Researchers evaluate implementation of rapid oral HIV tests in dental practices

- HIV infections in Australia jumped by 10 per cent last year, according to recently published figures from the University of New South Wales. A group of researchers from Sydney have recently started investigating whether dental practices and pharmacies could help stop the further spread of the virus by diagnosing more people who are infected and not aware of it through rapid oral HIV testing.

The trial, conducted in collaboration with the University of Sydney’s Faculty of Dentistry, Western Sydney Sexual Health, and Sydney School of Public Health, is currently being conducted in the states of New South Wales, Victoria and Queensland. It seeks to examine knowledge of HIV, attitudes towards people living with HIV and the willingness of Australian dentists to conduct rapid HIV testing, lead researcher Dr Anthony Santella from the Sydney Medical School told Dental Tribune Asia Pacific. He said that studies on the willingness of dental patients to accept such testing were also begun recently.

Depending on the test results, the team will further investigate how to implement them in practices that operate in neighbourhodws with high HIV prevalence rates in cities like Sydney. This step is anticipated for next year.

"Evaluations would also need to be done to explore whether it is cost-effective to implement rapid HIV testing in the dental setting versus other settings," Santella added. "Assuming it is cost-effective, we would then explore reimbursement mechanisms so dentists and possibly other dental professionals could bulk bill the government for the test."

Rapid HIV tests have been available to medical practitioners in Australia since late 2012, but the country has been slow to implement them. The OraQuick ADVANCE Rapid HIV-1/2 Antibody Test developed by US company OraSure Technologies and used in the trial has not yet received approval from the Australian Therapeutic Goods Administration. It has been available to dental practices in the USA since early last year, when it was approved by the Food and Drug Administration. The latest studies suggest that rapid dental practices could increase testing frequency among regular testers, as well as testing rates.

According to the Kirby Institute at the University of New South Wales, about 25 per cent of HIV cases in Australia are undiagnosed. In total, more than 31,000 infections were reported in 2011, with almost every second one occurring in New South Wales.

Aussie study suggests dentists are prone to visual illusion

- Objects in a mirror appearing to be farther away than they are is a common illusion encountered by car drivers around the world every day. Misleading visual perception of an object could also be the reason that dentists sometimes drill larger cavities than necessary to fill a tooth or prepare a root canal, a team of psychologists and dental researchers from Australia and New Zealand has suggested.

In clinical field tests involving eight practising endodontic specialists from New Zealand and conducted in 2002 and 2006, the researchers found that dental professionals tend to fall trap to the Delboeuf Illusion, which makes enclosed areas appear smaller than they actually are when seen in a larger context. In their case, a cavity drilled into a tooth appeared to be smaller when the surrounding tissue was in range of the parameters of the illusion, leading to more healthy tissue being removed at the expense of patients.

The researchers said in the report that it remains unknown whether dentists are aware of this when drilling but recommended that their findings be incorporated into the early stages of clinical training to decrease the risk of cracking or perforating the root end due to having removed too much healthy tissue. It should also be extended to other fields of health-care treatment that could be affected by visual illusions, they added.

"When operating, health-care providers try to save as much healthy tissue as possible. It is important to know that their eyes can deceive them into removing more healthy tissue than necessary," lead author of the study and psychology expert from the University of Southern Cross in Australia Prof. Robert O’Shea commented.

Named after its creator, Joseph Remi Leopold Delboeuf, a Belgian scientist, the illusion was first documented in 1865. It has been reported to be used by restaurants to trick customers regarding the size of their dishes by using smaller plates, among other things.

For the latest study, more than 20 extracted and root-filled teeth were treated by each participant, who had not been informed about the parameters of the illusion. The participants were asked to remove as little tissue as possible when preparing the teeth and to use their usual hand instruments.

More female dentists in Australia

- The number of dentists in Australia has increased, as well as the number of women working in the country, according to an employment report released by the Australian Institute of Health and Welfare (AIHW) in January.

"While dentistry is traditionally a male-dominated profession, the proportion of female dentists rose from about 35 percent to almost 37 percent between 2011 and 2012," said AIHW spokesperson Dr Adrian Webster.

The report also revealed that 97 per cent of employed dental therapists, 95 per cent of employed dental hygienists and 85 per cent of employed oral therapists in 2012 were female, while dental prosthetists were much more likely to be male, with women making up only 15 per cent of this group. With regard to age distribution, there were more men than women across all age groups except in the youngest (20–34 years), with the most men in the 45–54 age group (3,874), followed by the 55–64 age group (1,844).

Overall, 19,462 dental practitioners were registered in Australia in 2012, of whom 14,687 or two-thirds were dentists. The report also showed that 1,600 (8.3 per cent) worked as dental hygienists, 1,276 (6.6 per cent) as dental therapists, 1,161 (6 per cent) as dental prosthetists and 738 (3.8 per cent) as oral health therapists.

Roland DG Australia expands into dental business

- Roland DG Australia, a provider of milling and 3-D engraving technologies, has opened a 3-D and dental creative centre at its head-quarters in Sydney. The facility was established to strengthen the company’s position in the dental and manufacturing industries throughout Australia, New Zealand and the ASEAN region.

The new facility is mainly focused on Roland’s EasyShape Dental Solution and the DWX range of dental milling machines, including the DWX-50, which was specifically designed for dental laboratories and technicians for the production of dental prostheses, including crowns, bridges and abutments, and the DWX-4, which was released last October at the world’s smallest dental milling machine by the company.

Roland DG Corporation, which has its headquarters in Japan, is a global manufacturer of inkjet devices, milling and engraving devices, 3-D scanners, and a number of other products. The company entered the dental health market only recently by introducing milling machines designed for creating dental prostheses.