



NSW Health adopts new approach to surgery design

By David Petrikas

NSW Health has set a new standard of patient care with its all new Tweed Dental Clinic, which features fully customised surgery fit-outs and the latest in dental equipment and technology.

Working in conjunction with A-dec's NSW Territory Managers, Paul Riddel and Daniel Bet, NSW Health was able to come up with a standardised surgery design which has reduced build costs and provided a modern, stylish and practical solution to NSW Health's clinical requirements.

The new Tweed Dental Clinic opened in April 2014 and provides affordable dental care for children and Healthcare

Card holders living in the region and also doubles as a teaching facility for final year dental students from Griffith University on the Gold Coast.

The dental clinic which is housed in a new wing of The Tweed Hospital, boasts 10 new surgeries, featuring customised A-dec 500 dental units, A-dec 'Preference' cabinetry and a semi open layout with optimum sized surgeries in a limited floor area.

A-dec Territory Manager, Paul Riddel said the combination of purpose built A-dec dental cabinetry and A-dec delivery systems provided a space efficient solution, encompassing superior ergonomics, materials management, asepsis and radiation shielding.

"The A-dec dental units, Preference cabinetry and new design of LED surgery lighting are all aimed at better workplace health and safety," Mr Riddel said. "For example the relationship between the dental unit control head, patient chair and work surfaces encourages good posture by minimising excessive twisting and extension [Class 3 to Class 5 movements of the arm, shoulder and torso] and instead puts chair controls and consumables within easy reach of the dental team.

"The innovative daylight balanced LED lighting is very easy to position and virtually eliminates shadows and reduces eye-strain because of its unique 'stadium effect' multi beam design."



Supervising dental officer at NSW Health's Northern NSW Local Health District, Dr Andrew Brenac, said the use of pre-built A-dec surgery cabinetry and cabinetry wall dividers enabled more surgeries to be accommodated in the available space.

"We only had a certain amount of space to house the surgeries because of the encroachment of an external stairwell, so we had to fit the surgeries into a smaller area than intended. However, we were able to fit all the surgeries in with the A-dec surgery design, which has double-sided central divider cabinetry between each of the open plan surgeries.

"That also enabled us to economise on the number of X-ray units we had to buy, which was a saving of about \$40,000 or more. What's the point of having an X-ray generator in each room if you can share it between surgeries?" Mr Brenac commented.

The A-dec Preference cabinetry and semi open plan design also offered practical advantages compared to traditional walled surgeries. "The pass-through feature allows trays to be moved in or out of the surgeries into the corridor without interrupting the dental team," Dr Brenac said.

The Tweed Dental Clinic has also installed an A-dec Preference ICC (Infection Control Centre) which encourages a disciplined infection control protocol, supported by a logical workflow and colour-coded task lighting to delineate "clean" from contaminated areas. Additional features include touch-free cabinet doors and taps to avoid cross contamination and special shelving to accommodate cassettes and trays together with slide-out shelves with drip trays and inbuilt suction to contain spills.



To comply with NSW Health guidelines, the sterilisation room was split into two sections joined by a window hatch to keep contaminated instruments completely separate from the processing and storage areas.

Mr Riddel said that the A-dec Preference cabinetry enabled a total surgery fit-out to be provided at a very competitive cost compared to traditional build techniques, but with many added advantages.

This sentiment was echoed by Dr Brenac: "The optimal driving forces were cost and space (which is cost based anyway) and the bottom line outcome was only possible with the extensive use of the A-dec Cabinets. The facility is now in full use with all ten chairs utilized most days during term time," Dr Brenac said.

surgery | DESIGN



Mr Riddel explained that A-dec Preference cabinetry is in effect dental “equipment” that has been purpose-built for the dental environment. The surface finishes are not only attractive, but are designed for asepsis, with hard wearing non-porous benches in modern stone look finishes and complimentary cabinetry colours including plain, patterned and wood grain finishes that combine to create either a clinical or “designer” look.

“A-dec has come up with an optimum surgery design with separate entry and egress points, work surfaces and storage units which place materials in easy reach of assistants and delivery systems which support four-handed dentistry,” Mr Riddel said.

“Most importantly, over the years A-dec has worked closely with dentists to come up with an ideal surgery layout which provides easy access for staff, special pass-through shelving to accommodate common tray and tub sizes and a choice of benchtop widths to fit small and larger surgeries. The bench height is also designed specially for seated dentists and assistants and ergonomically superior to adapted “kitchen cabinetry” systems used in many dental fit-outs designed by building companies.

“In the case of the innovative A-dec Preference central divider cabinetry, the steel frame and built-in lead lining meets radiation requirements and represents significant savings by allowing X-ray units to serve two adjoining surgeries and from not having to build partition walls.”

Being modular, the A-dec system is fully configurable to different shapes and layouts of surgeries and sterilisation rooms and can be upgraded with new A-dec Preference cabinet modules with inbuilt taps, sinks, ventilated PC cabinets and monitor mounts as required.



Because it is classified as “dental equipment”, the Preference units may offer taxation advantages (being fully depreciable) and because the system is assembled on site it can be moved or removed at a later time without damaging internal walls such as occurs with traditional cabinetry, which is often glued and screwed or nailed into position.

A-dec has worked with a number of government customers in Australia in providing complete surgery solutions incorporating dental units, dental cabinetry, sterilisation equipment and digital imaging systems. Because the design is modular, it is fully replicable in other locations and the identical surgery layout with rear pass-through cabinetry, side cabinets and central divider units, saves on individual design and build costs and simplifies staff training where standardised surgery layouts and equipment including A-dec dental units and cabinetry is used.



Summary

The Practice

Practice	Tweed Dental Clinic
Owner	NSW Health - Northern NSW Local Health District
Supervising Dentist	Dr Andrew Brenac
Type of Practice	Public Health (Dental), Teaching clinic
Location	Tweed Heads NSW
Size	177 square metres
No of chairs	10

The Team

Design	Warwick Appleton, DRA Architects, Coffs Harbour
Construction	Bennett Constructions, Lismore
Project Manager	Rob Nienhuise (PDPM)
Site Builder	Shannon Davies (Bennett Constructions)
Facility Project Manager	Brad Bouchaud Northern NSW Local Health District
Installer	East Coast Dental Services, Gold Coast Qld

Equipment

Units	A-dec 500
Cabinetry	A-dec Preference dental cabinetry
Sterilisation	Lisa Fully Automatic
X-Ray	Acteon X-Mind
Digital Imaging	PSP!X phosphor plate scanner
Compressor	Cattani K400
Suction	Twin Cattani Turbo Smart C2
Software	ISOH™ (Information System for Oral Health), Kodak Imaging

A number of teaching universities and dental hospitals across Australia use A-dec equipment for its reliability, ease of use, superior ergonomics and service backup from the A-dec Australia-wide dealer network. This includes East Coast Dental Services on the Gold Coast, which installed and validated the equipment at Tweed Heads and also at a second NSW Health clinic at Yamba.

A-dec customers include Griffith University, James Cook University, University of Queensland (Brisbane campus), Sydney Dental Hospital, Westmead Hospital, Melbourne Dental School, Adelaide Dental Hospital, TAFE SA, SA Dental Service, NT Health, ACT Health and the University of Western Australia.

