
Dementia Care and the Built Environment

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Foreword

Dementia Care and the Built Environment is presented as a contribution to the on-going debate about how to provide high quality care for people with dementia. It builds on the ideas presented in Alzheimer's Australia's well-received and widely distributed 2003 position paper Quality Dementia Care.

The paper provides a starting point for people to think about dementia design issues and highlights ways in which the challenges of designing for people with dementia can be met. While the paper focuses on residential facilities, either mainstream or dementia specific, many of the ideas presented will be relevant to the design of other facilities including respite centres and day activity centres.

Given the progressive nature of the condition it is likely that many people with dementia will make use of residential facilities at some time. It is widely acknowledged in the aged care industry that people with dementia form a significant and growing proportion of their clientele. In many senses "Aged Care is Dementia Care".

The design of facilities can play an important role in ensuring that quality of life for people with dementia living in residential facilities is maximised. In turn, this will reduce the stress and anxiety felt by families and carers when facing the often difficult decisions around residential placement and will encourage carers to take up residential respite opportunities.

Well designed facilities also avoid placing unnecessary burdens on staff and contribute to a productive, pleasant and safe workplace.

As the peak body representing the interests of people with dementia, their families and carers, Alzheimer's Australia is very aware of the importance of high quality residential facilities for people with dementia, their families and carers. We trust that this paper will make a contribution to improving the physical design of such facilities.

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Introduction

For over 20 years Alzheimer's Australia has represented people with dementia, their families and carers. During this time Alzheimer's Australia has built up an understanding of the issues involved in the provision of high quality care for people living with dementia.

The purpose of this position paper is to promote an understanding of the principles of good environmental design and highlight the benefits of applying those principles.

The paper may assist:

- aged care providers and staff working in the aged care sector
- families who select aged care accommodation and (where possible) people with dementia who use the accommodation
- architects and builders who design and construct aged care accommodation

Alzheimer's Australia believes that quality care is more likely to occur if the care environment reflects the following characteristics:

- a management culture and philosophy that emphasise personalised care and which is reflected at all levels of the organization;
- operational leadership that promotes ownership of the care philosophy by every member of the service;
- staff who are knowledgeable and valued as important resources and encouraged to respond in a positive, creative and flexible manner; and
- a built environment that has a warm and "homely" feel based on appropriate physical design

This paper addresses the built environment in the provision of care for residents living with dementia. It has been prepared as a supporting document to Position Paper 2, Quality Dementia Care (Alzheimer's Australia 2003).

Best practices in dementia care have been developing for close to two decades and, during this period the physical environment has been considered a fundamental component of best practice.

Dementia and the Built Environment

Dementia is a general term indicating changes to cognitive function that result from a range of specific, usually progressive and irreversible disorders of the brain. The most common of these disorders is Alzheimer's Disease.

The changes most commonly encountered by people with dementia will be in the area of short-term memory, spatial perception, difficulty with planning activities, and lowered stress thresholds. As a consequence the physical environment in an aged care residential facility can become a challenge to people with dementia. In an environment designed to specifically meet the needs of people with dementia they are more likely to be able to utilize their retained abilities with minimal frustration, and experience the highest possible quality of life.

Operators of aged care facilities should consider how the accommodation needs for those of their residents moving through the continuum of early, middle and late stages of dementia will vary, and develop management and accommodation policies which address these variations.

Principles of Design

Designing facilities to support people with a reduced level of cognitive function is practical and achievable. There is almost universal agreement about the features of good design for dementia care. Marshall (2001) reviewed the international literature on principles for designing dementia specific facilities and, in summarising the consensus of views in this material, concludes that aged care accommodation for people living with dementia should:

- compensate for disability;
- maximise independence, reinforce personal identity, and enhance self-esteem/confidence;
- demonstrate care for staff;
- be orienting and understandable;
- welcome relatives and the local community; and
- control and balance stimuli.

Design Features

Marshall notes that there is consensus in the literature on the design features that need to be incorporated in a facility, to provide quality accommodation for people living with dementia. These include:

- small size, in terms of the numbers of people accommodated in a dementia specific unit;
- familiar building style, that is, domestic and home like;
- plenty of scope for ordinary activities (unit kitchens, washing lines, garden sheds);
- unobtrusive inclusion of safety features;
- rooms for different functions that are equipped with furniture and fittings familiar to the age and generation of the residents;
- a safe outside space;
- single rooms big enough for a reasonable amount of personal belongings;
- good signage and multiple cues where possible; eg. sight, smell, sound;
- use of objects rather than colour for orientation;
- enhancement of visual access; and
- control of stimuli, especially noise.

Applying Design Principles in Dementia Care Settings

The fundamental purpose of a dementia friendly unit is to compensate for the effects of dementia and to support retained function and skills. Maintenance of quality of life for the individual person with dementia is the desired outcome.

The quality of life of people with dementia is expressed through their response to their environment. While context and culture will inevitably impact on these responses, it is possible to measure these in various ways. Loveday, Kitwood and Bowe (1998) state that the resident with dementia demonstrates well-being when they are able to express their wishes in an acceptable way, initiate social contacts and take pleasure in aspects of daily life.

The next sections spell out how general design principles can be applied to specific issues.

Domestic Size and Character

People with dementia are challenged by large, unstructured spaces, with a large or unpredictable number of people sharing the space. The following points should be considered:

- international experts suggest that an environment, which accommodates between 8 and 12 residents, can maintain a domestic character;
- imaginative approaches to design can create small groupings of people within larger buildings as an alternative to multiple small separate units;
- “domestic character” requires that each room is furnished and decorated to identify its purpose and function in a similar manner to an average home;
- the environment should prompt activity and behaviour connected with each area, and minimise confusion likely to arise from large, all in one activity areas; and
- a design that enables rooms and spaces to be visible and recognisable with minimum effort, thus assisting with orientation and ease in finding the way.

Floor Plan

A successful floor plan is one that creates opportunities for residents with dementia to succeed and use their retained abilities by maximising ease in finding their way, familiarity, and their feeling of freedom and control, whilst reducing opportunities for failure and feeling of imprisonment and/or alienation.

Specific Spaces

Bedroom

The bedroom is a private space that, at times, must be shared by care staff. Successful design in bedrooms includes:

- using furniture which is familiar to residents;
- providing opportunities for residents to personalise their room;
- ensuring rooms are large enough to minimise clutter, with unobtrusive/camouflaged storage space which allows residents to make manageable choices in their personal area;
- using easily cleaned but warm, non slip floor coverings; and
- providing rooms that are individually recognisable from the outside and provide orientation to the general environment when leaving.

Toilet and Bathroom

An environment that facilitates independence in personal hygiene and toileting will heighten self-esteem and minimise a sense of failure. This objective can be achieved by having en-suite toilets and bathrooms that:

- are readily visible and accessible and large enough to allow for assistance;
- allow control of water and temperature (within safe limits).
- provide fixtures which are familiar in location and style, eg. taps in domestic designs with the normal operating positions for hot and cold. Sinks without plugs avoid accidents caused by taps being left on.
- use contrast in colour to assist recognition of equipment, eg. hand basins and benches;
- have unobtrusive supporting hardware, eg. grab rails; and
- position doorways and toilets to provide both easy access, and visibility and recognition at night.

Activity Areas

The design objective in areas like kitchens, dining areas, social space and outdoor space, is to facilitate their best use by people who have lost some of their abilities to plan and make judgements, while minimising opportunities for mistakes that put them in dangerous situations. The benefits of effective activity and social spaces are:

- increased interest and engagement in meaningful activity;
- psychological security;
- orientation to place and time;
- enhanced opportunities for safe physical activity
- balanced stimulation; and
- minimised behavior disturbances.

Kitchen

The kitchen can be the hub of the unit, where simple meal preparation by both residents and staff, can be enjoyed. Resident involvement will be enhanced if:

- the design balances the need for involvement with safety;
- cues are visual, eg. open shelving to promote recognition and use of safe objects;
- cupboard doors are used to maximise safety by camouflaging dangerous equipment;
- safety switches are installed to protect from fire and burning; and
- equipment is familiar in design.

Dining Room

Large cafeteria style dining areas are noisy and complicated for people with dementia and do not promote an atmosphere of calm, enjoyable meal times. The provision of small, easily recognisable dining spaces will enhance individuals' abilities at meal times and improve nutrition. Ideas to achieve this outcome include:

- space should be sufficient to accommodate four to six person tables with ease;
- square tables identify the space of each person more readily than round/oval tables;
- dining room furniture to store crockery, cutlery and manchester will assist orientation;
- dining chairs that offer stability and support;
- effective lighting that provides maximum opportunity for recognition of equipment and food to enhance the functional aspect of the room; and
- the use of contrasting colours to assist identification of crockery and utensils.

Social Space

These areas equate with the lounge room or family room in a domestic house. A successful social space will provide:

- small seating groups which support more than one activity at a time; and
- integrated spaces which allow for activities that are either passive or active, including craft, music and exercise/movement.

The toilets adjacent to the social spaces in a facility will enable residents with dementia to enjoy the area to the best of their abilities when:

- toilets are positioned in close proximity to the areas, but provide unobtrusive entry to maximise privacy;
- they are clearly identified and labelled with multiple cues, eg word and diagram signs; and
- there is adequate space to allow any necessary assistance to be given.

Outdoor Space

External space can be a most beneficial asset to a dementia unit and, to be successfully utilised, the outdoor space must be:

- visible, easily accessible, and user friendly;
- enticing and interesting;
- safe;
- provocative of meaningful activity generally and for individuals;
- provided with fixed seating;
- inconspicuously secure around the perimeter and at any necessary external access points;
- designed to facilitate easy return to indoors;
- large enough to satisfy a need to walk for lengthy periods; and
- if a practical option, an area where watering, gardening and other untidy activities are encouraged.

Staff Working Space

Both care and service staff need unobtrusive work and storage areas for their duties and, to be effective, these areas need to:

- be positioned so that care/service staff have clear visual access to the residents;
- provide private space for working, while offering residents easy access to staff;
- include secure but readily accessible storage areas for equipment such as cleaning materials; and
- have doorways to service areas creatively camouflaged to reduce the interest of residents.

The Built Environment and Quality of Life for People with Dementia

The built environment will contribute significantly to the quality of life for people with dementia when it provides:

- balanced and controlled stimulation;
- features that assist orientation;
- maximise success, self esteem and confidence;
- promote involvement in everyday activity
- supporting relationships with family, friends and the community; and
- provide unobtrusive security.

Balanced and Controlled Stimulation

One goal of quality and effective dementia care is to create an environment which balances sensory stimulation so that neither over-stimulation nor boredom predominate. Strategies to achieve this include:

- considering the impact of light, colour, contrast, texture, aroma and sound to optimise the use of all five senses. Both interior and exterior aspects of the built environment can be evaluated for their impact on visual, tactile, aural and olfactory senses; and
- reducing noise, as created by individuals, internal and external traffic, and working and entertainment equipment. Of all stimuli, noise has the most significant and damaging impact upon people with dementia. Location of dementia units and the use of noise absorbing materials may reduce the impact of inevitable operational noise, while improved practices can eliminate other avoidable sources of noise pollution.

Features that Assist Orientation

People with dementia are greatly assisted in living in a residential care facility, through the well considered:

- use of colour, texture and design to assist the identification of/or alternatively conceal where appropriate, environmental features: eg. rooms, doorways, the junction between walls and floors, and service areas with dangerous substances and equipment;
- furnishing of rooms in a style that clearly indicates the purpose/function of a room;
- elimination of glare on floor surfaces by use of non-shiny floor coverings to avoid residents mistaking glare for water on the floor which can cause fear of walking on the surface or a fall;
- use of appropriate window treatments that reduce confusing glare from the exterior;
- employment of multiple cues (words and symbols) to indicate toilets;
- signage (words and symbols) to ensure exits to safe outdoor space are recognisable; and
- provision of furniture in designs familiar to the residents, and
- use of personal effects.

Maximise Success, Self Esteem and Confidence

To maximise opportunities for dementia residents to attain/sustain their optimal levels of success, self-esteem and confidence in 'daily living skills and tasks', facility design should provide:

- obvious routes to general and outdoor spaces;
- camouflage of any unsafe areas; and
- opportunities for socialisation and meaningful activity.

Promote Involvement in Everyday Activity

To encourage the use of retained skills and interests at the individual resident's level of ability, there is merit for the design provision of:

- domestic style kitchens and laundries;
- safe gardening opportunities;
- space dedicated for a resident's involvement with pets;
- an individualised music activities area; and
- space for activities particularly appealing to men – eg handyman and/or automotive

Supporting Relationships with Family, Friends and the Community

It is important for people with dementia to maintain a regular connection with those people who have been and continue to be significant in their life. Accordingly, facility design should include:

- appropriate space and facilities for private occasions including family visits;
- spaces that can be used to welcome in a wider group of people; and
- the opportunity for a resident to 'decorate' their room, by allowing some 'workable' personal space in the room and encouraging families to contribute to provision of this feature.

People with dementia will have diverse cultural backgrounds. Creating opportunities to experience situations that are culturally familiar either within or external to the residential facility is critical to maximising quality of life.

Provide Unobtrusive Security

For many people with dementia, the need to move around for long periods is important. Some will feel trapped when faced with obvious obstacles to freedom of movement. Their needs however, may be perceived to be in conflict with the need to provide a safe environment for people with dementia. Creative design approaches to balancing a feeling of freedom and real safety are possible through:

- the unobtrusive use of technology - such as movement detectors and exit monitors;
- providing horticultural screens that are less threatening than high fences; and
- the use of fencing disguised by landscape that can be perceived as an acceptable barrier and less likely to be viewed as a challenge to be scaled.

Conclusion

This paper has drawn on international consensus, opinion and experience to present design principles for care providers who desire to create a quality environment for people with dementia. Such an environment will compensate for the cognitive changes of dementia and will "maximise awareness and orientation, promote feelings of, and actual safety and security, provide opportunities for significant social contact, and support functional ability through meaningful activity." (Cohen and Wiseman, 1991).

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Web Resources:

- Alzheimer's Australia
www.alzheimers.org.au
A source of excellent general information related to dementia and the support available nationally.
- ADARDS Nursing Home – Tasmania
www.tased.edu.au/tasonline/adards
An excellent Australian site detailing the development, design and practice in a dementia specific nursing home.
- Belgian Cantous Association
Tools for the Future: How dementia friendly is your building.
Dementia Services Development Centre.
www.cantous.be/pub6.htm
Described as an audit tool and strategic brief for architects and planners, this publication draws attention to the needs of people with dementia using world-wide good practice.
- Dementia Services Development Centre, University of Stirling, Stirling, Scotland
www.dementia.stir.ac.uk
An introduction to a wide range of resources is available through this site.
- The Benevolent Society Nursing home or my home? Converting a nursing home to a home for people with advanced dementia Squires, B and Owens S. (2000)
www.bensoc.asn.au/research/coa_echhome.html
An Australian site describing the experience of planning dementia friendly changes to a traditional nursing home.

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for comprehensive information about

Ø dementia and care

Ø information, education and training

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For further information and advice contact :

The Dementia Helpline on 1800 639 331

National Dementia Behaviour Advisory Service on 1300 366 448