



The 60-place simulation lab at Orange features Planmeca Advanced Bench Simulators and allows a full year of students to be training together with an additional 20 places for students from other years to utilise at the same time.

Charles Sturt University dental program

As CSU's dental students enter their second year on campus, we caught up with outgoing Head of School Prof. Ward Massey for an update on the progress of the new dental school

By Joseph Allbeury

The shortage of dental practitioners in rural and regional Australia is well known and despite many initiatives, there has only been limited success in attracting dentists to the bush.

Charles Sturt University (CSU), with campuses across regional New South Wales, is one of three universities located away from capital cities to recently commence new programs to train dental practitioners (with the others being La Trobe in regional Victoria and James Cook in Far North Queensland). CSU commenced its first intake of students to study dentistry and oral health therapy at the start of 2009.

The premise behind these regional training initiatives is simple: train practitioners in the bush and there is evidence to suggest that many will spend at least part of their careers practising in the bush.

"The data shows that 70% of regional and 30% of metro students trained in the bush will stay in regional areas on graduation for up to 5 years," explains Prof. Ward Massey, CSU's Head of the School of Dentistry and Health Sciences. "Most stay at least 5 years and many longer. A key reason for developing a dental program in regional New South Wales was that based on this, we believe we will have a big

impact on the dental health of rural Australia as well as help rural dentists with succession planning."

Prof. Massey said that planning for the dentistry and oral health therapy programs commenced in 2004 and over the next 3 years, much work was done on building grass roots support and lobbying local and state politicians for funding.

"In 2007, we received \$65.1 million in the budget to establish dentistry and oral health therapy training programs and to build five clinical teaching facilities which would also provide care for the public across regional New South Wales."



The 24-chair teaching practice at Orange includes 16 Planmeca Compact i dental units in open bays and a further 8 chairs in private closed rooms.

All images courtesy of Christian Mushenko

Uniquely, funding came from the Department of Health and Ageing under the guise of a regional workforce initiative (Most universities are funded by the Department of Education, Employment and Workplace Relations).

“The Department of Health and Ageing was keen to fund the program because of the five public clinics we’re establishing,” Prof. Massey said. “There is a tremendous shortage of dental personnel in rural and regional Australia and we will be making a significant contribution towards redressing that when fully operational.

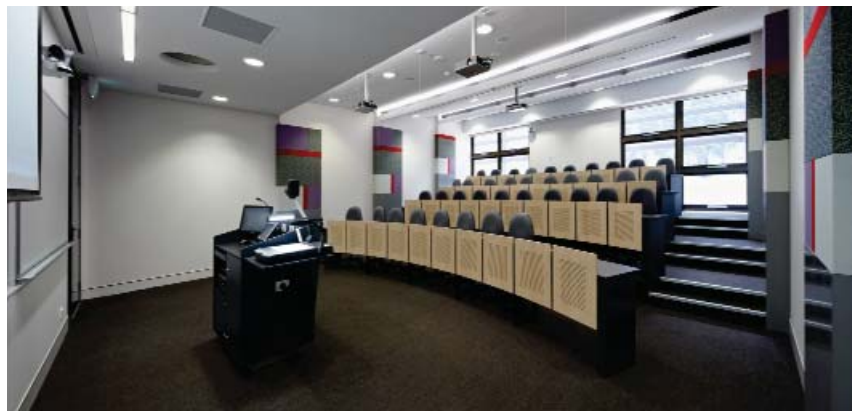
“A key aspect of the funding agreement for the next five years is that all students are from Australia paying through HECS. 50% of the students in our first intake in 2009 have a regional background and 50% have a metropolitan background.”

Prof. Massey said that the intake for the dentistry program is 40 students per year and it is a 5-year undergraduate course. In four years time when the student load is at capacity, there will be 200 dentistry students on campus.

“The five clinics will be located in Albury and Wagga Wagga in the south and Orange, Bathurst and Dubbo in the north. Of these, Orange and Wagga Wagga were officially opened in late 2009 and these are the HQ sites for the program. The other three sites are under construction and due to be completed mid-year. All these sites are located on existing CSU campuses with all the buildings being built from scratch on CSU land.



The new dental campus at CSU Orange.



“Orange is the HQ site for the dentistry program and has a 60-place simulation clinic, a 24-chair teaching practice, a 40-place dental lab, an anatomy lab as well as lecture halls, seminar rooms and computer labs. All these facilities are brand new and cost around \$25 million to complete.

“40 dentistry students have just finished first year. They have already commenced simulation training and are about to start their clinical work. They will see their first patients in the second half of 2010 and ultimately graduate in 2013.”

High tech equipment the cornerstone of CSU program

At the heart of Charles Sturt University's dental program are state-of-the-art clinical teaching facilities equipped with the latest technology dentistry has on offer. Following an extensive tendering process, Planmeca dental equipment manufactured in Finland and supplied locally by Henry Schein Halas, was chosen as the centre-piece for the new \$65 million facility.

"Due to the nature of our funding, we had a very extensive evaluation process to select equipment for the clinics," Head of School Prof. Ward Massey said. "We had very detailed technical specifications and requirements related to education and the relationship we would have with our service provider. We looked at seven different suppliers but at the end of the day, only Henry Schein Halas and Finnish equipment manufacturer Planmeca came close to delivering what we wanted.

"The equipment is state-of-the-art and in our opinion, ahead of all other manufacturers. The digital dental units, the plug and play technology and the Romexis management software were all key features that really won us over.

"We were also looking for a true partnership arrangement with the vendor where we receive the service and support we require while also being able to showcase their products and trial their latest developments.

"As an example, we are regionally based and while we have our own technical personnel and can diagnose problems to an extent, the fact Planmeca



The "Dream Room" at Orange features a Planmeca Sovereign dental unit and the latest in high-tech equipment.

can remotely diagnose and upgrade the equipment was very attractive to us.

"As an educational facility, we also have a commitment to educate our graduates in the latest technologies so it's important that the equipment we choose caters well into the future."

The bulk of the 78 dental units being installed by Charles Sturt University are the Planmeca Compact i model. Planmeca Intra intraoral x-ray units are being used with either Planmeca Dixi or Planmeca Pro sensors. Air Techniques Scan-X phosphor digital x-ray scanners are have also been installed.

"We also chose Planmeca Advanced Bench Simulators for the simulation clinics as it allows our students to move from the simulators to the clinical environment using the same equipment. The simulators are like a Compact i unit but without the chair.

Instead there is a Frasaco head. All the lights, instruments, programming, suction, etc, is the same as the Compact i chair.

"The transition between simulator and clinic can be traumatic and we believe that this approach of similar equipment types will make the process easier."

Prof. Massey said that in addition to the main treatment areas, two showcase rooms have been built in Wagga Wagga and Orange where Planmeca and Henry Schein Halas have donated equipment.

"We call these our dream rooms," Prof. Massey said. "Each has the top of the range Planmeca Sovereign Chair and the latest in cabinetry and equipment. These rooms are set up for distance education, teledentistry and student instruction with mobile video conferencing. Local practitioners can also come in, look at the latest in equipment and ergonomics... and dream!"

The 24-chair teaching practice at Orange includes 16 chairs in open bays and 8 chairs in private closed rooms. Academic staff commenced offering services to patients as part of a private practice which opened on January 4 this year. Specialist practitioners who visit rural areas are also being encouraged to relocate their practices to CSU.

The oral therapy program is headquartered in Wagga Wagga and includes a

20-place simulation clinic and a 24-chair teaching practice identical to Orange. The intake for oral health therapy is 20 students per year for the 3-year program.

The other three satellite clinics currently under construction each include 10 chairs. The Dubbo clinic is a collaboration with the Greater Western Area Health Service and the new premises was expanded to include an additional 6 chairs in private rooms to relocate the existing

4-chair public Dubbo Dental Clinic.

"When complete, we will have 78 clinical chairs over the 5 clinics open to the public with services being provided by dentists and oral health therapists on staff, visiting specialists and dental and oral health therapy students," Prof. Massey said. "When we are fully operational, we envisage being able to offer an additional 30,000 dental appointments per year across regional New South Wales."



Frasaco reinvents simulation



Key to student clinical skills development at CSU was the selection of a typodont model with tooth morphology and soft tissue contours representative of our patient demographic, said Prof. Massey.

After an evaluation of products available on the market, the school selected a

recently released typodont model (ANA-4) by Frasco and supplied by Gunz Dental, for further evaluation. CSU staff then modified the interdental soft tissue contours to further open proximal embrasures and to facilitate proximal restorative procedures.

Prototype typodonts prepared by Frasco were subsequently evaluated and the new model (now ANA-4V) has become the standard for CSU simulation classes and is also being used by several other dental schools in Europe.

“We appreciate the significant investment in the future of our students made by Frasco and Gunz Dental in developing this new model for us,” Prof. Massey said.

Dr Massey said that local practitioners are supportive of the CSU initiative as many have their books closed for new patients or have to send their existing patients to Canberra or Sydney for specialist treatment.

CSU’s curriculum was developed in house led by Professor Massey with input from local and international consultants. Input from the ADA NSW Branch, local practitioners and other key stakeholders

including the area health services was also canvassed with regard to workforce requirements and student placement.

“We believe the curriculum we have developed is progressive and will graduate very competent practitioners with a diverse range of clinical experience. Our dentistry students commence their simulation activities in first year and begin to work with patients in second year.

“Our students will undertake the majority of their clinical experience in our facilities and our buildings rather than in area health service clinics and because our clinics charge patients a fee, students will be exposed to more procedures and a more diverse range of patients. We would hope our students will also experience more aesthetic and complex restorative dentistry than you would traditionally expect during your undergraduate education.

“We are expanding our faculty as student numbers increase. At present, we have a Professor of Dental Science with a background in Oral Pathology; a Professor in Restorative Dentistry; an Associate Professor in Periodontics; myself with a background in Restorative Dentistry; a Senior Lecturer in Restorative Dentistry; and four visiting staff who teach in the simulation program.

“The all new facilities and state-of-the-art equipment is helping to attract great people and we are continuing to receive a lot of interest because of what we have here. You can make a position your own. We are also about to take on three full time academic dentists for 2010 and a total of 10 clinical academics between now and 2012.”

For more info, see www.csu.edu.au