References in this paper are based on a confidence rating scale. A confidence rating of 1 is considered to be "evidence based" and will be followed by ❶. A confidence rating of 2 is based on "expert opinion" and will be followed by ❷. A confidence rating of 3 will not be followed by number symbol.

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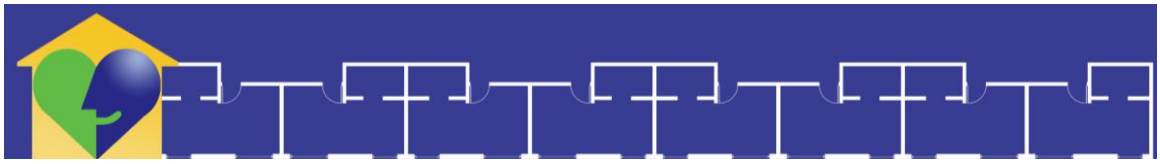
Care Setting Configuration and Size

People with dementia are challenged by large, unstructured spaces because of the large or unpredictable number of people sharing the space. Therefore, efforts have been made to decrease the size or perception of scale of the care community using the metaphor of familiar social groups of a household or a neighborhood.

With the increasing movement away from "units" to "households" or "neighborhoods," the debate is taking on a slightly different tenor. The Culture Change movement has been advocating an agenda of creating home in the nursing home, as evidence by a conference of that name that was held in 2008 and hosted by CMS (Centers for Medicare and Medicaid) and the Pioneer Network. There are numerous articles, conferences, consultants, and online resources dedicated to helping providers move away from the "institutional" model of care that was primarily staff-centric to a model that is resident-centered or self-directed. It is not always clear exactly what it takes to be non-institutional, but there is increasing agreement that it encompasses greater individualization and self-determination on the part of residents, as well as the creation of a living space that feels more like home than a hospital. Just as it was difficult in the 1990s to articulate what differentiated a "special care unit" from a traditional care unit, it is now difficult to define what differentiates a household/neighborhood from a "unit."

The most common elements that begin to distinguish the newer household/neighborhood concept from the older unit design have to do with (1) scale, (2) character of spaces, (3) spatial adjacencies, and (4) spaces that support resident self-determination. Each of these will be addressed separately.

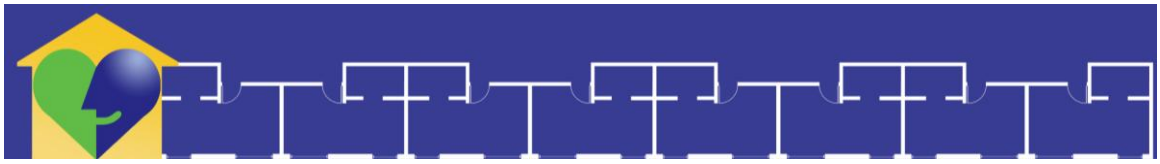


Scale

Although there is no standard for a size cutoff, there is widespread agreement that 60 and even 40 beds (note the use of the term "beds") reflects an institutional model, while 8 to 12 to 16 residents living together (i.e., people, not beds) reflect a more residential model. The cutoff between these two is unclear. The Life Safety Code Task Force (coordinated by the Pioneer Network to help shape the Life Safety Code to be supportive of culture change efforts) has selected 24 residents as the maximum number for a household. Given the very real economics of care settings, one needs to address the question of whether spaces must be dedicated to a single household/neighborhood, or whether they can be shared between two or more. If the goal is to create places where residents feel more comfortable and more at home, then the spaces they inhabit, as opposed to the spaces that staff use to support their caregiving activities, should reflect this smaller scale. This does not mean there should be no larger gathering space for larger groups of residents to gather, just that these should be separate from where the residents live.

Character of Spaces

If the goal is to create a setting that feels more like home, the rooms that people inhabit should look like the rooms found in a house (e.g., dining room, living room, kitchen) rather than spaces found in hospitals (e.g., large, brightly lit nursing stations, long corridors, multipurpose rooms). Again, there are no absolutes here. Carpeting, a little chintz, and a few throw pillows do not necessarily make a room feel like someone's home. However, having 20 or 30 or more of the same chair, covered in the same fabric, placed in all bedrooms and the dining and living rooms is very unlikely to convey a feeling of home. Homes are generally characterized as having rooms with different character, décor and style, and varying sizes. A kitchen with no displays of knickknacks, art, baskets, or canisters on the counter, is unlikely to convey that this is a comfortable place to sit down for a cup of coffee or tea. Similarly, there are a number of "institutional icons," such as prominent nursing stations, medication carts in the dining room during meals, clean and soiled laundry



carts, and transportable lifts sitting in the hallway that need to be addressed. These are all very real and necessary components of the care setting, but it is their location and disposition that contribute to an institutional versus residential ambiance.

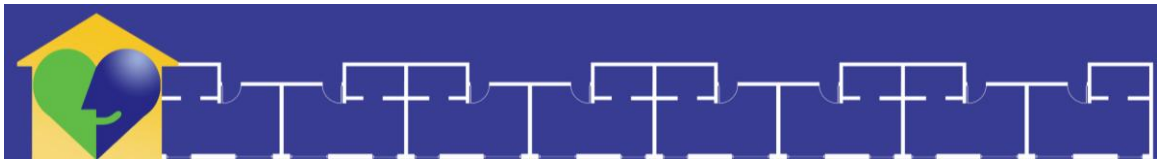
Spatial Adjacencies

In the staff-centric models of the previous decades, maximizing efficiency often meant putting staff work stations at the center of the unit, necessitating that unit entrances be adjacent to resident bedrooms. In American homes, rarely is the bedroom adjacent to the front door. Rather, there is typically a vestibule or hallway that serves as a transition from the public space to the more semi-public areas of the house (i.e., living room and dining room, and increasingly the kitchen), as well as some other transition (e.g., stairs or hallway) before one gets to the most private areas of bedrooms and bathrooms. There are now several examples of well-designed care communities that have been able to reflect this same set of spatial adjacencies.

Spaces that Support Resident Self-Determination

There are three main components to this factor. The first is greater choice over whether to have a room by oneself or to share a room with another person. Forty, even 30, years ago it was fairly common for bedrooms to be designed to accommodate 3 to 4 people. One private room was typically required for infectious patients, which contained negative air pressure. More recent designs have shifted to 2-person rooms, most often replicating the hospital room layout, with both beds along the same headwall (we refuse to call this a "semi-private" room, since a cubicle curtain between two beds does not constitute privacy[1]). In this layout, one person controls the window and the other constantly has his/her territory impinged

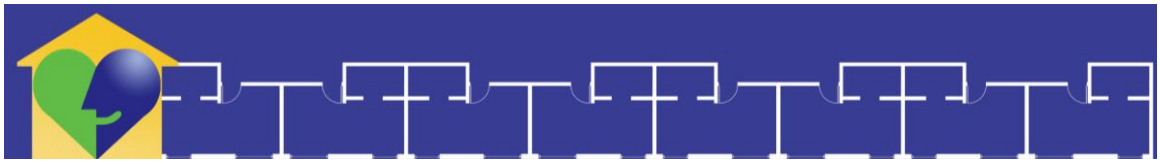
[1] It is interesting to note that the definition of "semi-private" is specifically related to sharing a room in a hospital: "having some degree of privacy but not fully private, as a hospital room with fewer beds than a ward." Based on the Random House Dictionary, © Random House, Inc. 2009, from Dictionary.com. http://dictionary.reference.com/browse/semi-private accesses 9-20-09. "Private", however, has 16 examples of definitions as an adjective, and only number 14 relates to health care "of, having, or receiving special hospital facilities, privileges, and services, esp. a room of one's own and liberal visiting hours: a private room; a private patient."



upon. Increasingly, providers are recognizing that people want to choose whether to share their bedroom and bathroom, the most personal spaces, with someone else.

The second component is the extent to which a kitchen in the household provides sufficient flexibility so that residents can easily choose when and what they eat. While regulations have long required offering a snack between meals, it is often provided with little to no choice. Asking for a different entrée was a long and often difficult process because meals were delivered from a main commercial kitchen, already plated and in carts, and served at specific times. The dietary staff were expected to know a resident's food preferences (as though they never change) and serve the best choice. A resident could request the alternate, but it might take 20 to 30 minutes to deliver to the unit. As part of the shift away from institutional-style service, many providers are serving meals from steam tables or as a buffet service. This gives residents more choice at the point of service. The provision of a kitchen with a well-stocked pantry and basic appliances provides even more flexibility, in both time and choice of food. Clearly, operation systems need to be adjusted as well, but the presence of a kitchen makes it that much easier for residents to have a greater say in what and when they eat.

Finally, the third component is access to a variety of social opportunities. In the traditional institutional model, there was often one multipurpose dayroom on the unit and the other social spaces in centralized areas of the building were equally nondescript (with the exception of the chapel). In moving toward a model that reflects the way people have lived throughout their lifetime, spaces should represent the typical types of places where people have spent time outside of the home, which often involve different purposes – food and dining, learning, and entertainment (e.g., movies and shows). A neighborhood does not consist of 3 to 4 multipurpose rooms or buildings where any activity can take place. Instead, it is comprised of distinct types of spaces.



Households

Households usually contain between 8 and 12 residents[1]❷. Clustering the spaces of a long-term care community into smaller households reduces the scale of a large building and provides a more familiar size[2]❷. Household models replicate the elements of a house and typical elements are resident rooms with bathrooms, a kitchen and dining area, and a living room or activity space[3]❷.

Some argue that certain elements are necessary to be defined as a household, although these are not universally agreed upon[4]. However, the following guidelines are provided as a starting point. It is recognized that some elements may be difficult, if not impossible, to achieve in existing buildings.

1) Working from the Life-Safety Task Force, a household accommodates no more than 24 residents.

2) A household must include the bedrooms and toileting/bathing spaces. If there are showers in each resident bathroom, a tub room maybe shared between multiple households. However, if there are no shower provisions in the resident bathroom, then the shared bathing room must be able to be accessed from the household without have to leave the household and go into public areas.

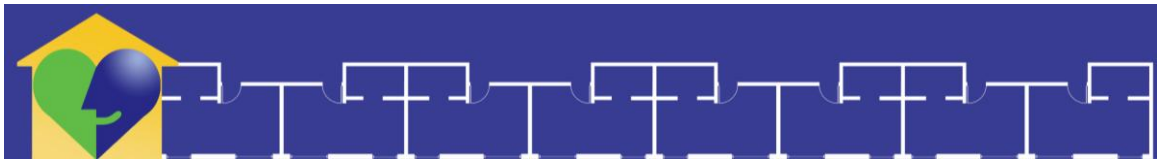
3) The dining room should accommodate the residents from a single household, with space for guests (e.g., two households cannot share a dining room).

4) Each household shall have a functional kitchen with residential appliances and a pantry, as allowed by state code. Multiple households may share a back-of-house support pantry that is used solely by staff.

5) The front entrance to the household shall not be adjacent to resident bedrooms. There shall be at least some transition space (ideally more than just a vestibule, but some shared social space).

6) At least 50% of the residents shall be able to choose whether to have a private or shared room (which translates to at least 50% private rooms). All shared rooms should be designed so that each individual has his/her own definable territory, which does not have to be crossed by someone going to the other person's space.

The household concept has many benefits for residents. Research suggests that residents who relocated to a household setting experienced less cognitive deterioration and maintained better activities of daily living functioning (e.g.,

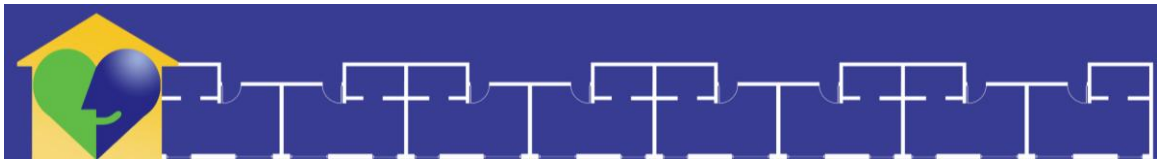


grooming, mobility) over the course of a year than similar residents who moved to a traditional institutional nursing home[5]❶. A household concept eliminates the confusion of long corridors and encourages wayfinding[6]❷. A household design provides more opportunities for informal social interaction than a traditional corridor design. Many sources outline the factors that encourage social interaction in household designs, which include: (1) a cluster layout that allows direct visual and physical access to activity areas, (2) an opportunity to become familiar with a smaller group of residents, and (3) social groups that simulate neighborhood relationships, which may decrease feelings of loneliness, isolation, loss, and depression[7].

Neighborhoods

Neighborhoods house between 30 and 50 residents[8]❷. A neighborhood is defined as a collection of multiple households that share additional spaces, both for socialization and staff support. Most neighborhoods have a common area that programmatically joins all of the houses together with a variety of program elements for both large and small group activities, such as: great room (i.e., an assembly space that can be used for larger group activities), crafts room, salon, living room, and staff workroom[9]❷. Ideally, these would reflect the types of spaces and places that are found in a neighborhood, such as a library, café, gym, restaurant, and a place of worship. The neighborhood concept reduces the confusion of long corridors by creating distinctive social destination spaces[10]❷.

Connected household models contain interior spaces that are connected in some way to the households. Depending on the size of the building, there may be multiple smaller neighborhoods, each with a slightly different character. In the freestanding household, residents will likely have to go outside to access the neighborhood- just as people living at home in the community do. Especially in inclement weather, it can be difficult to get from the house where one lives to either another household or to some central activity areas, and residents may require staff



assistance. Therefore, efforts should be made to make the neighborhood spaces as convenient as possible, recognizing the level of frailty of the residents.

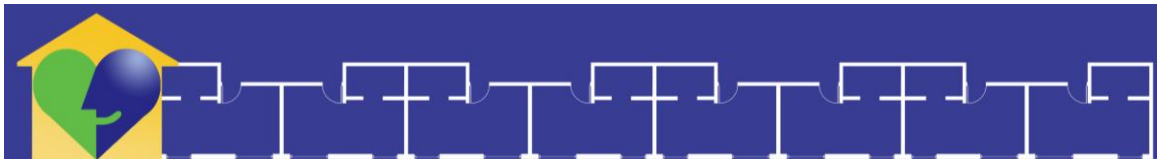
It is worth noting that not everyone is convinced that the "household" model is the only or even best model. Some would argue that a nursing home can never really be home. Therefore, the best one could be is homelike—and who wants to live in homelike? An alternative approach reflects more of a hospitality model, which could represent a hotel (concierge-style service), cruise ship (entertainment focused), or bed-and-breakfast (sort of like home, but not trying to be your home).

Whether in an existing building or through new construction, there is clear and convincing evidence that the design of the built environment makes a difference for individuals with dementia, as well as their caregivers. This website is designed to link interested parties to the latest information, allowing new and ever more creative solutions to be developed. It is also hoped that providers and designers will spend more effort on both evaluating the environments they have created, and in sharing the results with the rest of the community of professionals dedicated to improving life for individuals with dementia.

Recommended Care Setting Size

There is broad agreement that small-scale dementia care care community are desirable. Anecdotal reports and clinical observations of residents with dementia have led to recommendations for small unit size (i.e., low social density) in published design guidelines for dementia special care units, but there is a lack of reported empirical studies testing the density hypothesis with this population[(11)]❷. Currently, there is no standard definition of what constitutes a small-scale, homelike concept of dementia care[(12)]❶.

The literature has attempted to identify specific unit sizes. A recent international literature review of homelike care environments for older people with dementia indicates that the number of residents per house or unit typically varies between a range of 5 to 9 and 13 to 15 residents[(13)]❶. Similarly, Perkins states that

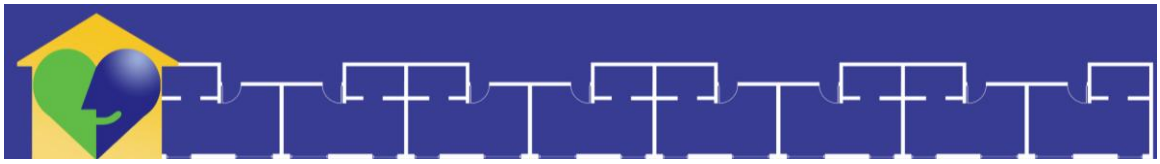


clusters or households should accommodate no more than 10 to 14 residents[14]❷. Staff and managers in one study of dementia care homes suggested ideal sizes ranging from 6 to 12 residents per unit because as the size of the unit becomes any larger, there is a move away from having a "family feel" in the home[15]❷.

Benefits of Small Care Settings for Residents

Keeping the group size small makes it easier to create homelike spaces[16]❶. Compared to large institutional care settings, small care homes with fewer than 31 residents have higher scores for resident comfort, normalness, choice, and overall wellbeing[17]❷. Smaller units are also associated with residents having a greater sense of control over their environment[18]❶❷. A secure unit with a low number of residents may encourage increased spatial orientation, as well as verbal abilities and social interaction[19]❶.

Residents have opportunities to get to know each other better in smaller groups. Dementia unit households with 12 residents likely provide more opportunities for informal social contact and familiarity[20]❶. A small unit provides a higher possibility of becoming familiar with a smaller group of people through daily structured and informal interactions. When a special care unit relocation reduced the size of the resident group from 69 to 20 residents, the lower social density also meant that there was less noise on the unit[21]❶. Residents could attend to each other better in the quieter, less distracting environment. They were also less likely to misunderstand each other's verbal and non-verbal communication, which minimized confrontation. Lower social and spatial densities have the potential to reduce personal space violations among residents and provide greater control over social interaction[22]❶. A study of assisted living settings found that residents of small care community (i.e., 2 to 10 residents) participated in more hours of group activities, while residents of large care community (i.e., 30 to 120 residents) engaged in more solitary activity[23]❶. Another social advantage of small-scaled units is that relatives are not "swamped" when they visit and they are more likely to get to know other relatives[24]❶.



Units with a high social density can result in high stimulation levels because of the large number of people and the associated activity, but reducing the size of the resident group eliminates many of these problems[25]❶. Small units, or the division of large units into smaller subunits, minimizes agitation among residents with dementia by reducing the potential for overstimulation in terms of controlling noise and limiting the number of people each resident encounters[26]❶. Residents with dementia experience less stress in smaller units and do not "set each other off" as much[27]❶. A small resident group living in a more compact design may provide control over stimulation levels, without the negative consequences of very low spatial density, such as decreased social interaction Reduced social and spatial density has beneficial effects on behavior of elderly nursing home residents with dementia[28]❶.

Benefits of Small Care Settings for Staff

Small units appear to help employees to cope better with work stress and to give better care that supports residents' quality of life[29]❶. Units in Pekkarinen's study ranged in size from 12 to 50 residents[30]. The larger the unit, the more work stressors present (e.g., time pressure) and the poorer the residents' quality of life (e.g., sufficiency of psychosocial help received). Staff in group living units reported greater competence, more knowledge in dealing with dementia, and greater job satisfaction than did their counterparts in traditional nursing homes[31]❶. In Cantley and Wilson's research, managers and staff identified the following advantages of small-scaled units compared to homes with larger units: (1) easier to develop good resident-key worker relationships, (2) easier for staff to keep an eye on all residents, and (3) staff develop a greater sense of ownership and pride in their unit[32]❶.

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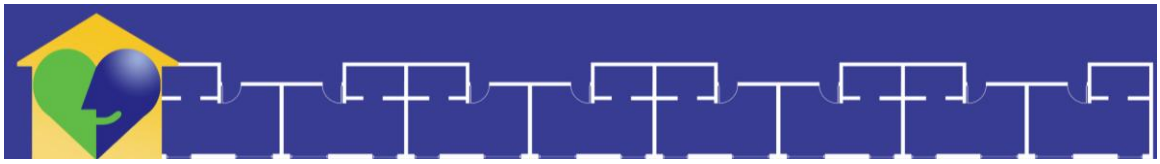

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