

# Clever healthcare design is in the detail



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When designing a healthcare environment, it is not only important to focus on how it looks and feels, but equally important on how it functions. On every project, every practice owner, practice manager and designer will need to consider the design of details such as joinery in each room, access to consumables and high usage equipment, plumbing and electrical requirements, power point locations, clinical zones, bench space and storage. If these details are designed successfully, you will have an efficient, comfortable and safe environment for you, your staff and patients.

The design should be guided by the equipment and material to be accommodated in each area. Once you have drawn up this inventory, measure the footprint and height of each piece of equipment to be accommodated. Make certain that you include any future items on the purchase list and allow space for them in the design.

Another important issue to consider in designing the details is access for staff. Most frequently accessed items need to be located in areas of comfortable reach as excessive reaching or bending can cause physical stress to staff. The functionality of drawers or cupboards in each area and for particular items will need to be assessed. (In all areas of the practice, drawers allow much better access but are more costly to construct.) Adjustable shelving is a smart idea to allow for flexibility and variability in your storage requirements.

Joinery should accommodate plumbing and electrical supply for a safe working environment and a clean look to your practice. Electrical items can be concealed if power points are located at the rear of the storage space with a cavity for cabling. If overhead units are required for additional storage, it works well to have concealed lighting at the base, lighting the counter.

The administrative zone includes reception, the back office, utilities area, patient filing area and the offices of the principal, practitioner and practice manager. For these areas, a comfortable desk height range suggested by Standards Australia is 680-720mm. Even with a

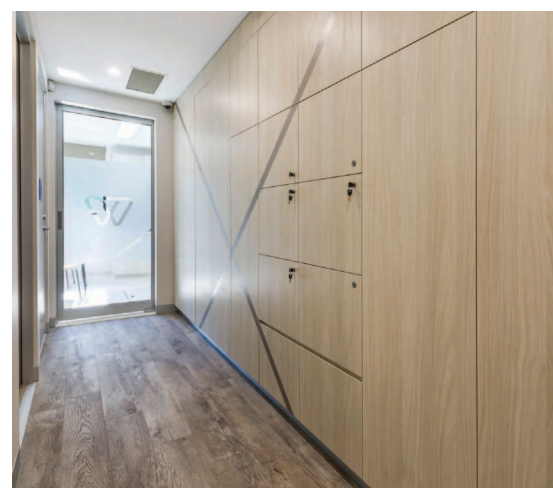
desk which is not height-adjustable, a comfortable arrangement can be achieved with the provision of a pneumatic office chair and an adjustable keyboard. The average desk depth is 750mm-1m, but the size varies depending upon the number of people using it, the available space and its purpose.

In the patient filing area, files can be stored in shelving or in drawers. A common mistake when using the drawer system is not allowing clearance for the drawers to be fully extended and for an employee to stand in front of the extended drawer. Double extension runners are required to gain access to all files. The height of the storage unit must be limited to a comfortable eye height and reach height for the staff.

The clinical zone includes the surgeries and sterilisation area. In these areas, it may be beneficial to have easy access to gloves, masks and tissues by building their storage into the joinery.

Formulating an inventory is a starting point in the practices, but the quantity of equipment and materials to be stored requires more information to create a successful design. Draw up a list of items which need to be accessed by particular staff members as well as those items used most frequently. The benefit of drawer access or cupboard storage also needs to be addressed for each item. You may like to assess the advantages of a slide out work surface depending upon the available space.

Consider the importance of having clear benches or having all equipment within easy reach. If concealed equipment is required, lift-up hatch covers and



retractable or roll away doors can be used to achieve this. Mobile work stations can be accommodated within the joinery areas, providing that some tolerance is allowed for removing and replacing the station. Design for infection control, by using slide out keyboard drawers in the practice. The use of dispensers in-built into the overhead cabinets will also remove clutter from the bench tops.

The general approach to the sterilising area is a progression from dirty to clean, which addresses the infection control guidelines for the sequence of sterilising instruments. Sterilising is split into two zones: the waste area and dirty sink; the clean sink and bagging area. Dirty and clean zones must be kept distinct and this can be reinforced in the design. In the sterilising area, space is often at a premium and the area needs to be designed specifically for the space at hand – the design may be affected by the area's visibility to patients.

The detailing of the sterilising area needs to provide appropriate storage for all types of waste. The sterilising area is the perfect place to have overhead storage – especially for those surgeries who work on a tray system, but the storage unit must extend to the ceiling to prevent the accumulation of dust in this clinical area. Strong lighting in the base of the overhead cupboards is beneficial in this intense work zone. ♦

