

# Determining an Environmental Audit Tool for Dementia Specific Research

Presentation by

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# Design & Health Conference

Singapore 24<sup>th</sup> – 28<sup>th</sup> June  
2009





## The Study

*Person-centred Environment and Care for Residents with Dementia: a cost-effective way of improving quality of life and quality of care?*



## The Aims

- Based on Kitwood's Social-Psychological Theory of Personhood
- Determine the effect of Person Centred Design (PCD) and Person Centred Care (PCC) on the Quality of Life (QOL) and Quality of Care (QOC) of residents living with Dementia
- Examine the PCD with and separately from PCC





## Presentation Overview

- Background to the Study
- Philosophy of Design Approach
- Development of the Audit Tool
- Current Findings from the Audit





## Background to Study

- *PerCen Study, was approved for three years funding by the Australian National Health and Medical Research Council.*
- *The team was predominantly from the University of Technology Sydney, but also the Universities of Sydney, New South Wales, Wollongong and the Australian National University.*
- *The project was based on previous work in both Person Centred Care and Person Centred Design by the researchers involved.*



## Background .....

- **Person-centred care (PCC)**
- *PCC is consistent with current nursing philosophy*
- *PCC is distinguished by care staff understanding the person's individual needs.*
- *Helps residents gain a sense of place and belonging within the social and material world*
- *Allows staff to respect the person's individuality, make contact with the person in order to understand their present world, and give them recognition, respect and trust*
- *Evidence of PCC occurring if staff are observed to:*
- *Value the person's uniqueness, reinforce their strengths and positive attributes rather than their weaknesses,*
- *Develop a therapeutic relationship with the person, encourage and allow choices and personal decision-making, and the person's lived world.*



## Background .....

- ***Person-centred environment design (PCD).***
- *There are direct links between QOL for persons living with dementia and physical space*
- *the physical environment serves as a non-pharmacological supportive element*
- *stimulating the remaining senses, enabling communication, assisting to retain self-control*
- *reducing levels of anxiety, aggression, depression and psychotic behaviour, through built “cues”*
- *improve or slow the decline in residents’ communication skills, self-care skills, social function, mobility and affective responses*
- *The study will identify if PCD indeed supports both QOL & QOC*



## PerCen Study Research Method

- *Factorial group-randomised cohort study with stratification.*
- *Interested in the main effects of PCC and PCD individually and in their joint effect,*
- *Previous studies showed correlation within individuals over-time (range 0.6-0.7), so needed cohort design (pre-test, post-test and follow-up)*
- *Stratification to ensure balance across treatment groups, geographical locales and type of facility.*





## .....Research Method

- *Surveys of QOL and QOC measures at each stage – 500 residents to be surveyed*
- *Used Resident Quality of Interactions Schedule (QUIS) and Emotional Response in Care (ERIC) plus Staff Approaches to Care structured interview questionnaire*
- *PCC & PCD – filter determining the facilities to include in the study was Person-Centred Environment and Care Assessment Tool (PCECAT)*
- *PCD used Evaluation Audit Tool (EAT)*





## Research Structure

- *40 Facilities selected from the lowest on PCECAT scores for both PCC and PCD*
- *10 facilities to have no intervention as a control group*
- *10 facilities to have PCC intervention only*
- *10 facilities to have PCD intervention only*
- *10 facilities to have both PCC and PCD*





## Interventions

- **PCC:** *Experiential and adult learning approaches facilitated by two PCC trainers in a train-the-trainer course for five care staff in each of the ten PCC and ten PCC+PCD units.*
- *PCC trained staff supported to train all care and therapy staff in PCC intervention facilities.*
- *PCC-trained staff would be assisted by a further 10 hours of telephone support per site by the two PCC trainers and monitored.*
- **PCD:** *Allowance to undertake minor alterations (painting out doors, providing cover externally, etc) to assist with priority barriers in the facility settings.*





## Philosophy of Design Approach – 10 Criteria

### 1. Be safe and secure

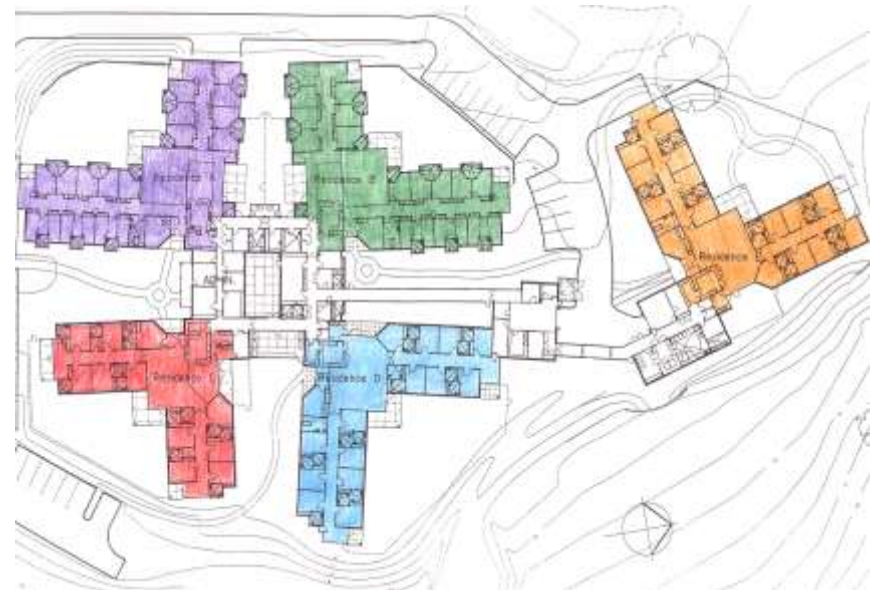
Providing for private spaces with ones own possessions

### 2. Be small

Units from 10 – 14 rooms  
preferred and grouped in homes  
Reducing confusion with  
domestic scale



### HAMMOND CARE - ERINA





# Philosophy of Design

3. Be simple with good visual access
4. Have unnecessary stimulation reduced
5. Have helpful stimuli highlighted





# Philosophy of Design

## 6. Provide for planned wandering



Back to  
Lounge



Down  
the  
corridor



Out to  
court-  
yard

Access  
open to  
the path





# Philosophy of Design

7. Be familiar



8. Provide opportunities for a range of social interactions from private to communal





# Philosophy

9. Encourage links with the community



10. Be domestic in nature providing opportunities for engagement in the ordinary tasks of daily living.





## Characteristics of PECAT

**Section A:** *Information relating to the main features of the home.*

**Section B:** Addresses the three Domains include:

- Domain 1. *Organisational Culture;*
- Domain 2. *Care, Activities / Interaction Relationships and Interactions;*
- Domain 3. *Physical layout and design of the home.*

**Section C:** Provides staff an opportunity to develop strategies to improve care practices and the environment.



## Using PECAT to Select 40 homes

- Difficult to Use the Combined Score to Assess at the Margin
- Needed to Convert PCECAT scores to Room for Improvement (RFI) Score

### **PCECAT**

0 = Not even considered  
1 = Have thought about  
2 = Sometimes used  
3 = Used a great deal  
4 = Fully implemented

### **RFI**

3 = a lot of room for improvement  
2 = quite a bit of room for improvement  
1 = some room for improvement  
0 = no room for improvement  
0 = no room for improvement



# Using PECAT .....

		People Centred Care			
		Very Poor	Poor Enough	Too Good	
<b>People Centred Environmental Design</b>	Very Poor	8	4	7	19
	Poor Enough	5	21	13	39
	Too Good	0	1	5	6
		13	26	25	64



## Developing the EAT Tool

- Required to Determine the Strengths and Weakness against the Design Criteria
- Required to determine the essential intervention for PCD
- An examination of the various tools used internationally was conducted.
- Tools examined were:
  - *Multiphasic Environmental Assessment Procedure (MEAP)*
  - *Therapeutic Environmental Screening Scale (TESS+)*
  - *The Professional Environmental Assessment Protocol (PEAP)*



## Results of the Comparison

- MEAP has 5 major testing instruments – not suitable for student assessors, shown to be biased toward large institutions and only one aspect covers physical environments
- Many issues in MEAP were covered by TESS+2 so MEAP was rejected in preference to TESS+2.
- PEAP consists of a five-point rating of nine dimensions, each represents a desired outcome of “quality” environments.
- PEAP required experienced raters and considerable time in follow-ups.
- PEAP correlated well with TESS+2 so was rejected for this study in favour of TESS+2



## Results of Comparisons

- TESS+2 has high level of validation and was modified twice
- Final adjustment after North American National Institute of Ageing project for the evaluation of Special Care Units (NIA SCU) and became TESS-NH
- TESS-NH contains a series of 13 domains of discrete items including one item that covers all domains
- Embedded within the TESS-NH is a selection of 18 item scores into the Special Care Unit Environmental Quality Scale (SCUEQS) – considered useful for dementia units.



## Problems with TESS-NH

- The 84 items scored don't produce one final overall score,
- Only one question uses a Likert scale to make an overall general assessment – too subjective
- Only 50% of the Special Care Unit Environmental Quality Scale is relevant to the specific care of People with Dementia
- TESS-NH was developed before the current research and doesn't reflect many of the PCC/PCD issues.
- Need a tool that is easy to use, covers the Philosophy of Design, has a high level of InterClass Correlations and Inter-rater reliability.



## Providing and Alternative Tool

- Needed a tool that is easy to use, covers the Philosophy of Design, has a high level of Inter Class Correlations and Inter-rater reliability.
- Extended the Audit Tool developed by Fleming and Forbes for studies on rural hospitals experiencing dementia co-morbidity patients
- There are 72 items which are weighted to allow for degrees of importance which produces individual and overall scores.
- The majority of questions are answered either Yes or No (1 & 2), some have a Not Applicable option (0) and some provide for extra points in certain circumstances.



## EAT versus TESS-NH

- Selected 30 Facilities from the PerCen study
- Two raters engaged, one very experienced, the other a PhD student with Degree in Psychology
- There was 8 hours of training with both EAT and TESS followed by 3 pilot sites analyzed and then the 30 units
- Each site took 1.5 to 2 hours to Assess
- Data was entered in SPSS 17 and the level of Inter-rater reliability calculated using Interclass Correlation Coefficients





## Comparing EAT with TESS-NH

- The item by item inter-rater reliabilities of the scales were very similar.
- The average level of absolute agreement between raters across all items is 84.4% (TESS-NH) and 80.2% (EAT).
- The inclusion of a 'Not Applicable' category in many of the EAT may have caused absolute agreement to 90% by providing a rater with the opportunity to opt out.
- EAT also had the highest minimum level of absolute agreement, 53%, against 43% for TESS.
- Showed the tool to be superior to TESS-NH.





## Some Findings from Audits

Older Facilities have too little Space for Activities



This can be covered to create all weather space



## Some Findings from Audits

Too Institutional in appearance



Needs to be landscaped for resident use



Poor access to a garden





## Some Findings from Audits



Making spaces person centred for residents not just for staff convenience



Thank you

