

Some examples of systems of governance and management of dental schools in different parts of the world

Brazil

In Brazil there are 178 dental schools, of which 27 are federal, 18 belong to the states, 7 to City Hall and 123 are private. The public dental schools, with a few exceptions, have better reputations than the private ones because they have better professors and they support research. In Brazil, management, leadership and administration differ between public and private universities. The public ones aim for social profit and undertake research, whereas the private ones look for financial gains.

UERJ is a public university that belongs to the Brazilian state of Rio de Janeiro. Its governance is very similar to that of the federal universities. In UERJ, the senior managers (Chancellors, Vice chancellors, Pro Vice Chancellors Deans and Vice Deans) are chosen by direct election. Votes come from professors, students and clerks, with different proportions for each category. There is also a University Council (formed by professors, students and technicians) that governs its administrative policy. The Council is also elected and the Chancellor is supposed to accept its decisions. Finally, the Superior Council of Lecturers and Researchers (CESEP), formed by elected professors only, provides academic direction and policy.

Each college in the University of Rio de Janeiro has its own dean, vice dean and Council of Departments. The Council of Departments is formed by the heads of specialties, one student and one clerk. The dean is supposed to respect this Council and follow its decisions. A group of schools form a Center, so the deans report to the heads of Centers and then to the chancellor. The Dental School at UERJ belongs to the Biomedical Center that is composed of the following Schools: Medicine, Dentistry, Nursery, Nutrition, Social Medicine and Biology. Senior managers of UERJ Dental School have, as one of their main duties, the assurance of high academic quality.

The State of Rio de Janeiro provides in its budget the basic expenses of the University of the State of Rio de Janeiro including: the salaries of professors, staff and secretaries; the buildings and equipment; basic services like energy, security and cleaning; undergraduate courses (these are free for students) and grants for researchers for some post graduate courses (which sometimes are topped up by the Ministry of Education, depending on the approval of the project)

The University also provides the School, intermittently, with some grants. However, these vary according to State politics and are inadequate. So, the Dental School is involved in various initiatives in order to provide extra resources. The main generation of extra income comes from Specialization Courses, via fees paid by post-graduate students (around US\$11,000.00/year per student) and from patients, who pay relatively small amounts for services provided in specialty clinics. As indicated previously, grants for researchers come from the Federal Government, through specific Institutions of the Education Ministry, or from a Foundation of the State of Rio de Janeiro also directed to Education.

There is a special Center inside UERJ (Center of Production of UERJ-CEPUERJ) that is responsible for administering the resources captured by the Dental School. CEPUERJ charges 10% from the Dental School for administration, 20% goes to the management of the Dental School, and the remaining 70% is distributed among the post-graduate courses. In 2005, the Dental School received US \$376,000. More than half this was used to pay clerks not officially contracted by the University and invited

professors. In 2006, there was less money as a consequence of a 4-month strike inside the university.

There are management and administration problems generally within the universities in Brazil, especially the good public ones - mainly due to a lack of resources. Nevertheless, UERJ is still considered to be one of the five best and biggest universities in Brazil and is recognized as a very good research centre in Latin America.

Australia and New Zealand

There are 40 universities in Australia which has a population of approximately 21 million people. New Zealand, with a population of around 4 million, has eight universities. Most of the universities in Australia are public, receiving funding mainly from the Federal Government, but there are a couple of private universities. The government has recently given permission for some overseas universities to be set up in Australia and offer courses.

As of 2007 there are six dental schools in Australia, the most recent school to open being at Griffith University on the Gold Coast in Queensland (the first one since the 1940s). However, further schools are planned. There is only one dental school in New Zealand, located in the south island at Dunedin. Many dental schools have set up Bachelor of Oral Health programmes in the past few years for the education of dental hygienists and/or therapists and there are plans for another 5-6 new Australian dental schools to open in the near future, partly in response to a perceived shortage of oral health professionals.

Dental schools in Australia and New Zealand used to exist as separate faculties in their own right within the university system, with considerable autonomy, in relation to academic issues, student admissions, appointments, finances etc. However, they now fall within larger Faculties (eg faculties of health sciences). The heads of dental schools in the ANZ region are still generally referred to as deans but they are responsible to executive deans and are often one of several heads of schools within a faculty.

The budgets for schools of dentistry are formed at the faculty level. In Australia, the Commonwealth Government provides funding to the universities for student places, with the value/student varying depending on the cost of the programme. Medicine, dentistry and veterinary science are bracketed together on the highest funding band level of approx \$24,000/student/year. In Adelaide, the central university takes approximately \$16,000/student leaving only approximately \$8,000/student for the school.

International students are providing an important means for schools to generate additional income, although a large proportion of these fees is taken by the university. Some of the Australian schools run their own dental hospital and, therefore, potentially have the opportunity to generate additional income through treatment of patients. In other cases, the dental hospital is run by the state government and so there need to be agreements in place to enable students to treat patients who attend the hospital.

Universities in Australia have moved away from having elected heads of schools to a system of limited term appointments, usually for periods of five years. The system of governance in Australian universities has been inherited largely from the UK. Most of the universities are statutory bodies established under Acts of Parliament. The major

governing body in most Australian universities is the Council, a group of about 20 members from within and outside the university. The Council appoints the vice-chancellor who is assisted by a group of deputy vice-chancellors and pro-vice-chancellors with different roles and responsibilities. The number of faculties in many universities has been reduced in recent years to form larger "super-faculties" headed by executive deans that comprise several schools each with an appointed head. So, whereas dentistry used to be a separate faculty, in all universities in ANZ it is now included as a school within a larger faculty structure.

USA

There are 56 dental schools in the United States and 10 in Canada. In the U.S., 37 schools are part of state university systems, five are considered private and state-related (receiving support from their state government but are part of private universities), and 14 dental schools are part of private universities. In Canada, nine schools are public, and one is a part of a private university but is affiliated with the provincial government.

There are differences in the governance and administrative structure of dental schools in the United States and Canada. The dean's position is selected on the basis of a search that is conducted by the university or health sciences centre. The term of appointment varies by school. For some schools, the dean serves for a term of 5 to 6 years, which after review is often renewable for an additional term. In other schools there is no stated term, and some deans have served for 20 to 30 years.

Dental schools in the United States provide an accredited educational programme leading to the D.D.S./D.M.D. degree and many schools also offer postdoctoral training in general dentistry (a hospital-based general practice residency or a university-based programme in advanced education in general dentistry) and dental specialties. Many dental schools also have programmes to train dental hygienists and dental assistants, but training of these auxiliaries also occurs outside of dental schools.

The curriculum at the vast majority of dental schools in the United States and Canada is four years in length. The Columbia University College of Dental Medicine (CDM) is a four-year curriculum following completion of a baccalaureate degree. At CDM, the curriculum is structured with the first two years focused on basic science education. During this time students are also receiving didactic and preclinical instruction in dentistry. In the third year clinical care begins and the fourth year is focused on comprehensive clinical care. At Columbia, on average 97% of students continue on for at least one additional postgraduate year (PGY1). The importance of a PGY1 has recently been emphasized when New York State modified its licensure requirements for new dentist to include a PGY1. There are now a small number of other states that require this additional training for licensure. Nevertheless, in the United States the majority of graduating dentists enter practice directly after dental school.

The organization of dental schools can be grouped into basic science departments and clinical departments. In many dental schools there are basic science faculty who are part of the dental school faculty. Their responsibilities include basic science education in the dental school curriculum. In addition, the clinical faculty is responsible for didactic, preclinical and clinical instruction. In a small minority of U.S. dental schools, the dental students receive their basic science education with students in the medical school. That is the situation at the Columbia University College of Dental Medicine.

The dental school at Columbia resides on the Columbia University Medical Center campus, which is some 2.5 miles north of the main Columbia University campus. In addition to the College of Dental Medicine, the other health sciences schools include the College of Physicians and Surgeons, School of Nursing and School of Public Health. The deans of these four schools also hold the title of Vice President of Columbia University Medical Center. There is a major teaching hospital on the health sciences campus (New York Presbyterian Hospital) which is not owned by Columbia. A close relationship exists between the College of Dental Medicine and New York Presbyterian Hospital, and residents in oral and maxillofacial surgery, paediatric dentistry, oral pathology, general practice and advanced education in general dentistry are all appointed through New York Presbyterian Hospital.

The budget for the College of Dental Medicine is structured as are all budgets for schools at Columbia University. CDM retains its tuition, clinical income, direct and indirect grant funds and other income (i.e., fundraising). In turn, CDM is responsible for all salaries (faculty and staff), and also pays a "common cost" to both the Medical Center and University. These costs cover all services provided by the Medical Center and University to CDM. CDM is also responsible for all costs of operating its clinical programmes, including clinical renovation and repair.

All dental schools are encouraged to be part of their parent university. At Columbia, CDM does this in part by the development of dual degree programmes with other schools at Columbia University including the School of Public Health (DDS-MPH programme), School of Business (DDS-MBA) and Teacher's College (DDS-MS in science education). Faculty also participate in Medical Centre and University committees. Further, the research programme at CDM is closely linked to research ongoing in departments in the College of Physicians and Surgeons, School of Public Health, and other schools at the University, including the School of Engineering and Applied Sciences.

The description of the Columbia University College of Dental Medicine is representative of dental schools affiliated with private universities. Dental schools affiliated with state universities generally have greater restrictions on financial management as budgets must follow regulations established by each state's Department of Education/Higher Education. Nevertheless, throughout the United States the percent of the budget of dental schools affiliated with state universities that is actually received from that state has decreased sharply in recent years.

UK

There are 15 Dental Schools in the United Kingdom. Of these, 14 have undergraduate and postgraduate programmes and one (Eastman Dental Institute, University College London) only offers postgraduate courses. The most recent school to open and the first new school since the 1960s, The Peninsula Dental School, accepted its first intake of students in September 2007 and will run a 4-year graduate entry programme only.

All Dental schools have experienced expanding student numbers in recent years in response to a shortage of dentists in the UK, and this has led to innovative teaching methods being developed and more reliance on 'outreach' clinical training in areas of high oral health needs. This approach poses a new challenge to Dental Schools, Universities and the General Dental Council regarding how to govern the safety of patients and ensure high quality of the outreach teaching provided.

Dental Schools in the UK have various management relationships with Universities: some are 'stand alone' schools, whereas others exist as part of a larger medical/sciences based faculty. This has an impact on the school's autonomy and flexibility in relation to academic issues, appointments, research direction and finances. The heads of Dental Schools are still normally referred to as Deans regardless of the structure, with some reporting directly to the Vice-Chancellor whilst others report through Faculty Heads known variously as Provosts or Pro Vice-Chancellors.

The funding for teaching dental undergraduates comes via two distinct routes. The first is through the higher education funding councils and this is received by the University. The funding varies for the four developed administrations within the UK (Wales, Scotland, Northern Ireland and England) but broadly speaking is approximately Euros 10,000 for the non-clinical years and Euros 17,000 for the clinical years of the course (2007). This income is then top-sliced by the Universities (between 20% - 40%) to support central administrative directorates and infrastructure costs.

The second funding stream is through the NHS (Health Service) and this is known as SIFT (Service Increment for Teaching). SIFT was developed very early on in the NHS to compensate the NHS for the additional costs it would incur related to teaching of medical and dental students. SIFT is only used to support these undergraduates and is not available for other health care students, for example dental hygiene and therapy students. In Dentistry, SIFT is known as Dental SIFT and it has subtle differences from SIFT for Medical Training purposes.

Dental SIFT is given 'on-block' to the host NHS Trust (dental hospital) to support the training of dental undergraduate BDS students. This includes the direct costs of training the students and also support for the basic infrastructure and fabric of the dental hospitals. Dental hospitals would not exist in the UK without dental schools – they would be smaller service departments in District Medical Hospitals. The Dental SIFT funding is approximately Euros 35,000 per student per year (2007) but is only available for the 4 clinical years of the course.

In addition to this, there is a third stream of funding which is Medical SIFT for dentistry which is used to fund the teaching of human disease and related subjects for dental students and for additional costs associated with teaching in outreach clinical placements. This component is similar to the medical student SIFT, where the funding follows the students to the various district hospitals and community clinics within the NHS.

Student intake in the UK is quota controlled by the government – each school has a set figure and it must not exceed this figure or there will be no financial recompense for the additional students. International recruitment of undergraduate dentists (outside of the EU) is capped by Government in the UK and this is a relatively low proportion (c.5%-8%) of the home student intakes. This is due to the fact that the NHS in the UK limits the support for the costs of training international students. At present there are approximately 1,200 home/EU undergraduate dental students and 80 overseas (outside the EU) students studying in BDS courses at UK Dental Schools (2007).

Universities in the UK are statutory bodies established under Acts of Parliament. The major governing body in most universities is the Council, a group of approximately 20-25 members from within and outside the university. The Council appoints the vice-chancellor, pro vice-chancellors, and heads of schools/deans with different roles

and responsibilities. Deans/Heads of Schools are appointed either by internal promotion after gaining the consensus of the academic staff, or appointed externally through a competitive process. The later is more likely to occur when there is no consensus internally as to who the next dean/head of school should be. Generally, the dean will be appointed for a 3 plus 2 year term sometimes with the opportunity to serve for a maximum of two terms (10 years). Ex-deans may return to the ranks of clinical academics or may sometimes progress to university pro vice chancellor or faculty dean positions.

Italy

There are 35 universities in Italy which has a population of approximately 58 million people. Most of the universities in Italy are public, receiving funding mainly from the Government but there are a couple of private universities. Some overseas universities offer continuing education programmes in Italy.

There are 31 dental schools in Italy since implementation in 1984 of the EU 1978 directive on a five year training period for dentists. Before this system, there was postgraduate education in dentistry after medical graduation. After 2000, dental hygiene schools were established and soon there will be clinical dental technician university schools.

Dental schools provide an accredited educational programme leading to the DDS degree and many schools also offer postdoctoral training in general dentistry (a hospital-based general practice residency or a university-based programme in advanced general dentistry) and dental specialties (orthodontics, oral surgery and soon paedodontics).

Dental schools in Italy are part of the medical Faculty and they follow the rules for fees, admissions and finances of the university system. The head of the dental school is usually refereed to as the dean and there is generally a head of hygienist schools.

The budgets for schools of dentistry are formed at the faculty level. The previous law in Italy about budgetary matters was based mainly on historical grounds. However, under a new law, schools must have a 'new' chair in place for each new incoming student and a minimum number of teachers.

International students are not providing extra income at present. Most of the Italian schools are located within dental hospitals and a large amount and variety of patient care are provided. This places some constraints on the schools.

The Council of the dental school is formed by all of the teachers, representatives of the research staff, students and an administrative person. They elect the dean for a term of three years. The dean is supposed to respect the Council's decisions. Most of the universities are statutory bodies established under Acts of Parliament. The major governing body in most universities is the Administrative Council, a group of about 20 members from within and outside the university. All of the academic staff elect the Rector and Council academic members. The rector appoints his Vice and other delegates with various roles and responsibilities.

Thailand

Thailand has a population of about 66 million people and there are slightly more than 9,700 dentists certified to practise. Almost all dentists have graduated from nine

dental schools: eight are public and one is private. Chulalongkorn Dental School, the first in Thailand, was established in 1940. Rungsit Dental School, the most recent school and a private one, was founded in 2005. Each year, more than 450 students graduate from these dental schools. To improve the dentist: population ratio, the Ministry of Public Health asked all public dental schools to increase the number of dental graduates by 200 more a year in a 10-year project starting from 2005.

The dean is the chief executive officer of each school and is elected through ballots by faculty staff and approved by the University (governing) Board or Council. Each dean is elected for a 4-year term and cannot stay in the position for more than two consecutive terms. Deputy deans assist the dean in administrative matters, student relationships and academic affairs. A faculty board in each dental school is comprised of heads of divisions and the executive members of the faculty. It facilitates administrative issues and provides an interactive opportunity for the two levels of elected executives (faculty and division levels). A curriculum committee oversees the curriculum and it includes selected faculty members. All dental schools form a consortium through which all deans and dental school representatives meet regularly (eight times a year) to propose, discuss, collaborate and direct the governance of dental schools.

Thai public dental schools have one major financial provider. The Thai government provides support (up to half the expenses) to run the schools and then each dental school must find other sources of revenue.

Chulalongkorn Dental School provides one undergraduate course and several postgraduate programmes, ranging from one-year training certificates to PhD programmes. Each year the school accepts 50 dental assistant students, 140 undergraduates and 100 postgraduates. The first year of the 6-year undergraduate curriculum focuses on general, liberal education. Biomedical sciences fill years 2 and 3 and clinical sciences take up the last 3 years. In 2007, new students will study under a newly reformed undergraduate curriculum. It is a competency-based curriculum which stresses interdisciplinary approaches and self-directed active learning. All dental undergraduates will now have to take multi-part examinations to obtain licenses to practise dentistry in Thailand. The Dental Council of Thailand, a legal governing body of dental professionals, administers the examinations.

All school curricula must be approved from both the university board (council) and from the Ministry of Education. Policies and regulations from both bodies clearly define what a curriculum can and cannot include. The Dental Council of Thailand, a professional body, governs higher training of dental professionals, especially the residency programs. A National Quality Assurance Framework runs regular internal and external audit activities on all degree-providing curricula and programs.

The Thai Dental Council regulates the dental profession in Thailand. It registers dentists, conducts examinations for dental licenses, and approves dental curricula and residency programmes. It defines and enforces professional standards and ethics, and looks over sub-specialty boards.

Most Thai dentists are members of the Dental Association of Thailand. Since 1938, the Association has helped to promote professional standards, advance the dental sciences, and has become an important representative for Thai dentists.