Making a mark in dental training

Marita Kritzinger spoke with Professor Lakshman Samaranayake, Dean of the Faculty of Dentistry at Hong Kong University about how dentistry training can meet some of the challenges facing the Asia Pacific region.

Since establishment in 1982, the Faculty of Dentistry at Hong Kong University has continually expanded its training infrastructure and dentistry research offerings. The recent introduction of an MSc in implant dentistry, which commenced in September 2006, is an example of this. “Implant dentistry is growing rapidly all over the world, as more and more patients are demanding implants over traditional dentures. The affluent areas, such as Hong Kong and Singapore, have seen a great rise in the trend,” says Prof. Lakshman Samaranayake. He explains that up till now, apart from training courses run by implant manufacturers, there has been no official university course in implant dentistry in Hong Kong. “The time has come for the university to take a lead in this field and we have pooled our resources in the faculty to establish a world-class facility,” he says.

Advances in implant dentistry training
In conjunction with the MSc in implant dentistry, the faculty has plans to launch a craniofacial implant centre. It already has one of the largest and most prestigious oral and maxillofacial surgery departments in Asia and, together with the Family Dentistry and Endodontics Department, has recently raised funds in support of further infrastructure development. These funds will be used to refurbish buildings and upgrade the facility. Some of the money, mainly from a benefactor, will also be used to subsidize implant treatment for elderly patients who are unable to afford it, once the centre opens.

“We need to build a good research foundation for implant dentistry and this centre will help us to conduct prospective studies that will eventually provide us with long-term data,” he says. The centre was opened shortly after the MSc course commenced. This 2-year, part-time course is aimed at local practising dentists and will be taught by existing staff in the faculty, as well as visiting practitioners who are implant dentistry experts. “We also plan to bring on board internationally recognized implantologists to give weekend courses,” he says. Based on the response this degree has already generated, the faculty is making plans to expand it even further in the following year.

Infrastructure support
Prof. Samaranayake is also the Director of the Prince Philip Dental Hospital, the training hospital in which the dental faculty is based. Here, the schools for dental surgery assistants, dental hygienists and dental technology run in parallel with the undergraduate dental training, providing a full complement of dental undergraduate development. The hospital employs a large

Below and right: Students refining their technical skills with the help of interactive software in the simulation laboratory.
number of support staff, including 120 dental surgery assistants. "This support is excellent as it provides dental students with the opportunity to learn four-handed dentistry in their basic training needs from the start," he says. The faculty currently has roughly 250 undergraduate students.

Within the same building, the postgraduate programme currently has 100 students, of which one third are international students. "There is a great demand for postgraduate dentistry. My dream is to develop an institute for advanced dental studies in the near future," he says.

Implementing problem-based learning

The dental faculty is one of the two schools in the world that uses an open discovery, problem-based learning (PBL) programme to teach the theoretical aspects of its curriculum. Students do not have traditional lectures but take part in tutorials where facilitators guide small groups to solve problems. This approach to learning is already in its 9th year at the faculty and has seen 3 years of students graduating using this programme. "This kind of interactive, self-directed learning teaches students to become more reflective and it helps them to make decisions quicker. Emotionally they become much more mature and effective communicators with patients and their critical thinking abilities are sharpened," he says.

Life-long learning

Problem-based learning also lays the foundation for life-long learning. Qualified dentists are continually expected to acquire new knowledge and techniques as they progress in their practices. "We believe that PBL helps our students to be better equipped to adopt this once they graduate; they become good clinicians because they develop enquiring minds," he says.

Teaching clinical skills

PBL cannot be applied for teaching clinical skills, such as routine crown and bridge and cavity preparations. For this the faculty provides students with hands-on training in the Prince Philip dental hospital, as well as an electronic simulation laboratory. "We have 60 units in the lab where our students use the interactive software to practice certain techniques and dental procedures," he explains. He adds that the PBL approach does help them to acquire the core skills of the underlying principles to solving problems and evaluating procedures. "I am glad we started doing this early on as Hong Kong University will be taking on undergraduate students one year earlier from school, as of 2012, making the dentistry undergraduate course 6 years in total," he says.

Dentistry in Asia Pacific today

With China and India becoming increasingly powerful, there has been a rise in affluence and subsequently a growing demand for dentistry. There has also been a rapid rise in private universities that are establishing their own dental schools. "The quality of these dental establishments is sometimes questionable and, from my point of view, this is a concern for the dental fraternity in the longer term. The quality control of these institutions is very important from an academic point of view," he says.

Another challenge in Asia Pacific is the vast difference between the affluent and poverty-stricken areas. In countries such as Vietnam and Cambodia, dental care is a low priority in comparison to food and medicine. Samaranayake explains that most dentists have their practices in cities, which means that in the poorer rural areas, millions have little or no awareness of dental health and hardly receive any treatment. "The ideal situation would be to take dentistry to the grassroots level, so that every individual has access to it. But considering the number of people in Asia, this remains our biggest challenge," he says.

In a step towards achieving this, people have to be made more aware of dental health and consider it to be as important as their systemic health, particularly in light of the link between periodontitis and systemic diseases. Samaranayake says another way to address this is to continue to improve the quality of dentistry training programmes, to produce top dentists for the region. "In this age of globalization, we want to attract people from all over the world to our faculty; as students and members of staff," he concludes.

About the expert

Professor Lakshman Samaranayake, Hon DSc, Hon FDSRCS, BDS, DDS (Glas), FRCPath (UK), MIBiol, FCDSHK, FHKCPath, FHKAM (Pathol & Dent Surg.) is Dean of the dental faculty, Chair of Oral Microbiology, and Director of the Prince Philip Dental Hospital at Hong Kong University. He is also an honorary professor at the Eastman Dental Institute in London and earned his doctoral degree at the University of Glasgow, UK.

A renowned expert in oral infections and infection control, Prof. Samaranayake lectures worldwide and has published more than 400 articles and seven books, translated into several languages. He is Chairman of the Science Committee of the FDI and Vice-President of the Oral Medicine and Pathology Group of the International Association for Dental Research.

Send your comments or questions for the author to mkritzinger@advanstarc.com