Usually patients are discharged once their routine treatment has been completed.

Multi-disciplinary training

The School runs a four-year BSc programme in Dental Laboratory Technology. The highly achieving graduates from this programme are employed to teach the undergraduate students.

There are very few dental assistants and budgetary constraints do not allow for expansion of this important group of dental auxiliary personnel.

Although training of dental hygienists has been ceased in Iran, preventive-oriented auxiliary professionals could not only be utilised in dental care services, but also in the school to provide the students exposure to team work in dentistry.

The panel notes that in some clinical departments, students are able to work with one another, in pairs (senior with junior). We recommend that this practise is considered and formalised across all clinical departments.

Organisational structure

The School is led by the Dean, who is directly in communication with the Chancellor and Vice Chancellors of the University, and is supported by six Vice Deans. Their responsibilities are indicated below:

- Postgraduate Educational Affairs
- Educational Affairs
- International Affairs
- Student, Cultural and Social Affairs
- Research Affairs
- Administrative and Financial Affairs

The Vice Deans meet with the Dean weekly in the Management Board, to discuss major elements of organisation.

There are a total of 13 Academic Departments covering the range of dental disciplines.

The Dean, Vice Dean and Heads of Departments, plus two Faculty members, make up the Educational Board, which is the decision-making body of the School and which meets once a month.

The visiting team noted that this is an influential committee, taking overarching decisions about learning and teaching and assessments. However, the Heads of Department are able to make decisions about educational methods and types of assessment, which allows some flexibility, although leads to a lack of consistency of approach across the School. The panel also noted that there is no direct student input into the committee and this should be considered by the School.

Staff

The Dean of the School is supported by young and enthusiastic Vice-Deans, who are eager to contribute to the Mission of the University and the School.

At the time of the self-assessment document, 160 Faculty members were working in the School of Dentistry at TUMS. There are two types of full time faculty members; type A who must attend 120 hours per month and are allowed to practice in their private offices and type B who must attend 160 hours per month and are not allowed to practise in private offices and clinics. Currently 61% of the faculty are type B. In all academic departments, apart from OMFS, there are more female than male faculty members. The School has also recruited 13 international visiting professors across a range of disciplines. Although the School has a number of support staff, the team noted very few chairside assistants. This is of concern as it impedes the efficiency of faculty and students and can compromise patient safety.

Recruitment and retention

The University and School have criteria for recruitment of faculty members. Appointments are made depending upon the needs of each department and following application and interview. Assistant professors are appointed on one year contract which is renewed by consent of both sides.

Professors and Associate Professors are appointed on a longer contract.

Support staff have an exam and are reviewed annually.

The School is concerned about the difficulty of recruiting male academic faculty members. The School reports that after 4 years activity at the school, if faculty members cooperate with faculty clinic of the school 2 days a week, they will be permitted to work in private clinics for the rest of the week. It is hoped that the change in rules, will alleviate some of the retention difficulties.

CPD, Staff training and development planning

All dentists must undertake CPD in order for their licence to be renewed.

Within the School, workshops have been held for academic staff to improve their educational ability. These have covered topics such as communication skills, ethics, questionnaire design and course & lesson planning. However, there does not appear to be an ongoing programme of staff development activities.

The School reports that all staff from the international campus are included in these activities.

Peer observation of teaching is being introduced by the University and staff in the School will have to undertake this in the future.

The panel recognised the pedagogical workshops as good practice, but recommend that an ongoing programme of structured activities be developed to ensure that all staff are up-to-date in new learning and teaching methods.

Progression and professional standards

There are specific guidelines from the Ministry of Health for promotion from Assistant to Associate and then to Full Professor. Applications are considered by the School committee and then the University Committee. Promotions are based upon educational, research, social and executive activities and web based software helps to calculate an individual's eligibility.

Although all staff have a postgraduate qualification, the majority have a MSc (82%), rather than a PhD (9%).

Despite the appeal of being part of a respected School, the pedagogical coherence and consistency of the staff should be secured and measures put in place to attain a stable and qualified teaching staff. The visiting team recognised that there is a commitment from the School to achieve this.

However, recruitment and retention of junior staff requires a clear strategy from the School. Engagement of junior faculty with the School also requires a strategic approach and the nurturing and support of these staff will benefit the School's educational and research outcomes.

The auxiliary clinical staff should be regarded as an asset beneficial to facilitate the students' clinical activities and learning and the panel would recommend recruitment of more dental assistants.

Student selection and General Curricular approach

The student intake for the dentistry programme is between 80 and 90 students per year. Top ranking students in the Nationwide University Assessment Entrance Exam (NUEE) are selected for TUMS.

The Dentistry programme aims to train capable and competent dentists for:

- Providing preventive, therapeutic & rehabilitating services in the field of oral health to the community, co-ordinated and in line with the macro policies of the country and health system
- Oral health education and training
- Management of oral health programmes
- Research in the field of oral health

The School, under its 4-year strategy for dental education, introduced by the Dean in 2018, is committed to develop its undergraduate programme is committed to develop its undergraduate programme in the following ways:

- Competency based approach
- Simulation in pre-clinical courses
- Electronic site for exams and to provide questionnaire for analysis tests
- Increased community field programmes
- Increased virtual and modern methods for teaching
- Independent dental implant department.
- Main clinic development

The visiting team shares with pleasure the school's 4-year strategy for dental education. However, training dental professionals adopting life-long learning concept might also be worth including into the strategy

The DDS programme is delivered over six years of study in two stages. The first two years cover general and basic science and the following four years are focussed on clinical disciplines.

The department-based Educational Board plays a decisive role in the definition and supervision of overall educational activities and is actively engaged with implementing the 2018-2022 plan.

The curriculum is traditionally designed and delivered via a departmental structure which does not facilitate content integration.

Recent modifications, such as workshops, promote interaction between the students and also promote active learning.

The incorporation of integrated courses into different parts of the curriculum has taken place over the past couple of years. This is commended and further development of this integration is encouraged.

Term / Semester & Hours of Study

Each academic year is arranged in two semesters. Students must pass all courses in one year before progressing to the next.

In total the DDS programme comprises 217 credit points over six years. A BDS programme is offered to international students comprising 182 credits over five years.

General Assessment Strategy

The School uses a range of written and practical assessment methods. However, these are in the main, chosen by the Heads of Department and ratified by the Education Board. There does not appear to be an overarching assessment strategy and students must undertake multiple tests across departments.

A blueprint for each examination is completed by the relevant academic department and examinations are organised by the Educational Office.

The visiting team commended the current trend towards the development of proper educational competencies and recommend that this should be further nurtured

The panel also noted the efforts which have been made to integrate teaching and welcome the new initiatives which will encourage active learning. We would recommend further integration between Biomaterials and clinical disciplines and between Oral Pathology and the clinical disciplines.

However, the team felt that the assessment load for staff and students is too heavy and recommends integrating and reducing assessments where possible.

Some suggestions for the School to consider are:

- *Inter-departmental OSCE – combining all the separate OSCEs from different departments*
- *Progress testing – repeat each year demonstrating students' increasing understanding*
- *Log book or portfolio allowing student input to the assessment process – reflection which is the basis of lifelong learning.*
- *Students should receive some personal feedback about how they can improve their learning.*

Curriculum – Professionalism and Progression

Professionalism

Whilst the school values the attribute of Professionalism and has recently introduced a 'transition to clinic' professional practical in workshop style, including role play and ethics, this is not currently formally assessed in any way within the curriculum, either in written form, or within the skills or the clinical environment. However, a checklist to assess professionalism has been prepared and is to be applied soon within the course.

Student progression

Students must complete all the courses within each academic year before progressing to the next one. At the end of the second year students take a national exam in order to progress to the following stage. They may re-take this exam every two months until they pass.

At the end of year 6, there will be a local exam to assess students' knowledge. The complete details of this are not yet finalised, but students will have up to 3 opportunities to pass.

Within the programme, students must complete required numbers of procedures in the clinical disciplines in order to progress as well as completing a formal exam at the end of each semester.

Curriculum – Safe & Effective Clinical Practice

Scientific knowledge that underpins patient care

The panel felt that the current programme covering scientific knowledge that underpins patient care is generally comprehensive.

The first and second year of the dentistry programme focusses on general and basic science, which provides a good grounding for the students to underpin their patient care. However, there is no integration of these subjects with the clinical part of the course, which may lead to a 'disconnect' for the students.

Generally medical sciences are taught from years 3 to 6, alongside the clinical part of the course. The School is working to integrate courses, in particular the general and OMF pathology.

The Dental Public Health and Behavioural Science curriculum is delivered throughout the curriculum. Several practical workshops have been introduced to aid the development of communication and professional skills.

Within all clinical disciplines, theoretical aspects underpin the clinical teaching. In some areas the theory is taught before the clinical aspects and in others, for example, Endodontics, they are taught alongside each other.

Clinical experiences are being built on previous experiences, which is reflected in many dental curricula as spiral curriculum. This is indicated delivering theoretical background in different modules building on each other along the study years. Usually clinical training starts with practice of hygiene practices, simple periodontal and caries treatment. Having sufficient competence in these procedures facilitates students' adoption of more demanding skills e.g. endodontic procedures later in the curriculum.

Biomaterials is taught in two modules which are separated from the clinical teaching. However, a new integrated module is due to be delivered in semesters 5&6 as part of the new curriculum.

The panel recognise the efforts which are being made by the School to implement integrated courses / modules. We recommend the continued development in this area. In particular ensuring that faculty work together in delivering this teaching, rather than a series of separate lectures.

The delivery of basic sciences by the medical school, on a separate campus, means that there is limited contact between staff and students see this part of the course as very separate from the clinical phase. The panel recommends that the School tries to find ways to integrate these.

Gatekeeping patient care – Pre-clinical skills

There is an extensive programme of pre-clinical skills which is delivered by individual academic departments. This covers the following skills which are carried out in the simulation laboratory, technical teaching laboratories and phantom heads in the clinical departments:

- Operative
 - Anatomical tooth carving
 - Instrument use
 - Cavity preparation
 - Direct and indirect restorations

- Removable Prosthetics
- Paediatrics & Orthodontics
- Medical emergencies
- Radiography

Although students undertake a large number of procedures, assessment appears to be staff-focussed. It would be helpful for an element of student reflection to be included in this part of the course. For example, this could be done by means of an log book or portfolio.

The following reference to a European survey may be helpful in gaining an overview of teaching and assessing pre-clinical skills (<https://www.ncbi.nlm.nih.gov/pubmed/28636116>).

The visiting team noted the heavy load of prosthodontic laboratory based teaching for students and recommend that this is reviewed, with a view to streamlining it. We also recommend that student reflection is incorporated into the assessment process.

General clinical care

In the clinical training the undergraduate students enjoy good teacher-student ratio. Throughout the clinical phase of the course (years 3,4,5) students' main clinical experience is arranged in a departmental structure. Whilst this provides the opportunity for students to develop discipline-related skills and undertake a high number of individual procedures, it does not lead to fostering patient relationships. Preventive care should be an integral part of every patient encounter supported by integrated theoretical teaching covering all disciplines.

However, in the final year (6) of the course, a comprehensive patient care approach has been adopted. The students are able to integrate their clinical skills and focus on whole-patient care.

The panel were pleased to see this integrated approach to patient care and recommend further development of this into earlier years of the programme. In addition, the panel recommends that, if possible, an element of longitudinal patient care is introduced, in order for students to review the outcome of their treatments and to build ongoing relationships with their patients.

Curriculum – Patient-centred Care and Patient involvement

All patients that visit the hospital are triaged in the ground floor department prior to being allocated to faculty or student clinics for further care. Students attend this department and take a holistic approach to diagnosis and treatment planning before escorting patients to the relevant treatment areas.

Restorative, endodontic, periodontics and prosthodontics treatment is undertaken by students in the relevant departments and more complex cases are treated by the postgraduate students or faculty.

In Oral Surgery, students work together in pairs, enhancing the learning experience

In Paediatric dentistry, students are able to work together in some instances, with the year 5 students assisting year 6 students.

In Periodontology, students are able to undertake some surgery and in some instances work alongside the postgraduate students.

There is an opportunity for students to assist staff on the faculty clinics. This is popular and helps students develop a deeper understanding of patient care.

Currently patients are not involved in giving any feedback to students or participating in any examinations.

The panel commends the practice of shared care with junior students assisting senior ones. We recommend that all departments consider this way of working to ensure patient safety and wellbeing and to enhance student learning. Feedback from patients would also be useful as a contribution to the quality assurance processes.

Curriculum – Dentistry in Society and Outreach Programmes

Dental Public Health

The Dental Public Health & Behavioural Science teaching is delivered throughout the course, starting in year 1 with patient observations. The topics covered are broad and include:

- Community Assessment
- Oral health promotion & Health Education
- Community and Individual Prevention
- Structure & Delivery of Health Services
- Evidence-Based-Dentistry

A range of teaching and learning formats are used including role play, team-based learning and project work. Field programmes enable students to put theoretical concepts into practice, undertaking oral health examinations and fluoride varnish applications. However, expanding field programmes to cover some clinical procedures in order to facilitate a better real life experience of the students. could be considered. In addition, integration into the comprehensive care unit allows students to be taught and assessed in patient counselling and education.

Curriculum – Research, Electives and wider engagement

Research elements

Students are introduced to research methodology through courses in years 3 and 4 in order to present a research proposal in year 4. During the last year of study, students prepare their DDS thesis, supported by a course in scientific writing. In order for students to be eligible for their thesis defence, they must prepare and submit one research paper from their work. This is presented to faculty members.

The panel commends the thesis preparation, but recognises that students have limited specified time to undertake this throughout the final year. We suggest that additional time in the curriculum is identified for students to carry out their thesis work. The School reports that students have enough time to carry out their thesis work from 8 to 12 semesters. It might also be helpful for students to present their work to the whole year group, rather than just faculty members. This would provide a great learning opportunity in research matters.

Opportunities for engagement

The School actively encourages students to engage in extracurricular activities. These include cultural, charity and political activities. In addition further research opportunities are available.

The Dental Public Health field studies enable students to engage with the local community.

Student affairs and the Student Voice

The student body at TUMS School of Dentistry is open-minded and positively engaged with the School. Student representatives are elected for each year group and serve on the Students' Association Council.

Annual course evaluation takes place via student questionnaires and some student focus groups.

Generally, the student voice in educational matters is addressed via informal pathways.

Informal lines of communication with faculty members and the Dean are appreciated by students

Students experiencing difficulties are able to seek advice and support from the Psychologist who is based in the School

The panel commends this support, but we suggest considering a formal personal mentor system which would give all students the opportunity for support and advice about their academic progress.

Student thoughts:

The visiting team was able to meet with a group of students representing all years and were impressed by their willingness to engage with discussion. They expressed a range of views but in general were positive about the new curriculum and the increasing focus on education.

- The students felt privileged to be at TUMS and recognised the School's high rank within Iran.
- The students felt that TUMS gave them an opportunity to see a large number of patients and experience a wide range of clinical cases.
- The students were positive about the integrated courses but felt that in some cases there was repetition
- Students raised concerns about self-study hours, which they felt weren't enough and not labelled clearly in the curriculum
- Students requested examination feedback
- Students were concerned about scores on clinic assessments and felt they weren't fair. They would like more transparency
- Students in the early (basic sciences) part of the course felt separated and in some cases, isolated from the School of Dentistry and the clinical part of the course.

Teaching quality

The School has well-framed quality management systems. Both internal and external quality assurance are in place. The Evaluation Committee within the School undertakes annual course and teacher evaluation by means of questionnaires. In addition, further work has been done with students using focus groups.

Student participation would be regarded and promoted as an opportunity for engaging the entire academic community in a broad reflection over its educational outcomes.

A tight regulatory framework is set by the Ministry of Health and Medical Education (MoHME) which publishes quality reports of the Dental Schools of Iran. In the latest publication (2004), the School of Dentistry of TUMS was in second place in this ranking. However, since this report, the School has relocated and has improved facilities.

The School follows a government-defined curriculum, which allows for a small amount of academic autonomy. In TUMS School of Dentistry up to 20% of the curriculum can be changed by agreement. Within the University, quality assurance is undertaken on a themed basis. In 2015, within the theme of 'responsiveness to customers', the School of Dentistry was ranked most highly.

The panel suggested that some feedback is given to students outlining how the course has changed following their evaluation

School research and publications

The School's scientific outputs constitute one of its major assets and appear to contribute to the overall image of the School. Recently, six lines of research have been defined within the School in order to focus on areas of strength.

A Faculty Research Committee has representation from each department within the Dental School and provides a clear link to the University research structure. This committee makes decisions about allocation of the research budget.

Well-equipped facilities for research are located in the research campus, which supports the School's research strategy.

Research-informed teaching

There is a commitment to instigate students' involvement in R&D activities leading to a mandatory thesis. Students have recently been allocated time in their calendar to work on their thesis. The visiting team saw evidence of ongoing support of some research club experiences.

The team commends the definition of lines of research according to the strengths of the School

Recommendation: To consider how research resources are allocated. To consider students defending their thesis to the whole class. The creation of a dedicated Institute of Dental Research should be supported by the University

International Campus

This campus was set up about 10 years ago, with a separate Dean (who is now Dr Reza Yazdani, appointed recently).

It is housed in two buildings, one administrative and one clinical and has 39 faculty members plus 9 other part-time staff. Some of the staff of the main campus also contribute to the work on the international campus.

Students

The student intake is approximately 50 per year. These have mainly been Iranian paying students. From 2012 to 2019, seventy-one international students have enrolled. They have mainly come from Iraq, South Korea, Syria, Morocco, Sudan and Nigeria. The first of these students will graduate in 2019.

Curriculum

Although the curriculum aligns with that on the main Dentistry campus, there are some differences, particularly in assessments.

During the first two years of the course, the students are taught in English and are based on the main university campus at the international medical school. During the clinical part of the course, the language used is Farsi and students are based on the international dental campus.

Students apply via an online application process and either undertake the DDS (217 credits) or can choose the option of a BDS (182 credits). This is more appropriate for some of the international students as the teaching excludes some cultural and religious credits. Clinical facilities are excellent and the patient supply is good. The staff student ratio is 1:5 or 1:6.

Organisation

This campus operates under University processes and so is aligned with the School of Dentistry. There is a separate Educational Board on this campus, made up of the Heads of Departments who are based here. However, the Dean and Vice-Dean also sit on the Educational Board at the main School of Dentistry which aids communication between the two sites.

Student voice

The team were able to meet with some of the international students, who gave positive feedback on the course. They were positive about their teaching, but cited difficulties in the first two years on the main university campus, feeling isolated from their peers at the School of Dentistry.

The visiting team were impressed with the facilities at the international campus and with the motivation of the staff. The population served is different to the main campus, however we recognised that there are some difficulties in being separated from the main School of Dentistry. The students are enthusiastic and motivated but expressed feelings of isolation particularly in the first two years.

Disciplines are taught separately and the team would recommend integrated clinics for comprehensive care of patients.

The team would recommend that all staff from the main building are scheduled to take part in teaching on the international campus, which would achieve harmonisation of the two programmes. In addition, unifying the leadership of both campuses would be of benefit, in order to ensure that the courses are closely aligned.

Summary

Strengths

Strong and innovative leadership within the School by the Dean supported by the Vice-Deans

Adequate building with modern facilities

Pre-clinical laboratory open to students for self-study out of hours

Comprehensive clinical patient care in final year

Dedicated staff support with a good staff : student ratio

Staff are engaged with research and education in their area of expertise

Great opportunity for clinical experience because of sufficient patient supply

In addition to dental school clinical experience, students have the opportunity to take part in oral health community projects

Energetic student body, appreciative of the support from the School

Integrated care approach seems to be well accepted by staff members

Students are able to access an appropriate range of materials and equipment.

The simulation laboratories and the clinical environment are adequate in the current international context
Pre-clinical skills units (x2) are used by students for prosthodontic and restorative procedures.

Weaknesses

Basic sciences separated from clinical experiences, both horizontally and vertically

Limited influence from the dental perspective on the content of the basic science teaching

Apparently heavy assessment load for both staff and students

Lack of chairside assistance for students treating patients

Focus on procedures, rather than continuity of patient care during clinical years

Clinical assessments could be better used for student learning

Recommendations

The panel recommends a number of key positive interventions, derived from the report and from the SW analysis above. Whilst this list is not exhaustive, the team feels that the recommendations below will help to guide the School in the next phase of curriculum development.

1. Integrated curriculum design
 - a. Continue the development of the Integrated care approach
 - b. Increase horizontal and vertical integration for basic science and clinical teaching
 - c. Develop further interdisciplinary workshops based on patient cases
 - d. Continue to develop the integration of computerised patient records to facilitate clinical care
2. Teaching and Assessment
 - a. Streamline assessment to minimise load on students and staff
 - i. Possibility of an integrated OSCE at the end of each year
 - ii. Review the need for tests at the beginning of each clinical session
 - b. There is an opportunity to incorporate student self-assessment along with teacher assessment in clinical rotations, as a preparation for lifelong learning
 - c. Find a way of following professional development and progress of students throughout the programme
 - d. Implement continuing care to foster dentist-patient relationships and for student reflection
3. Student-centred learning and teaching
 - a. The approach to learning and teaching should embrace flexible learning and encourage students to take an active role in creating the learning process
 - b. Develop further student-focussed teaching methods
 - c. Pedagogical methods should promote a dynamic learning environment that enhances each student's learning curve
 - d. Active and formal mentorship should be encouraged to stimulate students' motivation
 - e. Meaningful feedback should be ensured
 - f. Dedicated self-study time in the curriculum should be allocated
 - g. Students should have an opportunity to participate in the formal activities of the School i.e. decision making on education

4. Other

- a. Improve the efficiency of clinical outcome
 - i. By introducing more clinical dental assistants
 - ii. By students working in pairs: senior and junior
- b. Networking and multi-disciplinary research should be encouraged
- c. Staff development and professionalisation of staff engaging with educational department of the university should be continuous

ADEE is able to offer guidance in relation to the above key recommendations. In particular, we would reference the “Graduating European Dentist” curriculum documents:

- Field JC, Cowpe JG & Walmsley AD (2017) The Graduating European Dentist: A New Undergraduate Curriculum Framework. *Eur J Dent Educ*, 21(S1), 2-10.
- McLoughlin J, Zijlstra-Shaw S, Davies JR & Field JC (2017) The Graduating European Dentist – Domain I: Professionalism. *Eur J Dent Educ*, 21(S1), 11-13.
- Field JC, Delap E & Manzanares Cespedes MC (2017) The Graduating European Dentist – Domain II: Safe and Effective Clinical Practice. *Eur J Dent Educ*, 21(S1), 14-17.
- Field JC, Kavadella A, Szep S, Davies JR, Delap E & Manzanares Cespedes MC (2017) The Graduating European Dentist – Domain III: Patient-Centred Care. *Eur J Dent Educ*, 21(S1), 18-24.
- Gallagher J & Field JC (2017) The Graduating European Dentist – Domain IV: Dentistry in Society. *Eur J Dent Educ*, 21(S1), 25-27.
- Field JC, Walmsley AD, Paganelli C, McLoughlin J, Szep S, Kavadella A, Manzanares Cespedes MC, Davies JR, Delap E, Levy G, Gallagher J, Roger-Leroi V & Cowpe JG (2017) The Graduating European Dentist: Contemporaneous Methods of Teaching, Learning and Assessment in Dental Undergraduate Education. *Eur J Dent Educ*, 21(S1), 28-35.
- Field JC, Stone S, Orsini C, Hussain A, Vital S, Crothers A & Walmsley D (2017) Curriculum content and assessment of pre-clinical dental skills: a survey of undergraduate dental education in Europe. *Eur J Dent Educ*, 22(2), 122-127.

Conclusion

During their visit, the panel took a snapshot of the activities at TUMS School of Dentistry. Being the flagship of dental education in Iran, it is our opinion that these meet the standard of most dental schools within Europe. We recognise the ambition of the strategy the School has chosen which aligns with ADEE commitment to excellence. However, we understand that achieving these ambitions is a long term plan which requires resources, commitment and shared motivation to reshape existing structures and activities. Our team strongly believe that TUMS School of Dentistry is in a good position and we support the steps you are taking in realising your ambitions.