

Canberra Hospital Expansion Project

Design Stage 2 – Clinical User Groups: Briefing Document for Consumers

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1. Background

In late 2018, the ACT Government announced that a new emergency, surgical and critical health care facility would be built on the north-east side of the Canberra Hospital campus. This facility is now known as the Critical Services Building (CSB).

Clinical User Groups form part of a wider consultation which is part of the Design Stage 2 for the new Critical Services Building. These user groups include members who are health service staff including clinicians, managers, and other hospital employees, as well as consumer representatives.¹

Each user group will be looking at a different clinical area of the new Critical Services Building, areas include the Emergency Department, ICU and inpatient rooms. The scope of this phase of user groups will be limited and not cover matters already decided in the previous design phase.

This document has been created to provide briefing material to consumer representatives contributing to user group meetings for the Critical Services Building, where design decisions will be made. The information in it has been gathered from a) consumer input for this project from a series of consumer focus groups for this project, held in November 2020, b) consumer input gathered from HCCA involvement in previous health infrastructure projects since 2008, and c) HCCA research into the relevant design ideas and principles raised by consumers.

2. Overarching Design Principles

In accessing health care, consumers and carers want to:

- Feel welcomed, known and cared for
- Be and feel safe
- Understand how to get what they need

¹ Carthey, Jane. "Interdisciplinary User Groups and the Design of Healthcare Facilities." HERD: Health Environments Research & Design Journal, vol. 13, no. 1, Jan. 2020, pp. 114–128, <https://doi.org/10.1177/1937586719843877>

- Be independent and self-manage their health needs as much as possible
- Be able to participate as equal partners in their own care, or that of the person they care for, and
- Experience good communication between consumers and clinical staff, and staff within the service.

Thinking about the design of health care spaces, there are some common and useful principles and some specific features that are widely applicable across areas and improve the experience and outcomes of being in hospital for consumers.

Design for all abilities

"Variation in human ability is ordinary, not special, and affects most of us for some part of our lives."

– Institute for Human Centred Design

Many, if not most people visiting or staying in hospital are experiencing some form of impairment. It might be something they live with permanently, or it might be a temporary problem that has brought them to hospital, or even a side effect of medication. It makes absolute sense, therefore, to design spaces for consumers with universal design principles in mind. This means design which is suitable for the whole range of human ability and does not disadvantage a group of people.

Universal design principles are:

1. Equitable Use: The design does not disadvantage or stigmatize any group of users.
2. Flexibility in Use: The design accommodates a wide range of individual preferences and abilities.
3. Simple, Intuitive Use: Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

4. Perceptible Information: The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
5. Tolerance for Error: The design minimizes hazards and the adverse consequences of accidental or unintended actions.
6. Low Physical Effort: The design can be used efficiently and comfortably, and with a minimum of fatigue.
7. Size and Space for Approach & Use: Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.²

Some practical examples include:

- The installation of fittings and amenities at different heights (e.g. power points, handbasins, food and drink options)
- Design which considers sensory needs, for those with Autism Spectrum Disorder or other cognitive or sensory impairments
- Fully accessible adult toilet and changerooms
- Hearing Loop facilities
- Consideration of footpath gradients and surfaces
- Spaces to park or store bulky equipment such as mobility aids
- Automatic doors
- If not automatic doors, lever-type door handles
- Doorways, corridors and waiting spaces which accommodate mobility aids
- Reception counters at wheelchair/seat height, as well as standing height
- Accessible online information and forms

² Compiled by advocates of Universal Design in 1997. Participants are listed in alphabetical order: Bettye Rose Connell, Mike Jones, Ron Mace, Jim Mueller, Abir Mullick, Elaine Ostroff, Jon Sanford, Ed Steinfeld, Molly Story, Gregg Vanderheiden. The Principles are copyrighted to the Center for Universal Design, School of Design, State University of North Carolina at Raleigh [USA].

- Power points at convenient locations to charge electric wheelchairs and other devices

Design for culturally and linguistically diverse communities

Consumers have told us they need:

- Design features and technology that improves access and understanding of information including access to translation and interpreter services
- Translation of information into the main community languages
- The use of translation apps and QR codes to communicate translations
- Private spaces that can be accessed for cultural needs such as prayer, gatherings
- For people from some cultural backgrounds, non-gender specific amenities are unwelcome and access to private breastfeeding rooms must be provided.³

Design for family and carer needs

Consumers have told us they need:

- Accommodating the carer within a patient's room or patient bay, i.e. more private bedrooms, trizone room layout, comfortable seating, secure storage, overnight stay/day bed
- Providing a variety of calming, comfortable non-clinical spaces that can be used for:
 - time out or privacy for phone calls/discussions
 - eating, drinking, resting, or showering,
 - a space to do work or admin tasks regarding patient care

³ Health Care Consumers' Association, "HCCA CSB Consumer Focus Group Report", 2020. Available from: <https://www.hcca.org.au/wp-content/uploads/2020/12/HCCA-CSB-Consumer-Focus-Groups-Report.pdf> (Accessed 30 July 2021).

- space for larger family group visits or conferences
- Ensuring access to a variety of healthy, culturally appropriate food options, including afterhours access.
- Access to ATM and public phone
- Inclusion of a fully accessible adult change facility⁴

Design for wayfinding

Consumers value the following factors which make their journey through a hospital easier:

- Accessible pavements with sloping kerbs that are wide and unobstructed
- Clear signage (including aspects of colour, contrast, icons, language and placement)
- A direct journey
- Maps available in different formats and locations
- Kiosks to provide wayfinding help
- Knowing the distance they are required to travel
- Coloured lines on the floor, matched to area theme colours
- Automatic doors
- Well positioned features (such as door handles and intercoms), and
- Roads, walkways, signage and building entrances are well lit.⁵

⁴ Health Care Consumers' Association, "HCCA CSB Consumer Focus Group Report", 2020. Available from: <https://www.hcca.org.au/wp-content/uploads/2020/12/HCCA-CSB-Consumer-Focus-Groups-Report.pdf> (Accessed 30 July 2021).

⁵ Health Care Consumers' Association, "HCCA CSB Consumer Focus Group Report", 2020. Available from: <https://www.hcca.org.au/wp-content/uploads/2020/12/HCCA-CSB-Consumer-Focus-Groups-Report.pdf> (Accessed 30 July 2021).

Design for dementia and cognitive impairment

Adapted from '*A guide to creating a dementia-friendly ward*'.⁶

There are many practical ways to use design to help people with dementia or cognitive impairment. Here are some that relate to hospital design. As with universal design, most of these design solutions will improve the environment for all people, not just those with dementia.

- Floors should be one colour without changes that could be mistaken for a step. Shiny floors can be perceived as slippery. Sound absorption is important.
- Skirting and walls show clearly where the floor and wall join. If the floor covering is bent up against the wall, this must be as low as possible and in a contrasting colour.
- Handrails should contrast with the wall and have indicators where they end, such as a knob, or turn into the wall.
- Ceilings offer the best opportunity for sound absorption given the difficulties associated with using carpets and fabrics in hospitals. Sound-absorbent tiles can reduce the reverberation of noise around the room. Ceilings should also be light coloured to reflect light.
- Doors are crucial for way-finding. All staff-only doors should be the same colour as the wall, while doors that the patient is expected to find and use should contrast with walls. Sliding doors are difficult to understand. Panes of glass let people see what is through the door (bedroom doors are an exception because of sleep and privacy issues). If doors are identical, add striking signs, kick plates or panels. All toilet doors should be a consistent, bright, contrasting colour.
- Signs should be consistent throughout, mounted no more than 1.2m high, clearly contrast with the wall or door, using capital and lower case letters and include a graphic.

⁶ Nursing Times, *A guide to creating a dementia-friendly ward*, 2013, at <https://www.nursingtimes.net/roles/older-people-nurses-roles/a-guide-to-creating-a-dementia-friendly-ward-21-02-2013/>

- Clocks should be large, clear, accurate analogue clocks visible from every bed. There is evidence that clocks can help with delirium (National Institute for Health and Clinical Excellence, 2010).
- Lighting levels should be high, or be able to be adjusted to become high. By the time people are about 75 years old they need twice as much light as normal lighting standards recommend, and nearly four times as much as a 20-year-old, to see satisfactorily. The implications for care environments are that twice the usual light is required, so the lighting level should be set by an older person ([DSDC](#)). As much daylight as possible should be able to get in. Over-bed and chair task lighting is vital to avoid glare. Good lighting over food and drink helps patients to recognise and consume it.
 - Staff need adequate lighting to observe patients but making rooms completely dark at night is desirable to encourage sleep. Lighting that is activated by movement needs to stay on for long enough so people who move slowly can do so safely. Light switches should be easy to understand and made visible through contrasting colours.
- Sound, including that from buzzers, phones and noisy chatter, should be kept to the minimum. Washable acoustic panels should be fitted on walls and ceilings.
- Furniture such as chair seats should contrast in colour from the floor. Beds should go right down to the floor and bedrails be avoided. Table coverings and place mats should contrast in colour with plates to help people see their food.
- Mirrors can cause problems for patients who no longer recognise their own image. They may wonder, "Who is the strange person looking puzzled at me through this window?" Provide covers or doors for mirrors.
- Nurse call systems can cause alarm because people with dementia may not understand where the noise is coming from or what it means. Passive alarms can be more effective for people with dementia; the signal should be a vibrating pager carried by staff, rather than a sonic or flashing light alarm. Call buttons should be clearly labelled.

- Nurses' stations can be a hub of noise and activity, which makes them attractive to people with dementia. Having several smaller reception desks, ideally with a seating area for patients, providing space where notes can be written close to patients, is desirable. This means that staff can work individually and quietly on notes, rather than gathering together and being tempted into conversation. If there is a chair for a patient, the nurse and patient can provide each other with quiet companionship, allowing the nurse to complete administrative tasks while observing the patient.
- Relatives are better able to offer support if patients with dementia are cared for in single rooms with a comfortable reclining chair, foldaway bed or couch for overnight stays. A reassuring, familiar voice can make a huge difference if patients wake in the night and feel disoriented. When patients with dementia are being cared for in bays, a nearby room for relatives is the next best thing. Ward routines must be flexible enough to allow relatives to support care.
- Noticeboards and leaflet racks can lead to confusion, and should be kept up to date and free of clutter.
- Toilet seats and handrails should contrast with walls and floor. Any raised-level toilet seat should also contrast. Flush controls, taps, soap dispensers, toilet paper dispensers and hand drying arrangements should be classic in design so they are easily recognised. The aim is for domestic ambience.
- Bathrooms/shower rooms should have contrasting colours, and familiar fittings. Showers can be frightening if the water lands directly on the person from above; height-adjustable, detachable showerheads allow gradual exposure to water.
- Kitchens for daily activity assessment should be dementia friendly and all previous guidance on floors, walls, light and sound apply.
- A day room for additional activities is a great asset. It can be used for sitting, eating and speaking to relatives. Some people eat better if the setting is like a cafe or dining room. Activities can relieve boredom and the room is good for one-to-one work with people who have communication difficulties in addition to dementia.

- Outside views, together with access to sunshine or direct daylight, have been shown to benefit patients' recovery. The orientation and aspect of inpatient accommodation must be prioritised when developing a hospital master plan. Research suggests that easy access to outside reduces aggressive behaviour (Alzheimer's Society, 2010).
- Doors should be easily visible and easy to use. Internal and external floors should not have too strong a contrast. A seat easily visible from the door is good, and the lobby needs a water-absorbent mat. Outside spaces need a concealed and secure perimeter, non-slip paving, raised garden beds, robust seating, objects of interest to look at and protection from wind/rain/sun in some areas.

Design for other consumer safety considerations

Some consumer safety aspects relating to design have been covered in other sections such as wayfinding. Following are some remaining safety considerations consumers have raised, which are impacted by design.

- Infection control measures such as capacity for increased physical spacing between people, and automatic functions such as doors which reduced the need to touch surface.
- Homeless people (particularly rough sleepers) may carry their possessions with them, so it is important that they are provided a place to securely store their belongings while in hospital
- Most people report that mixed-gender rooms are unwelcome.
- People with autism spectrum disorder may require sensory friendly design including low sensory-input breakout rooms
- People who are experiencing a mental health crisis need safe spaces to get support from peer workers and clinicians.
- Idiopathic Environmental Intolerance/Multiple Chemical Sensitivity the term used to describe a condition that involved a broad range of ongoing, non-specific physical and psychological symptoms attributed to

low levels of chemical, biological or physical agents present in the everyday environment.⁷

- Design considerations need to be given to consumers with this condition particularly during the construction phase, such as using low-VOC and inert materials to reduce the pollutant load.⁸

⁷ South Australian Government, *A review of the Multiple Chemical Sensitivity (MCS) Guidelines for South Australian Hospitals 2010*, 2016 available at <https://www.sahealth.sa.gov.au/wps/wcm/connect/ff826a004f0e15b79823fe9ea2e2f365/MCS+hosp+Guideline+Review+report+2016.FINAL.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-ff826a004f0e15b79823fe9ea2e2f365-nwJZnjm>

⁸ Graveling, R. A., et al. "A Review of Multiple Chemical Sensitivity." *Occupational and Environmental Medicine*, vol. 56, no. 2, 1999, pp. 73–85. JSTOR, www.jstor.org/stable/27731063. Accessed 30 July 2021.

3. Consumer input on specific areas of hospital

HCCA held consultations with consumers and consumer organisations in November 2020 about the design of the Critical Services Building. Consumers had the following input about what they would like to see in different areas.

Waiting areas and public spaces

In waiting areas consumers value:

- flexible seating arrangements
- close access to accessible toilets and change facilities
- private areas that allowed for breastfeeding and conversations and phone calls
- access to healthy food options
- access to a sensory room and quiet spaces for time out or privacy to make calls
- systems in reception area for notifying consumers of their turn, their place in the queue and expected wait times
- availability of a public telephone⁹
- access to charging points for devices

In reception areas, consumers value:

- visually prominent desk using contrasting colours
- open reception desks with minimal barriers between consumers and staff
- entry through an obvious site entrance
- designed to set a welcoming tone for care in the hospital

⁹ Health Care Consumers' Association, "HCCA CSB Consumer Focus Group Report", 2020. Available from: <https://www.hcca.org.au/wp-content/uploads/2020/12/HCCA-CSB-Consumer-Focus-Groups-Report.pdf> (Accessed 30 July 2021).

- reception desk level and design to suit a variety of consumers, particularly people who need to be seated or use wheelchairs.¹⁰

Emergency Department

Consumers seek the following elements in the design of the Emergency Department:

- Reception desks that are of a height accessible to all consumers including those seated
- Amenities that provide consumer comfort
 - Comfortable seating
 - Entertainment areas for children
 - Access to a variety of food choices
- A concierge to assist with navigation in the ED
- Accessible carparks directly outside the drop off zone at the ED
- Comfortable and protected seating both inside and outside the ED for patients who are waiting for carers to park the car
- Access for consumers using wheelchairs and mobility aids
- A clear queuing and triage system in the ED, including a system to be show them their expected wait times and how to alert someone their condition has changed or deteriorated
- The streaming of specific services (such as paediatrics and geriatrics within the ED) and ability for people to self-refer to these streams
- Access to change facilities for children and adults, and private areas for breastfeeding
- Quiet and private spaces accessible from the ED

¹⁰ Health Care Consumers' Association, "HCCA CSB Consumer Focus Group Report", 2020. Available from: <https://www.hcca.org.au/wp-content/uploads/2020/12/HCCA-CSB-Consumer-Focus-Groups-Report.pdf> (Accessed 30 July 2021).

- An “express lane” or system that did not require queuing by critically ill people or children
- Design elements aimed at reducing sensory overload and stress (such as those experiencing a mental health crisis or those with sensory challenges)¹¹

Intensive Care Unit

Consumers raised the following needs relating to the design of the Intensive Care Unit:

- Single rooms with space for family and carers to stay overnight
- Accessible toilets
- Spaces for families and carers to visit
- Access to fresh air and sunlight
- Sufficient comfortable waiting space for families, nearby
- Privacy and cultural considerations
- Smaller, decentralised staff stations

Inpatient Units

Consumers raised the following needs relating to the design of the Inpatient Unit:

- Single rooms with designated space and furniture for family and carers to stay overnight
- Accessible toilets in ensuites, with rails around sink as well as toilet and shower
- Spaces for families and carers to visit

¹¹ Health Care Consumers' Association, “HCCA CSB Consumer Focus Group Report”, 2020. Available from: <https://www.hcca.org.au/wp-content/uploads/2020/12/HCCA-CSB-Consumer-Focus-Groups-Report.pdf> (Accessed 30 July 2021).

- Access to outdoors
- Rooms with natural light and views
- Sufficient comfortable waiting space for families, nearby
- Privacy and cultural considerations particularly in shared rooms
- Where rooms are shared, single gender rooms
- Smaller, decentralised staff stations

4. Additional Resources

NZ Dementia Foundation , *Best Practice Links Dementia friendly hospital design* , 2021, at <https://www.nzdementia.org/Best-Practice-Resources/In-hospitals/Dementia-friendly-hospital-design> (Accessed 30 July 2021).

Victorian Department of Health, *Designing for people with dementia*, at <https://www2.health.vic.gov.au/ageing-and-aged-care/dementia-friendly-environments/designing-for-dementia> (Accessed 30 July 2021).