New dental teaching facility to be built in South Auckland

By DTI

The University of Otago has announced that it will begin construction of a new dental teaching facility in South Auckland in 2019. The clinic will offer high-quality care at an affordable cost.

The University of Otago’s Vice Chancellor, Prof. Harlene Hayne, believes the NZ$28.2 million, two-storey, 32-chair clinic will make a true difference to the lives of patients and the broader community’s health and well-being. She noted that the Faculty of Dentistry will regularly consult the community to find out what it needs from the clinic, then work to deliver that, as well as provide a wide range of outreach activities.

With 48 final-year BDS students to be assigned to the South Auckland clinic at any one time, it will follow the long-standing social contract model operated successfully in Dunedin, whereby patients receive treatment provided by students under supervision at a highly accessible cost.

Prof. Paul Brunton, the Pro-Vice-Chancellor of the Division of Health Sciences at the University of Otago, said the project is a win-win situation for both the local community and the university. “Patients are contributing to the education of the country’s future dentists and, in exchange, they have access to high-quality dental care,” he explained.

The design of the clinic is already underway, with construction scheduled to start in 2019 and the completion date set for 2020.
New study links poor oral health to respiratory disease

By DTI

TOKYO, Japan: In oral and maxillofacial surgery and other fields of dentistry, the use of 3-D patient-specific organ models is increasing, and this has raised the cost of obtaining them. To design and produce inexpensive patient-specific dental models, researchers at the Tokyo Dental College recently developed an environment they call the "one-stop 3D printing lab".

The "one-stop 3D printing lab", in imitation of the term "one-stop shop" as a business or office where multiple services are offered, is an environment that can complete everything, from design to fabricating, in one facility. One of its merits is that it is possible to fabricate the model while communicating with the surgeon to determine which parts are critical in the 3-D model.

In the process of experimentation, the researchers fabricated over 300 mandibular models from polylactic acid filaments. It was possible to quickly print a 3-D model while greatly reducing the cost burden using the low-cost desktop 3D printer in the "one-stop 3D printing lab". The results suggested that adjusting the laminating pitch (layer thickness) may lead to further reduction of model print time and cost. Furthermore, as the laminating pitch increased, no significant reduction in geometric accuracy was observed.

"Although it is a low-price desktop 3D printer, we have created an environment to fabricate the practical 3-D models that seem necessary and sufficient for the daily clinical practice. The 'one-stop 3D printing lab' can complete the whole process, from designing to obtaining a model, within one facility," said lead author Dr Takashi Kamio, assistant professor at the college’s Department of Oral and Maxillofacial Surgery.

According to Kamio, the printing laboratory has many advantages for dentist and patients: “The costs for obtaining 3-D models is low, which is why these models can be applied to more cases. It is also easier to fabricate multiple 3-D models (for example according to the surgical technique). Presenting such a 3-D model to patients contributes to deepening their understanding of the process. Furthermore, it is very useful for the operator to visualise the teeth and the jawbone, and actually touch them.”

The study, titled "Utilizing a low-cost desktop 3D printer to develop a 'one-stop 3D printing lab' for oral and maxillofacial surgery and dentistry fields", was published on 13 August 2018 in 3D Printing in Medicine.
Researchers find possible link between bruxism and periodontitis

By DTI

OKAYAMA, Japan: In a recent study, researchers from Okayama University investigated whether involuntary masseter muscle activity showed any specific pattern concerning the severity of periodontitis. According to their results, after performing detailed measurements in a group of people with various degrees of periodontal disease, they found that bruxism might be related to its acuteness.

A total of 31 participants took part in the study, 16 of whom had no or mild periodontitis (NMP), with the remaining 15 having moderate to severe periodontitis (MSP). To ensure researchers were able to attain as in-depth results as possible, participants were equipped with a portable electromyography (EMG) device and monitored both day and night.

In addition to wearing the device, participants of the study were also required to keep a diary—noting activities such as when they ate their meals, which enabled researchers analysing the data to filter out all muscular activity not related to involuntary teeth grinding. Teeth movement due to speech was filtered out by monitoring voice activity from a microphone attached to the EMG device.

According to the study’s results, during both waking and sleeping hours, the duration of masseter muscle activity was significantly longer in the MSP group than in the NMP group. However, due to oral conditions such as missing teeth or the use of removable partial dentures not being taken into account, as well as the limited capabilities of the EMG setup, researchers stated that bruxism leading to periodontitis could not be concluded.

The study, titled “Relationship between severity of periodontitis and masseter muscle activity during waking and sleeping hours”, was published in the Archives of Oral Biology on 1 March 2018.
In China, Smile Around the World reports successful oral health education workshops

By DTI

WEINAN, China: Smile Around the World reached its full potential in China in summer 2018 thanks to a collaborative effort between FDI, the Chinese Stomatological Association and 3M Oral Care. The initiative was first implemented in India in 2015 and Brazil in 2016, reaching a combined total of close to 8,000 children and teachers. Smile Around the World is an FDI-led initiative that aims to raise awareness about oral health in disadvantaged, rural and urban communities through engaging oral health education workshops for children around the globe.

“We are thrilled with the success of our most recent initiative in China. We were able to raise oral health awareness among 3,649 children in western China, where there is a demonstrated need to improve oral health. We’ve worked closely with 25 volunteer dentists and dental students and 90 volunteer schoolteachers,” said FDI President Dr Kathryn Kell.

Smile Around the World encourages children to play an active role in their oral health. The oral health education activities help children establish good oral hygiene habits at a young age. The curriculum is based on seven steps to ensure a healthy mouth and smile:
1. Brush your teeth twice a day.
2. Use a toothbrush, fluoride toothpaste and clean water.
3. Eat only your main meals and do not snack in between.
4. Visit your dentist regularly.
5. Do not suck your thumb.
6. Look after your teeth.
7. Stay away from tobacco and alcohol.

“I’m very excited about the leading role that children played in this initiative. Children were actively involved in Smile Around the World through their own creative work, participating in crafting oral health messages to increase their own understanding of oral health,” Kell added.

Disparities in access to oral healthcare remain throughout the world, with many children suffering from untreated dental caries. Through its activities, Smile Around the World strives to create a lasting impression of the importance of good oral health. To encourage the sustainability of the programme after its official conclusion, schoolteachers and oral health professionals are trained to teach effective oral disease prevention strategies to their students and patients. Smile Around the World intends to expand its activities into other regions later this year.

The response has been terrific from patients. We started owing to the success of ‘tele-dentistry’ in the US and Europe and the fact that Invisalign had entered the market via SmileDirectClub; we knew this was the way of the future based on observable frameworks. This leaves the apparent lack of regulation of this new disruptive industry. As there are no actual dentists or orthodontists providing the service or ‘treating’ a patient, DIY orthodontics does not fall under traditional regulatory frameworks. This leaves the public in a very vulnerable position and with a risk of recourse if problems arise.”

Speaking about the tension between traditional orthodontists and the emerging industry of DIY tooth straightening options, Ambrosius said: “I think most orthodontists have come to realise that we are only for the lower cosmetic end of the spectrum and are not the threat to them that they may have originally thought.”

Orthodontists concerned about the emergence of DIY clear aligners

By DTI

SYDNEY, Australia: Dental tourism and do-it-yourself veneers have been contentious topics of debate in dentistry for some time. For dentists, DIY orthodontic kits could be added to this list of disruptive and dangerous practices too. However, for some people, the cost of in-office orthodontics is simply too high and recent alternative tooth straightening options arise.

The emergence of DIY clear aligners on the Australian market is a matter of concern for some orthodontists. However, those driving the business believe they are not a threat to patients’ health or orthodontic clinics.

The initial impression kit costs A$99, however, a full refund is provided if aligners are found not suitable for a particular patient. For those who are eligible, a payment plan of A$42.50 a week is possible (total of A$2,490) or an upfront payment of A$2,149.

“The response has been terrific from patients. We started owing to the success of ‘tele-dentistry’ in the US and Europe and the fact that Invisalign had entered the market via SmileDirectClub; we knew this was the way of the future based on the technology revolution we are seeing,” Ambrosius said. He also noted that EZ Smiles is looking to partner with dentists around the country who are willing to treat the patients EZ Smiles cannot. “We have more than 1,000 patients on our database—and this number is rapidly growing—that we have declined based on small amounts of interproximal reduction being required.”

Pricing for the aligners differs depending on the payment process.

The emergence of DIY clear aligners on the Australian market is a matter of concern for some orthodontists. However, those driving the business believe they are not a threat to patients’ health or orthodontic clinics. (Photograph: edwardolive/Shutterstock)
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Victorian dentists strike

By DTI

MELBOURNE, Australia: On Wednesday, 22 August, dentists across Victoria stopped working for half an hour as a form of protest against unacceptable waiting times for public dental care. The strike action follows intense advocacy activity by the Australian Dental Association Victorian Branch (ADAVB), which has borne a light on the fact that dentists employed in the state’s community health centres are the lowest paid public sector dentists in the country.

Dr Michelle Peterson, a senior dentist at Your Community Health, who took part in the strike, said: “The work we do is so important to the overall health of disabled, elderly and disadvantaged Victorians, yet we all feel overlooked and underappreciated by the Victorian Government.”

According to the ADAVB, at a community health care clinic in Darebin, the wait for eligible adults seeking general dental care is 22.8 months. Some Victorian dentists say this is due to insufficient funding, which results in the inability to retain experienced clinicians.

However, an interactive map released by the ADAVB shows a far greater problem, reportedly exposing waiting times of up to four years for some vulnerable Victorians. Additionally, less than 20 per cent of eligible Victorians are accessing care annually and there are more than 150,000 remaining on waiting lists. ADAVB President Dr Kevin Morris noted that the data from the interactive map means that just over a third of all courses of care are for emergency treatment rather than routine care, which puts more strain on the public system.

“The ADAVB is calling on both the State and Federal Governments to support an increase in funding, with a target to double the number of patients being treated on a yearly basis to 800,000 by 2023/24. This would represent approximately 29 per cent of the eligible population,” said Morris.

Straumann strengthens position in low-cost implant market

By DTI

BASEL, Switzerland: With implant dentistry continually developing and evolving, too are some of the low-cost options. In a recent move to secure a larger stake in that market, Straumann recently signed agreements to buy further shares in T-Plus, a Taiwanese dental implant manufacturer. Once the Taiwanese Investment Commission has approved the purchase, Straumann will gain a 60 per cent share in the company.

T-Plus develops and manufactures attractively priced dental implant systems, which are sold exclusively through distributors in Taiwan and China. Its portfolio includes three tapered implant designs and covers a broad range of indications and customer preferences. The concepts, features and quality are similar to those of popular implant brands, something that Straumann believes makes T-Plus an attractive, inexpensive option for dentists using systems like Osstem and Astra.

Straumann first entered the non-premium market two years ago with a 30 per cent stake in the France-based dental implant systems manufacturer Antiguus. They have now reported that in Asia more than six million non-premium implants are sold annually, of which more than a third are low-cost.

“T-Plus provides us with the additional product ranges, registrations and brand to penetrate the entire non-premium segment in Taiwan and mainland China. In addition, it provides us with a modern, certified manufacturing facility in Asia. The company has a good track record and is well positioned for international growth, supported by the Straumann Group’s global presence, network and expertise,” said Patrick Loh, Head of Sales in Asia Pacific.
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