DESIGN FOR DEMENTIA

GREGOR TIMLIN AND NIC RYSENBRY

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IMPROVING DINING AND BEDROOM ENVIRONMENTS IN CARE HOMES

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FOREWORD

Dr Clive Bowman FRCP FFPH
Medical Director, Bupa Care Services

In an ageing society, the provision of quality residential care services for older people with dementia is rapidly becoming one of the great challenges of the age. At Bupa Care Homes, we are rising to this challenge by continually reviewing and enhancing every aspect of the care we provide – clinical, technological, social, environmental and personal.

As international providers of 35,000 care home beds, principally in the UK but also in Spain, New Zealand and Australia, we have long recognised that design plays a very significant role in the quality of life that people experience in the care home. However, while much has been done to develop guidance and insights related to design for older people per-se, there has been far less practice-based research carried out into the specific needs of people with dementia and the staff who support them.

Cognitive decline brings with it a whole host of seemingly intractable difficulties for the designers of care home products and environment. While medical research looks at the causes of dementia, design research must deal with the effects. The research project described in this publication is therefore both timely and welcome because it adds to our knowledge in an underexplored aspect of the care and support of people with dementia.

Over the past two years Bupa has worked closely with two product designers based in the Helen Hamlyn Centre at the Royal College of Art, one of the world's leading art and design schools. As Bupa research associates, Gregor Timlin and Nic Rysenbry have engaged closely with and across our organisation, and looked afresh at some key issues of residential dementia care through a design lens.

What they have produced is a measured analysis of how better design can improve dining and bedroom environments for people with dementia – and a series of prototype designs and exemplar layouts that express a valuable people-centred approach. This publication is not an exhaustive analysis of design for dementia in all its aspects, but aims to encourage critical reflection on key areas by designers, specifiers and managers.

One of the most positive aspects of working with the Helen Hamlyn Centre at the RCA is that it has an ethos of ensuring that its designers operate as social researchers, so that there is a seamless transfer from ethnographic study to practical design intervention. Instead of remaining in the ivory tower of the design studio, the two research associates really spent time in Bupa care homes working with residents, carers, families and managers to understand the underlying dynamics of dementia care. I thank them for their sensitive engagement and our staff and residents who have so richly informed them.

Bupa is grateful to the authors of this publication and to Professor Jeremy Myerson, Rama Gheerawo and Ed Matthews in the Helen Hamlyn Centre for their commitment to making the collaboration work. We have encountered a refreshingly open research approach compared with that more typically encountered in medical research and have learnt much from its well-crafted focus on the individual and design challenge.

EXECUTIVE SUMMARY

Overview

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This publication describes a two-year collaborative research project between the Helen Hamlyn Centre at the Royal College of Art and Bupa. It explores how better product and environmental design can improve quality of life for care home residents with dementia.

Design for Dementia is aimed at care providers, manufacturers and designers with an interest in improving existing care homes. The design ideas and principles that have been developed are a practical response to challenge of cognitive decline and can be retrofitted to existing care homes as well as applied to new developments.

It is not the intention of the authors to propose expensive refurbishment or a complete overhaul of the care home environment in every case; simple, common sense applications of design thinking can create big improvements with relatively small investment.

Context

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The book begins by setting the context of the specific challenges that dementia can present before going on to outline design guidance through two case studies of dining and bedroom environments. It looks at the design implications of early, mid and late stages of dementia, recognising that dementia progress slowly and changes over time.

The vast majority of care home residents in the UK have a form of dementia. More than a third of these residents are not staying in facilities specifically designed for their needs. Many homes have been adapting existing environments that are not up to date with current thinking in the field. As a result, poor care facilities are making it more difficult for carers to deliver a good level of person-centered care, provide appropriate activities and empower residents to optimise their existing ability.

Methods

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In recognition of the difficulties of studying people affected by cognitive decline, an immersive research method was adopted. This allowed the researchers to become part of the everyday routine in several care homes where they interviewed and observed residents and staff. Focus groups were held with people in the early stages of dementia. Two ideas were important: first, to allow residents with dementia to express themselves; and second, to see them as real people with real lives.

Design Strategy

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A design strategy was developed to create proposals for facilities and products which enhance residents' abilities in three key areas:

Cognitive Ability is improved by promoting the use of familiar and recognisable surroundings and activities that respond to residents' deepest and earliest memories.

Social Ability is addressed through the design of artefacts and amenities that create opportunities for residents and staff to interact more easily in activities of daily living.

Physical Ability is promoted through design which unobtrusively compensates for disabilities such as mobility and vision which are prevalent among care home residents.

These values have been exemplified in two case studies that explore concepts and prototypes for dining areas and Bedrooms.

Dining

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The dining section explores how to improve dining culture and rituals without changing existing food service infrastructure. The following practical design changes are proposed:

Interior layouts that reduce visual and physical barriers for residents, allowing for more safe and unrestricted movement throughout dining areas and the care home.

Design of amenities which capitalise on redundant space and integrate activities such as cooking and gardening into existing spaces.

New lighting and furniture design which allow for greater physical access for those with poor visual acuity and mobility problems, including a wheelchair accessible table and dimmable overhead light.

New tableware designed to promote independent eating and improve the experience of being fed for those who are no longer able to feed themselves.

Bedroom

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The bedroom is the one place in the care home that can reinforce personal identity and act as a place of refuge. The bedroom section focuses on the importance of personalising private space and on enabling residents to retain independence and the ability to dress themselves for as long as possible. Here, the following practical design changes are proposed:

New personalisation system based on adapting hook-and-rail display techniques from the retail sector for swift, easy, low cost customisation of a care bedroom with objects, pictures and shelving.

Redesign of bedroom entrances to more clearly express the transition from communal to private space and to reinforce the identity of the occupant.

New wardrobe and dresser designs that respond to the individual needs of care home residents by using such features as contrasting colours and materials, over-sized handles, content-visible drawers and whole-outfit hangers to assist dressing.

SECTION 1.
CONTEXT

Residents seated in lounge

WHAT IS DEMENTIA?

Dementia is an umbrella term used to describe the symptoms that occur when the brain is affected by a number of conditions, most commonly alzheimer's. Symptoms of dementia include loss of memory, mood changes and communication problems and people affected will typically experience a decline in the ability to talk, read and write.

Dementia is progressive, meaning that the symptoms will gradually get worse. A person in the later stages of dementia will have problems carrying out everyday tasks of daily living and will become increasingly dependent on other people.

In care homes, staff training and well-designed physical surroundings are important. They offer a framework for people with dementia to maintain their existing skills, create opportunities for meaningful engagement between residents and staff and greatly affect quality of life.

WHY DESIGN FOR DEMENTIA IS IMPORTANT

Two-thirds of the population of care home residents in the UK have a cognitive impairment.[1] Dementia is the strongest determinant of entry into residential care for people aged over 65.[2] These figures are likely to rise as the population ages thereby creating more demand for facilities and as new drugs are introduced to slow but not cure the progression of the disease.

The quality of dementia care in the UK varies, ranging from excellent, through mediocre to neglectful. Only 60% of individuals in care are currently staying in dementia registered beds specifically geared towards their high level of needs. Reports from organisations such as the Alzheimer's Society suggest that many homes are not providing an appropriate level of person-centred care. Problem areas including the provision of activities, the treatment of residents with dignity and respect, and the relationship between homes, relatives and friends.

A key issue in improving care is to better understand how the design of care home environments impacts on the quality of care. Features, layouts and facilities can help to maintain a resident's remaining strengths, improve working conditions and provide a better care culture for staff, residents and visitors alike. This publication explores the role design can play in improving care homes, presents an understanding of residents' needs and gives a design perspective on dementia.

1.,2. Samantha Sharp, Home from Home: A Report Highlighting Opportunities for Improving Standards of Dementia Care in Care Homes, Alzheimer's Society, 2007, p4

THE THREE STAGES OF DEMENTIA

The most important thing for any designer working in dementia care is to recognise that dementia is a disability and any solutions they design need to offset the effects of the condition. Understanding the degenerative nature of dementia and designing to compensate for its effects become critical in meeting the challenges.

There are different types of dementia, but all have a similar effect on the person with the condition. This section primarily focuses on Alzheimer's as it is the most common form of dementia by far. In most instances, the progression of dementia is slow and consistently changes over time. For the purposes of this publication, this process has been simplified into three stages namely early, mid and late.

Early

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In the early stages of dementia, a person will slowly develop changes in their abilities and behaviour. They may not be vocal about problems and will often cover up gaps or lapses in memory. As these can be also attributed to other factors such as stress, bereavement or the natural process of ageing, onset of dementia can be difficult to pinpoint. Very often, it is only diagnosed retrospectively and recognition that someone is in the early stages of dementia is difficult and rare.

An early indicator is difficulty in remembering recent events. People may forget conversations that have recently happened or can become slower at grasping new ideas. Recurring confusion can be another sign but symptoms can be so subtle that they might be limited to occasional lapses that only a close friend, companion or relative might notice.

Care for a person at this stage should be supportive to allow them to retain their independence. It is critical that a carer does not take over tasks completely as this may undermine a person's confidence and their notions of self-worth. A person may experience distress over not being able to complete tasks they could easily accomplish previously. A good practice is to offer reassurance and support. People can also use memory aids to support themselves such as taking notes or using written calendars to remind them of events.

Mid

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In the mid stages of dementia, memory lapses and confusion become more obvious and a person can no longer hide it from those around them. Short-term memory becomes impaired and they will often ask many repetitive questions. They may be anxious about when events are happening, become more forgetful and develop difficulties in finding words or remembering names. It is common that they will fail to recognise other people or confuse someone known to them with someone else.

A substantial challenge will be the difficulty they experience in managing everyday life. They may need frequent reminders about activities or how to complete basic tasks. Gradually, the tasks of daily living will begin to become more difficult and they may need help or encouragement with eating, dressing or going to the toilet.

A person may become more socially withdrawn or less comfortable in group situations. In some cases they may also become more socially isolated as friends and family members no longer relate to the person in the same way as they once did and visit less often as a result.

Other difficulties include awareness of their environment. They can often become confused about where they are and wander off and become lost even if they are in familiar surroundings. In some situations this can present a risk to the person themselves and those around them, such as forgetting to light the gas on a stove, trying to drive or leaving an iron on.

The level of care a person needs at this stage increases. Those close to a person have to be vigilant, assessing tasks that the person may no longer be able to complete independently and assisting them where necessary. Activities such as shopping, cooking or anything else that requires a sequence to be completed will become more challenging. Those still living at home will require regular visits to ensure they are eating well, taking their medication and not at risk. Opportunities to connect socially with others will be important. Discussing the options of moving to a care home or increasing the level of daily assistance within their own home will become necessary during this stage.

Late

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In the late stages of dementia a person will ultimately become dependent on other people for nursing care. Memory loss extends to older memories and a person may not be able to determine the function of familiar objects or recognise people who are close to them. There is a gradual and increased loss of speech. People are often restless and they can have a tendency to want to search for someone or something. A common occurrence is the desire to be with their mother or in their own home, even if that is where they are being cared for.

Some people can have less control of their emotions and become aggressive particularly if they feel threatened. It is common for a person to become increasingly immobile often starting to shuffle when they walk or becoming more unsteady on their feet. Many people can end up being bed bound or confined to a wheelchair. Some of the most challenging problems that can arise include the development of a swallowing problem or incontinence.

Care requirements of a person in the late stages of dementia dramatically increase. A person will need daily, if not full time supervision. Dementia will limit their ability to communicate verbally and they will need high levels of assistance with activities such as bathing and dressing, which can no longer be carried out independently.

When levels of assistance increase it is imperative that the person is constantly reminded of who they are and consulted about what they are doing to lessen the feeling that they have no control over the situation. On occasion, individuals might have an angry outburst during an intimate care task. This is a very natural reaction especially if they do not remember or recognise the carer who might appear as a stranger to them.

Despite a person no longer being able to communicate verbally it is still possible to share significant experiences and to communicate using other methods. Holding someone's hand, a smile, the scent of a freshly baked scone, the sound of a loving voice or the feel of an animal's fur can all communicate where words fail. Carers need to be highly resourceful and know a great deal about the person they are caring for in order to find things they can still enjoy and be engaged in.

People willexperience good and bad days. There can be moments of real clarity and others where they exhibit severe agitation and annoyance. It is important to share and enjoy the good moments and help a person through the difficult ones. As dementia is prevalent in old age, many people will die in the care of others and in the late stages of dementia. Creating avenues for people to communicate and activities that they can engage in as dementia progresses becomes an important challenge for designers within the care environment.

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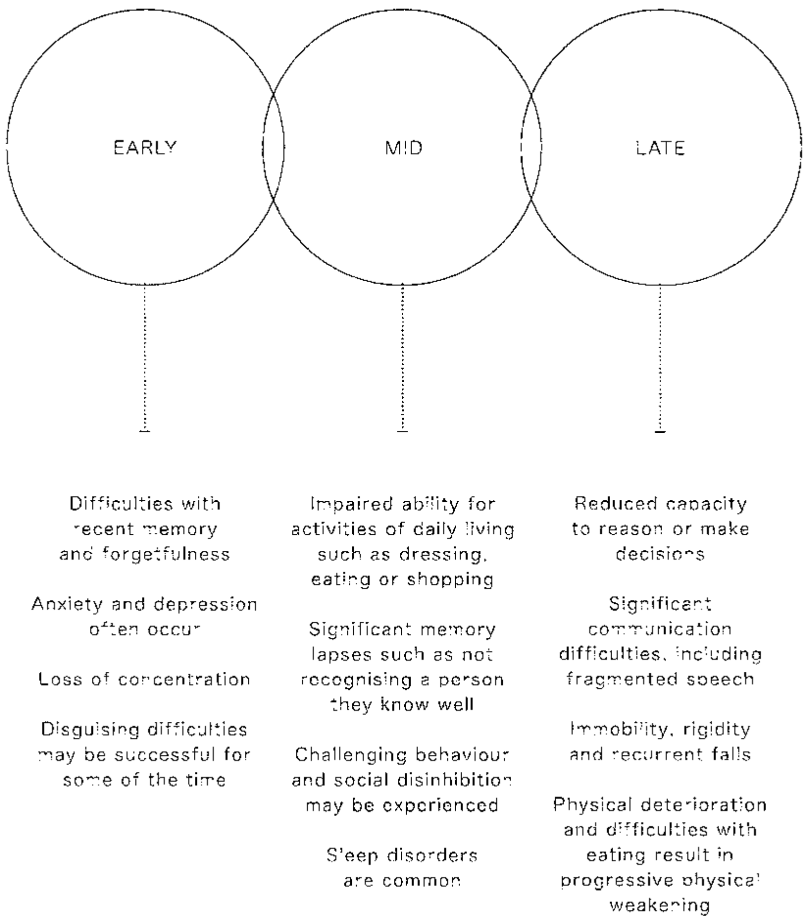
Opposite:
Diagram illustrating the three progressive stages of dementia



THE CHALLENGE FOR CARE

The reason that a person might be admitted to a care home is not exclusively related to dementia. People enter care for a variety of reasons. These can be socially-related such as not having someone who is able to look after them at home, or they can be financial, as in not having enough money to pay for home care. On occasion they may be totally unrelated to dementia if, for example, a person has extreme physical difficulties such as a mobility problem. The reality is that care homes cater for a diverse clientele.

In any given home there can be people ranging in age from their 60's to their 90's. Residents can be physically strong yet in the late stages of dementia or extremely weak and yet cognitively alert. They can be able to care for themselves or closer to palliative care and therefore highly dependent on staff for almost every task of daily living such as needing to be fed at all mealtimes. This puts pressure on care homes to provide a range of ability-appropriate activities for residents and creates an onus on having facilities that cater for all the needs of this diverse group.

One of the major challenges of care is managing staff stress, especially those working with residents who have dementia. In a good care facility, staff-to-resident ratios can be as low as one to four. The job often involves long hours and is poorly paid. Turnover of staff in care homes has been reported to be as high as 30% over nine months in struggling homes.[3] Training in how to specifically manage and support residents with dementia is often lacking.

As the job is challenging, staff can have little time to interact with residents. This can be damaging to the quality of life of someone with dementia as they often need personal attention. A recent Alzheimer's Society report found that the average person in care interacted with a staff member in an activity not related to a care task for as little as two minutes every six hours.[4]

A 2005 report calculated percentages of people in care home at the different stages of dementia. Figures indicate that 23% are in the early stages, 32% in the mid stages and 45% in the late stages.[5] This means that just over half are in early to mid stages and therefore still capable of performing many self-care tasks under their own initiative. It is important that this group is enabled to live to their full potential and that their independence, where possible, is promoted.

However, the design of many care homes does not allow this to happen. In some cases, the environment can actually add to the existing disabilities of residents and increase the level assistance needed from staff. Problems as basic as steps instead of flat surfaces, confusing layouts which prevent residents from finding their way or no access to outdoor spaces all turn actions that could be completed by residents independently into obstacles that staff have to help them overcome.

One major goal of this project has been to develop better design strategies that help to promote resident independence and improve carer and resident interaction. By improving a resident's ability to be more self-sufficient, staff time is freed up, giving them more opportunity to engage with residents at a social and personal level. This, in turn, improves quality of life for residents and can make the job for staff more enjoyable and less stressful.

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3. Margallo-Lana, M., Reichelt, K., Hayes, P., Longitudinal Comparisons of Depression, Coping and Turnover among NHS and Private Sector Caring for Older People with Dementia, BMJ, 2001, p769 - 770

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4. Samantha Sharp, Home from Home: A Report Highlighting Opportunities for Improving Standards of Dementia Care in Care Homes, Alzheimer's Society, 2007, p14

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5. Darton, R., Forder, J., Beddington, A., Analysis to Support the Development of the Relative Formula for Older People: Final Report, PSSRU, Discussion Paper, University of Kent, p2265

Independence for residents

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More staff free time

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Improved social interaction

DESIGN GOALS

Design in care homes needs to focus on three key areas. It should:

1. Address the cognitive difficulties people experience as a result of dementia by creating environments and products that build on the remaining strengths and abilities that residents have.
2. Create a social environment that allows residents and staff to participate and complete care tasks together.
3. Provide a physical environment that accounts for the multiple changes that care home residents will experience as a natural part of the ageing process.

This section of the publication outlines these core principles. The following sections looks at how these principles can be applied to design case studies that demonstrate how existing care home environments can be improved.

COGNITIVE

A key aspect of designing for a cognitive impairment like dementia is to build on the strengths that residents still have. Design should not just aim to support their disabilities, but utilise their remaining abilities. There are a number of ways in which this can be done.

Recollection 'vs' Recognition

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A person with dementia will find it easier to remember a fact or procedure when they are prompted by a reminder or a memory aid. This is generally termed recollection. What becomes more difficult is recalling information without a leading link, such as trying to recall what clothes a person wore yesterday. This is called recognition. Utilising the power of recollection has many applications in dementia care.

The building layout of the care home should be based around significant places that are held within a person's oldest and strongest memories. New environments that use unfamiliar typologies will not help a person to recollect the purpose of that space or how they should interact with it. Rooms which include recognisable objects such as dining tables in a dining room will be more identifiable from a person's past. They will appeal to a person's earlier memories and in most cases evoke positive and useful associations.

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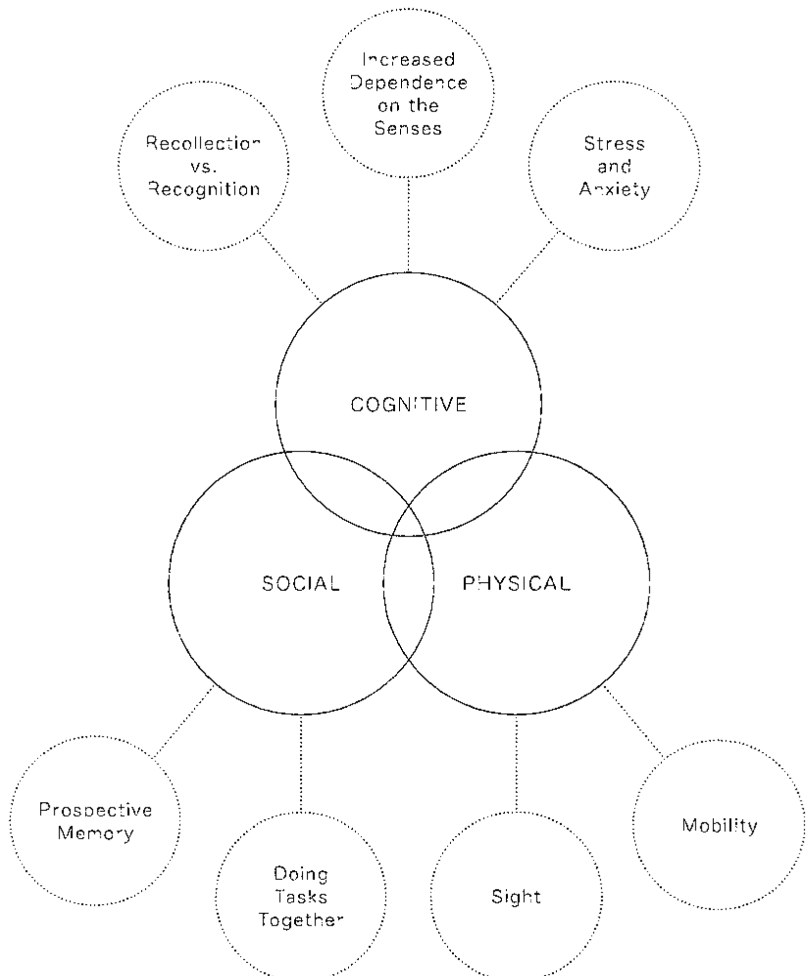
Opposite:
An outline of the design strategy aimed at addressing various aspects of dementia in care homes



People with dementia find it difficult to remember visual maps of a building even if they have been living in it for some time. Wayfinding skills can be improved by ensuring each room is distinctive in its décor so that it is visibly different when a person is navigating the home. Each room should have one activity associated with it so that a person can develop a familiarity with its purpose over time. Information needs to be embedded in an environment rather than having to be kept in mind.[6]

Recollection can also be applied to something as basic as including a relative's name with their picture to help a resident remember a family member when they come to visit.

Increased Dependence on the Senses

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Increased dependence on the senses is as common in people with dementia as with other disabilities. It can be a challenge to understand which senses are working most effectively as this will differ for each individual.[7] Different senses need to be used in the design of products and environments so that people do not have to rely on only one sense.

It is essential to ensure that environmental cues give good information to a resident about where they are and what activity is taking place. This will help to adjust behaviour accordingly. There are numerous ways in which this can be employed but some examples would include using a person's possessions to decorate a private bedroom, being surrounded by familiar sounds and artefacts such as the ticking of a familiar clock, the smell of a particular perfume or the sound of a favourite piece of music. All of these use different senses to help a person identify and feel comfortable in a particular space.

Stress and Anxiety

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High levels of stress and anxiety can be common for people with dementia and can impair their ability to function. Good dementia care includes reducing stress triggers, and measures such as protected meal times where residents are not allowed to be disturbed by anyone whilst eating, have proved to be very successful.

Not all rooms need to be quiet and calm but it is important to be able to control stimuli so that environments can be tailored to the needs of individual residents. A room that includes the noise of a television, people moving through the space or that is too crowded can result in overstimulation and stress. People with dementia may not be able to process or block out multiple forms of conflicting information so the layout of a room needs to be throroughly considered to ensure stimuli are appropriate, clear and controllable.

SOCIAL

Environments should create opportunities for a good level of social interaction between staff and residents. This is important for both the well being of the residents and the job satisfaction of the staff.

Prospective Memory

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Memory is not just about remembering what has happened but also about remembering what will happen. Prospective memory or planning memory is about remembering and maintaining future aims as well as recalling what is needed to reach that aim.

For people with dementia, the ability to remember future events is lessened. It has been suggested that this is one of the reasons why people may seldom do things under their own initiative.[8] Opportunities must be provided to keep people active and socially engaged and ensure that they do not become apathetic or depressed.

Doing Tasks Together

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With dementia, performing tasks that require a lot of steps can be very difficult as this involves a complex process termed 'executive functioning'. In a task such as dressing, a person will have to plan what they intend to wear, initiate the process of putting on clothes, monitor that they are putting them on in the correct order, perhaps take corrective action and finally verify they have completed what they started. Tasks that require sequences of information become more incomprehensible from the mid stages of dementia onwards.

Although it is impossible to restore a person's ability to do such tasks independently, once that ability has been lost carers can take the time to remind them of sequences they have forgotten. This allows people to re-access activities and reconnect with them.

Procedural memory is retained for longer and should be seen as a strength that can be built upon. This is the memory of how to do things without having to think. People can continue to carry out tasks that have become more or less automatic. These skills are will vary from person to person but a good place to start is with everyday activities that most people will have carried out all their lives.

As well as providing opportunities for residents to function on their own, design should enable residents and staff to do things together. Simple activities such as helping to set the table, watering plants in the garden or helping to peel potatoes can offer a space for staff and residents to work together and build more meaningful relationships.

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6. John Zeisel, Environmental Neuroscience and Alzheimer's Disease. In Alzheimer's Care Quarterly, October-December 2005, p5

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7. Mary Marshall, Food Glorious Food; Perspectives on Food and Dementia, Hawker Publications, 2003, p12

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8. Grethe Berg, The Importance of Food and Mealtimes in Dementia Care, Athenaeum Press, Great Britain, 2002, p26.

PHYSICAL

Physical problems such as frailty, reduced mobility and significant loss of vision are common among older people living in care. Dementia can also create a lack of awareness of a person's own physical disabilities which means that people are more at risk from causing accidents to themselves. An example of this is a resident forgetting that they may need their walking stick to safely travel down the corridor. For this reason, environments should include features that naturally compensate for physical disabilities. It is important to ensure residents are safe, empowered to use their remaining strengths and free to employ their natural sense of self-control and independence.[9] Two key areas that design can immediately influence are sight and mobility.

Sight

As many as one in eight people over the age of 75 have a high degree of visual impairment with figures rising as people get older. The main causes include problems such as AMD, refractive error, cataracts, glaucoma or other issues such as severe short sightedness.[10] As people grow older, the thickening and yellowing of the lens and the decreased pupil size lead many older people to need three times as much light as that of a younger person to easily perform activities such as reading.[11] There also are reports that Alzheimer's has a direct effect on the visual system of the brain creating difficulty with depth of perception, spatial orientation and judging colour contrast.[12]

Eye care brings added difficulties for people with dementia. These include basic problems such as individuals forgetting to wear spectacles, difficulty in communicating with optometrists in order to get successful prescriptive lenses or avoiding corrective surgery due to the vulner-ability and stress involved in being transferred to a hospital environment.[13]

Two key solutions for people with poor vision include ensuring that there are adequate lighting levels throughout the home and that colour contrast is applied appropriately so that residents can distinguish items such as door handles and light switches. Colour can also be used to disguise facilities that may pose a danger to residents. A common trick is to paint service area doors the same colour as the wall so that residents are less likely to see and enter the space.

Mobility

It is estimated that about one quarter of the population over 75 have some difficulty in walking.[14] As falls are one of the leading causes of admission to care homes, this population includes large numbers of people with poor mobility. Impaired cognition can cause additional mobility issues such as poor attention, slow processing and decreased judgment, all of which increase the risk of losing balance. Lack of awareness of environmental hazards can also contribute to mobility difficulties.

A fall can be a traumatic experience, can leading to reduced confidence, admission to hospital and increased chance of a repeat accident. Many types of dementia will gradually affect the areas of the brain responsible for balance and motor control as they progress.

Every space within a care home should support people with mobility difficulties and allow for wheelchair and walking frame access to ensure that residents are not excluded on the basis of their disability. Simple design solutions include tables that allow wheelchairs to fit under them, corridors that include rails to allow residents to support themselves as they walk and wardrobes that are at heights that prevent people having to stoop.

Residents should be encouraged to keep active and to exercise as much as possible. This strengthens muscles and maintains joints and balance. Exercise can also, in turn, help maintain mental faculties and improve awareness.

9. John Zeisel, Environmental Neuroscience and Alzheimer's Disease, Alzhiemer's Care Quaterly, October – December, 2005, p6

10. Dr Jennifer Evans, Mr Richard Wormald and Dr Liam Smeeth, Research Findings Nov 05 no. 10, Thomas Pocklington Trust, p1

11. Jennifer A Brush, Margaret P. Calkins Design for Dining, Building ideas, Lippincott Williams & Wilkins, 2003, p75

12. Rizzo M, Anderson SW, Dawson J, Nawrot M., Vision and Cognition in Alzheimer's Disease, Neuropsychologia, 2000, p1157 - 1169.

13. Professor Astrid Fletcher and Dr Jennifer Evans, Research Findings May 09 no. 19, Thomas Pocklington Trust, p3

14. Caregiving: Helping the Elderly with Activity Limitations, National Academy on an Ageing Society, 2000, p2

RESEARCH METHODS

A major challenge for this study was to create research methods that were appropriate for people with dementia. These had to be sensitive to their needs and respectful of them as individuals. Conducting ethnographic research with any group deemed to be vulnerable can be difficult, but working with people with dementia is particularly challenging as the mental condition of the person participating in the research is affected.

Two ideas became important. Firstly to find ways to engage with residents with dementia and allow them to express themselves and their opinions. Secondly, to see them not as test subjects for research but as real people with real lives. The research methods draw on processes already established within people centred design, but one tailored to the care home environment and the effects of dementia. The goal was to gather and collate existing knowledge in the field, cross reference this with findings from research with users and translate the results into design criteria and solutions for dining room and bedroom design.

Central to the study has been the participation of people with dementia in the research. Care home residents with dementia are the real experts on what they want and expect and as the people who are actually living through the experience, they are best placed to provide critical insight into what can be improved.
Research was completed in three stages:

1. Creating a basic understanding of dementia and its effects on older people in care. Beginning with desk research such as literature reviews of care practice, seminars on topics related to the research, including the UK dementia congress were attended, as were induction sessions for new staff in care homes to experience the training programme firsthand. Two focus groups involving 14 people in the early and mid stages of dementia outlined key concerns and failings, as well as opportunities for further investigation.

2. Establishing the current challenges faced by both residents and care workers in UK care homes. 18 day visits to care facilities took place in environments ranging from family homes to larger, long stay care institutions. A variety of techniques were used to gather insights including observation, photographic ethnography and informal interviews with residents and staff. This enabled a range of data to be captured. Observation allowed events to unfold and be recorded in a natural, everyday setting with no interference from the investigators, and interviews gave a more in-depth view of particular issues.

3. Development and testing of design concepts. Once insights were gathered and organised into design briefs, various concepts were developed and tested. The most promising ideas were taken forward as physical models and then finalised as exemplar designs.

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Opposite: breakdown of the research methods and design process