4. Appendices

Appendix 1: Background and methodology

Improving the environment for older people in Health Services: An audit tool (original audit tool)

The Improving the environment for older people in Health Services: An audit tool was published by the Victorian Government Department of Human Services in 2004. It was developed by the National Ageing Research Institute (NARI) and involved a comprehensive review of resources relevant to the care of older people, including dementia care design and access design. A draft tool was piloted amongst 14 health services in Victoria and was reviewed by the Department of Human Services’ Capital Management Branch and an occupational health and safety consultant.

Since publication the original audit tool has been used broadly by health services across Victoria, primarily in sub acute settings and emergency departments.

This resource is available online at:

Improving the environment in Residential Aged Care Facilities: An audit tool (revised audit tool)

In 2009 the Department agreed to the revision of the original audit tool as part of the ENvironment and Vision Optimisation in Residential Care (EnVORC) project undertaken by the National Ageing Research Institute (NARI) in collaboration with the Centre for Eye Research Australia (CERA). The EnVORC project was funded by the Australian Government Department of Health and Ageing under the National Eye Health Initiative. The original audit tool was reviewed and modified for relevancy in residential aged care settings. It was then used extensively in three low care residential aged care facilities. This process helped identify areas for improvement in the tool that have been incorporated into the revision. The revised audit tool titled “Improving the environment in residential aged care facilities: An audit tool” was tested but not published.

Residential aged care services built environment audit tool (current audit tool)

For the current version of the tool the Department has further researched, modified and improved the revised audit tool for suitability in public sector residential aged care services (PSRACS) in Victoria. As part of this project the Departmental aged care branch and NARI conducted a focus group with internal stakeholders, piloted the draft tool at six selected PSRACS throughout Victoria and sought further industry advice before preparing the current audit tool for online testing and feedback.
Appendix 2: Design principles

Many changes can be made to the environment to capitalise on an older person’s strengths and abilities.

Table 1 highlights examples of age-related changes which are particularly relevant in considering design principles to help older people navigate their environment.

Table 1: Examples of age-related changes
(Adapted from Fisk et al. 2004; O’Keeffe)

<table>
<thead>
<tr>
<th>Mode for interacting with the environment</th>
<th>Examples of age-related changes</th>
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| **Vision** | • Reduced ability to distinguish objects  
• Glare is more problematic.  
• Depth perception is altered.  
• Reduced speed of accommodation to changing light levels  
• Reduced vision in low light  
• Reduced visual acuity  
• Reduced fields of vision |
| **Audition** | • Reduced hearing ability  
• High pitched tones can be difficult to hear  
• Difficulty filtering out background noise |
| **Physical changes** | • Loss of muscle strength, flexibility and coordination  
• Reduced balance  
• Reduced reflexes/reaction time  
• Reduced dexterity and fine motor coordination  
• Difficulty sensing movement and touch |
| **Cognition** | • Age-related decline in working or short term memory (ability to keep information active)  
• Age-related decline in time-based prospective memory (for example, remembering to do something in an hour’s time)  
• Reduced reasoning and abstract thinking |

Area specific diseases can further reduce function e.g. cataracts or glaucoma increase a person’s visual loss.

The universal design principles: designing for people of all ages and abilities (1998) developed by the Centre for Universal Design, North Carolina State University, are broad-based principles intended for use across environments, products and communications. There are seven principles:

- equitable use
- flexibility in use
- simple and intuitive use
- perceptible information
- tolerance for error
- low physical effort
- size and space for approach and use.

The series of universal design principles has its roots in architecture, engineering and environmental design and was developed by the Centre for Universal Design in collaboration with a consortium of universal design researchers and practitioners from across the United States (Centre for Universal Design 1998).

Supplementing these principles are design features that aim to ensure the physical environment assists clinical care of people with dementia. These features are recurring themes in dementia design resources reviewed through this project. The consensus on principles of design state that design should:

- compensate for disability
- maximise independence
- enhance self-esteem and confidence
- demonstrate care for staff
be orientating and understandable
reinforce personal identity
welcome relatives and the local community
allow control of stimuli (Calkins 1988 and cited in Fleming et al. 2003).

The challenge in developing a person-centred environmental audit tool is ensuring the range of design considerations are taken into account, including:

- the functional capacity of older residents: those requiring minimal staff assistance and those requiring significant or full staff assistance
- the standard of accommodation expected in a new or extensively renovated facility and in an existing facility.

References
Calkins, MP 1988, Design for dementia: planning environments for the elderly and the confused, National Health Publishing, Maryland.
Centre for Universal Design 1998, The universal design principles: designing for people of all ages and abilities, North Carolina State University, Raleigh, North Carolina.
O'Keeffe, J, Creating a senior friendly physical environment in our hospitals, Regional Geriatric Assessment Program of Ottawa.
Appendix 3: Individual seating assessment tool (ISAT)

Purpose: To evaluate bed and chair characteristics that may facilitate transfers, minimise potential for falls, promote resident comfort and prevent negative outcomes associated with improperly fitted chairs/seats.

Directions: Use this tool to evaluate a resident in the bed and chair that is used for the majority of activity they perform over a 24-hour day. For each item checked ‘Yes’, refer the resident for comprehensive evaluation by physiotherapist/occupational therapist/care plan team.

1. Resident is unable to touch floor with feet when sitting on the edge of bed. □ yes □ no
2. Resident is unable to touch feet to floor when sitting in chair. □ yes □ no
3. Resident leans or slides when sitting in chair. □ yes □ no
4. Resident frequently attempts to move leg rests or removes feet/legs from leg/foot rests. □ yes □ no
5. Resident frequently slides or shifts pelvis when seated in chair. □ yes □ no
6. Resident frequently arches back or leans forward when seated. □ yes □ no
7. Resident is unable [to] or does not self-propel wheelchair. □ yes □ no
8. Resident uses wedge cushion, bolster, pillows, seat belt, lap tray/buddy or other positional aides when seated in chair. □ yes □ no
9. Seat belts (if used) cross over or above abdominal area. □ yes □ no
10. Resident becomes verbally agitated, physically agitated/restless or cries when seated in chair. □ yes □ no
11. Resident does not use armrests (if present). □ yes □ no

REFERRAL INDICATED? □ YES □ NO

COMMENTS: __________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Completed by: ___________________________ Date: ____________________

Assessment tool developed by Sara Wright, MSN, CRNP, Pennsylvania Restraint Reduction Initiative (PARRI) cited in resource number 17