

Faculty of Dentistry

2016-17 External Review

Site Visit November 30-December 2, 2016

Program(s) under review:	Doctor of Dental Surgery, D.D.S. Master of Science in Dentistry, M.Sc. Doctor of Philosophy in Dentistry, Ph.D.
Division/Unit under review:	Faculty of Dentistry
Commissioning Officer:	Vice-President and Provost
Date of scheduled review:	Fall 2016

The Provost of the University of Toronto charged a three person external review committee to evaluate the Faculty of Dentistry and make recommendations. The evaluation was guided by the University of Toronto *Terms of Reference* which is intended to establish the parameters of the cyclical review process and provide the framework of the External Review Final Report.

External Review Committee members included: Dr. Cecile A. Feldman, Dean, Rutgers School of Dental Medicine; Dr. E. Dianne Rekow, Executive Dean, Dental Institute King's College London; Dr. John N. Williams, Dean, Indiana University School of Dentistry. Following a review of the self-study materials sent in advance, materials available on-site and on-site interviews with faculty, staff, students, and other external constituent groups and individuals, the External Review Committee offers these observations.

Academic Programs

Undergraduate D.D.S.

The University of Toronto (UT) Faculty of Dentistry Doctor of Dental Surgery (D.D.S.) degree program is the largest of its kind in Canada. It consists of a traditional Doctor of Dental Surgery (D.D.S.) program and International Dentist Advanced Placement Program (IDAPP). The 4-year traditional program currently enrolls 96 D.D.S. students and adds 24 IDAPP students for the final two years to graduate approximately 120 qualified students each year from its undergraduate D.D.S. program. All of these students are eligible to become registered as licensed dentists in any province in Canada following successful completion of assessments conducted by the National Dental Examining Board of Canada (NDEB). The UT Faculty of Dentistry has the largest Qualifying Program for international dentists in Canada enrolled in its International Dentist Advanced Placement Program (IDAPP). The 6-month preparatory program currently enrolls 24 internationally-trained dentists yearly, all of whom are Canadian citizens or permanent residents and with successful completion are admitted with advanced standing to the third year of the traditional D.D.S. program. The Faculty of Dentistry currently has approximately 430 undergraduate students.

December 30, 2016

The UT Faculty of Dentistry has implemented the 2014-19 Strategic Plan, which identifies a number of areas for improvement of the learning and teaching environment. The Direction of *Enriching Our Educational Programs through Innovation and Scholarship* has several goals identified within this plan. Specifically:

Goal 1-1: Design and implement curriculum renewal

Goal 1-2: Strengthen teaching across all programs

Goal 1-3: Establish new educational program options

Goal 1-4: Foster the teaching of social responsibility through community outreach

Each of these goals is followed by specific priorities. The External Review Committee strongly encourages the Faculty of Dentistry to follow this plan and offers the following additional observations:

Strengths

- Quality of applicants for admissions and enrolled students
- Strong academic outcomes as measured by National Board examinations and on time completion rates
- Aspiration to develop Interdisciplinary courses & entrepreneurial experiences for students
- Students self-reported reasonable employment prospects upon graduation with more opportunities available beyond the greater Toronto metropolitan area

Challenges

- High reliance on part-time faculty & Associate faculty (over 500) including some serving as course directors which leads to challenges in calibration and consistency in instruction within each academic year and over the entire 4 year D.D.S. program
- Lack of incorporation of new advances in technology in the D.D.S. program (e.g. CAD/CAM, pedagogy-technology & technology driven assessment)
- Reliance on individual course directors to do own recruiting of other course faculty with limited vetting by central administration
- Concern expressed by students about timeliness and responsiveness of Registrar

Recommendations

- Review faculty composition (e.g. Part-time & Associate faculty) to optimize the balance between part-time, Associate, and full-time for consistency in instruction related to: *Goal 1-2: Strengthen teaching across all programs*
- Strengthen faculty calibration in instruction and clinical teaching
- Assess the professional practice and education environment to determine the most useful new technologies currently employed in clinical practice; develop a plan to incorporate the most useful technologies into the traditional educational program, and integrate best

December 30, 2016

- practices into future plans and budget
- Evaluate the level of service and responsiveness provided by Registrar and related Student Services; make modifications if indicated

Graduate Programs

The UT Graduate Department offers the Master of Science (M.Sc.) and Doctor of Philosophy (Ph.D.) degree programs, either with or without concurrent clinical training in a dental specialty. In that latter role, the Faculty educates specialists in all 10 dental specialties recognized in the province of Ontario. These include: Dental Anesthesia, Dental Public Health, Endodontics, Oral and Maxillofacial Radiology, Oral and Maxillofacial Surgery, Oral Medicine and Oral Pathology, Orthodontics, Pediatric Dentistry, Periodontology, and Prosthodontics. It is the only dental school in Canada to educate specialists in all recognized specialties, and the only one to have programs in Dental Anesthesia, Dental Public Health, and Oral and Maxillofacial Radiology. It provides the potential for future academics for dentistry to universities across Canada through its M.Sc. and Ph.D. programs. The Faculty of Dentistry currently has approximately 130 graduate students.

Strengths

- Comprehensive graduate education (M. Sc. & Ph.D.) with all 10 recognized dental specialties in Canada
- Explicit activity to develop a philanthropic attitude in graduate students to give back to program (e.g. Endodontics)
- Good mix of Ph.D. candidates distributed throughout the various graduate programs with no mention of major difficulties with educational outcomes or time to degree completion
- Quality indicators such as numbers of applicants and admitted students; enrollment/student completion rates and time to completion as well as quality of the educational experience, teaching, and graduate supervision are good

Challenges

- Mismatch of M.Sc. programs outcomes and student desired outcomes (e.g. expecting students with limited interest in research being required to complete a M.Sc. thesis/research project) ; process as done now is a dilution of research faculty productivity
- Size of some specialty programs may be below critical mass and may not be cost effective to sustain financially but the program may be important to support the UT mission
- Some students voiced concern about lack of administrative responsiveness to student matters

Recommendations:

- Review all 10 specialty programs for consistency with program and faculty mission, need/demand and financial performance; consolidate or redesign if indicated
- Review the provision of student support through orientation, advising/mentoring, student services, registrar and effectiveness of the office of registrar and office of student life
- Coordinate the M.Sc.-specialty research projects to build on thematic research areas to

December 30, 2016

- advance pilot projects/data collection for enhanced opportunities for extramural funding
- Assess the perceived mismatch of M.Sc. programs outcomes and student desired outcomes to engage in useful research activities; redesign programs and degree options (e.g., MS with and MS without research, certificate vs. degree, etc.) accordingly
- Assess level of faculty in decision making for program investments in research; enhance their role if indicated

Faculty/Research

The UT Faculty of Dentistry has a major commitment to dental research. The Faculty has a long tradition of research and is considered a major dental research center, not only in Canada, but also internationally. Among the U15 universities in Canada, the Thompson Reuters data show that it ranks number one in publications and number one in citations in the field of Dentistry, Oral Surgery and Medicine. When compared with the public universities in the Association of American Universities (AAU), it ranks fifth in publications and seventh in citations. Areas of research strength and future growth in the Faculty include multidisciplinary approaches in the fields of biomaterials, connective and mineralized tissue biology, dental public health, education research, microbiology, oral pathology and cancer, pain and neuroscience, and wound healing. Each year, with the support of the Canadian Institutes of Health Research, a limited number of research scholarships are available to enable students to work through the summer months in the research laboratories. Students awarded such scholarships report the results of their work at research seminars. The UT dental research program was reviewed in 2015.

Strengths

- Dedicated research faculty both Full-Time & Part-Time
- Diversity of faculty gender & nationality
- UT Faculty of Dentistry well recognized within Canada and globally for strength of research programs
- Protected time for new faculty & mid-tenure review term release program to focus faculty on research effort after 3 years in rank
- Planned research space renovations will bring together most research intensive faculty and core facilities within the physical plant of the Faculty of Dentistry
- Generous opportunity for sabbaticals (e.g. 6 months after 3 years/ 12 months after 6 years)

Challenges

- Developing and sustaining a robust research program requires protected time in a faculty member's workload. We raise the practicality of a 40-40-20 workload to build and sustain research and teaching programs; realistically, a much higher proportion of time must be allocated to build and sustain a research career than the 40% time allocation, which may have important implications to funding agencies' review of researcher commitment and thereby negatively influencing the probability of obtaining funding.

December 30, 2016

Recommendations

- Review the 40-40-20 faculty workload to determine if it is realistic for research intensive faculty to build and sustain a robust research program and obtain extramural funding
- Complete the space renovations of the research laboratories
- Review and implement the findings and recommendations of the external reviews of the UT Faculty of Dentistry Research program (April 2015)

Clinical Service

The objective of the D.D.S. program is to graduate clinically competent dentists with critical skills to be lifelong learners and hence adapt to the rapidly changing demands of the profession. The program also strives to instill a sense of social responsibility and the appreciation of interprofessional cooperation.

Strengths

- Program location in downtown Toronto with access to serve a large patient base
- Amount of space dedicated to clinical education
- Dean's leadership as Co-Chair of the Centre for Interprofessional Education governance committee

Challenges

- While space is available for clinical education, the quality of the clinical space is a concern with facilities in critical need to be modernized
- Adequate financial resources to support efficiencies and cost effectiveness of all clinical operations (based on budgetary review)
- Lack of endodontic clinical experiences for D.D.S. students
- Insufficient and/or inconsistent Part-time and Associate faculty calibration

Recommendations

- Review of clinical operations with emphasis on budget sustaining these programs over the next five years
- Conduct a feasibility plan for clinical renovation and renewal with attention to sequencing a project to create a modern clinical facility
- Determine and implement policies and procedures to improve calibration of part-time and Associate faculty
- Evaluate and improve effectiveness of patient recruitment as teaching cases with goal to improve depth and breadth of student patient care experiences

December 30, 2016

Relationships

The Faculty of Dentistry is engaged in relationships internally through interactions with cognate divisions and university-affiliated institutions. It is engaged externally through its relationships with professional organizations provincially, nationally, and internationally. It provides an important service for the dental community through its Continuing Dental Education programs. It connects with nearly 8,000 UT dental alumni through the Advancement and Alumni Affairs office. It offers training to permit licensure in Canada for international dentists and dental specialists through its International Dentist Advanced Placement Program (IDAPP) and its Dental Specialty Assessment and Training Program (DSATP).

Strengths

- Well regarded academic program by other deans within the University of Toronto
- Robust student demand to study dentistry at UT from both traditional students and IDAPP internationally trained dentists
- In general, faculty and staff are pleased with the direction the Faculty of Dentistry is heading
- UT program held in high regard by Ontario Dental Association (ODA) and Royal College of Dental Surgeons of Ontario

Challenges

- Support for students by Registrar and Student Advocate

Recommendations

- Faculty of Dentistry should continue to work as a resource to develop policies & standards for the Royal College of Dental Surgeons of Ontario such as obtaining input from the Faculty regarding opioid use/abuse and other Registry Standards
- Review needs and address challenges to provide improved student support from Registrar and Director of Student Life

Organizational and Financial Structure

Dentistry is a single department Faculty within the University of Toronto. As such, it has representation on the Academic Board, in the School of Graduate Studies, and on the Principals and Deans' committee. The academic and administrative leader is the Dean, who reports to the Provost. The Dean of the Faculty is a member of the Council of Health Sciences (and its chair for 2015-2017) as well as a member of the Deans of Single Department Faculties committee.

The 2011 External Review noted that the organizational structure of the Faculty, which had been in place since 1998, needed to be more collaborative and integrated, as there were perceived silos, along with unclear lines of authority, responsibility and accountability. In addition, the 2014-19 Strategic Plan identified a need for renewal to improve collaboration as well as student,

December 30, 2016

faculty and staff satisfaction.

Since July 2016, the new organizational structure has been implemented and aims to address the issues highlighted in the 2011 External Review as well as the Strategic Plan. Its objective is to result in a structure that better supports the Faculty of Dentistry research, education and clinical service missions. It is consistent with the institutional Vision, Mission and Values, as stated in the 2014-2019 Strategic Plan. It also supports the mission of the University of Toronto which is to be *an internationally significant research university, with undergraduate, graduate and professional programs of excellent quality.*

In 2013, the Planning and Budget Office provided data showing that the 5-year budget projection (2013-18) was compounding yearly deficits leading to a projected accumulated deficit in 2017-18 of \$19.7M. Faced with these serious financial challenges, the Faculty of Dentistry took on a number of fiscal initiatives including enrollment increases, as well as cost reductions in procurement, delayed hiring, and clinical operations. For this current fiscal year, financial resources are stable; however, the External Review Committee is concerned about the Faculty of Dentistry being able to maintain a balanced budget into the future.

Strengths

- Willingness to investigate organizational structure and implement changes in the Faculty of Dentistry
- Willingness to engage in thoughtful financial changes to eliminate significant budget deficit matters in the short run
- Adoption of an annual assessment plan for changes made July 1st in organizational plan
- Investment in research space renovation by Province/University by partial cost sharing of total research space project
- Energetic engaged Director of Advancement

Challenges

- Faculty & administrative staff not clear on redefined roles and responsibilities of various administrative leaders, course directors etc. based on recent reorganization.
- Stability of budget in the future (2017-22)
- Research renovations capital cost may highly leverage future budget with long term debt service
- Some faculty and staff not understanding basis of salary increases
- One administrator responsible for supervising and managing 50+ faculty/course directors teaching in the D.D.S. program
- As clinical and technological advances are often first implemented for various disciplines in the graduate programs, it is imperative that there be ways to ensure that graduate and undergraduate (D.D.S.) faculty are talking and sharing experiences and knowledge to minimize separation

December 30, 2016

Recommendations

- Review future five year budget model (2017-22) to develop plans to assure financial stability as many of the easy budget decisions have been implemented (e.g. enrollment increases, costs reductions etc.) to address previous projected cumulative deficits
- Enhance internal and external communication regarding organizational changes as well as roles and responsibilities of faculty and staff
- Be diligent in conducting annual assessment of organizational changes as stated in self-study
- Clarify the annual performance review for each faculty to assure consistency to match actual and planned workload with implication on salary increases
- Develop formal mechanisms to ensure faculty engagement both within and across disciplines
- Consider ways to assist administrator responsible for supervising and managing D.D.S. faculty
- Consider a formal mentoring program coordinated by the Undergraduate and Graduate Associate Deans respectively, matching senior faculty with junior faculty, so mentors can create opportunities for junior faculty within their professional disciplines

Long-range Planning Challenges

The long-range planning challenges have been well delineated in the UT Faculty of Dentistry Strategic Plan 2014-19. The critical steps now are the continual implementation, assessment and modification of changes made to bring to fruition those goals and objectives outlined in the plan. Planning for the process to develop a new academic/strategic plan for 2019 onward should take place during the 2017-18 academic year. While a number of areas for improvement or enhancement have been identified in the previous sections, the External Review Committee offers these observations.

Strengths

- Establishment of Teaching stream position similar to a Clinical stream
- Provision of student financial aid for graduate students
- Commitment to and enthusiasm for fundraising and development
- Leadership of the Dean and administration (new appointees)
- Opportunity to use clinical program to build and enhance clinical research projects
- Enthusiasm for pursuing Intellectual Property (IP) and technology transfer for commercialization
- Aspiration to focus research emphasis on fewer areas

Challenges

- Undergraduate (D.D.S.) student enrollment at capacity unless UT considers some type of alternative scheduling or split class model which may or may not be possible
- Substandard facilities for clinical and instructional space
- Future five year budget plan and long range viability of all programs given the dynamic economic environment, constraints to expand enrollment and tuition increases beyond externally imposed amounts, and cost sharing for research facilities upgrade

December 30, 2016

- How best to maximize research investment and return (ROI) by focusing on fewer areas
- Recommendations*
- Faculty of Dentistry needs to establish or clarify the balance of time commitment expectations and/or differences between tenure and teaching stream faculty; seek concurrence with Provost
 - Review and articulate priority research areas and establish markers and measures of progress and roadmap to include “The Center of Excellence”
 - Investigate alternatives to increase revenues and decrease costs, without negatively impacting the current quality of research or teaching. Implement alternatives as quickly as possible
 - Develop a capital plan which enables the renovation or building of new facilities to replace the aging clinical facility

International Comparators

The University of Toronto Faculty of Dentistry is a highly ranked international program.

Assessment of the Faculty and the programs under review relative to the best in Canada/North America and internationally, place it high on the list. In 2016, the QS Ranking placed Toronto 47th in the survey. Of note is the Burlington Growth Center Legacy Collection which is a tremendous asset for international research collaborations in the area of orthodontics and growth and human development.

SUMMARY

The University of Toronto Faculty of Dentistry is well respected. It is being led by a dean who demonstrates strong leadership, is collaborative and approachable; and is able to make necessary changes to improve the school. It has an energetic faculty dedicated to continuing the success and professional reputation of the organization. Its leadership has established excellent and important ties to other UT faculties and leadership as well as influential professional dental organizations. While there are a number of challenges that it must address and eliminate going forward, they are beginning from an already strong base.