Programming Principles

part 4
One's experience of and behavior in a particular environment are often more strongly influenced by general qualities or attributes of the setting than by specific architectural features. In the planning and design of various environments for people with dementia, four such attributes appear to be particularly salient: image, negotiability, familiarity, and stimulation. These attributes are a function not only of the physical environment, but also of the interactions of physical, organizational, and social subsystems. Thus, creation of a "homelike" environment requires appropriate furnishings and finishes, patterns of ongoing behavior typical of those found in residential settings, and policies and programs supportive of such residential activities.
NONINSTITUTIONAL CHARACTER

People with dementia are confronted with an ongoing series of changes in themselves and their world. It is therefore important, to the extent possible, to maintain their ties to that with which they are familiar and comfortable. Facilities should be patterned after the outside community and its residential imagery—rather than after the medical model of the hospital and nursing home—to assist people with dementia in retaining these ties to the healthy and familiar.

Breaking down the monolithic character typical of many hospitals and nursing homes is the first step in creating environments in keeping with this domestic scale. Externally, this is achieved by creating small interconnected units, as opposed to a single large structure. Internally, this is achieved by breaking down the organizational and physical structure of the environment. Institutional materials (e.g., ceramic tile and stainless steel), typically selected for their qualities of indestructibility, can be replaced with equally durable "domestic" materials (e.g., selected types of carpeting). Variety in the visual appearance of the facility will also contribute to this goal.

Concerns regarding sanitation need not dictate traditional "institutional" furnishings and surfaces. For example, residential–looking living room and activity area furnishings can be ordered complete with silicone–sealed construction, strategically–placed drainage outlets built into the seat decking, moisture barriers between the upholstery covers and stuffing, and moisture–proof fabric upholstery.

A one story building organized in components of "house" size components with residential imagery can reduce the institutional character of a facility for 50 residents.
The open plan of this domestic kitchen allows unobtrusive observation of many parts of the unit by caregivers, yet eliminates the need for a conventional, institutional nurses' station.
ELIMINATING ENVIRONMENTAL BARRIERS

In recent years, considerable attention has been directed to the creation of "barrier-free environments" (ANSI, 1980). Truly accessible and "negotiable" settings for people with dementia must also respond to additional demands. Dementing illnesses often exacerbate common age-related problems in the performance of seemingly simple tasks, such as knitting, fastening buttons, or closing snaps. It may be equally difficult to operate a variety of "control devices" in the microenvironment, such as appliance dials, door handles, and telephones. Such difficulties reflect a variety of factors (Mace & Rabins, 1981), including apraxia (whereby messages from the brain may not be transmitted to hands and fingers), tremors, muscle weakness, and vision problems.

In addition to requirements for barrier-free design (ANSI, 1980), a variety of strategies may be employed to mitigate hazards and overcome barriers to negotiability in environments for people with dementia. For example, Pastalan (1979) proposes the concept of redundant cueing, whereby the same information is presented via several sensory modalities. Such a recommendation is realized in the design of a dining room that includes pictures of food, smells of cooking from the adjacent kitchen, and auditory access to the sounds of meals being served, all of which direct residents from the corridor into the dining area. In another example of redundant cueing, light switches can be made conspicuous in both color and form.

Objects in the microenvironment can often be designed with enhanced anthropometric fit to compensate for the decreased abilities (e.g., hand-eye coordination or visual acuity) of people with dementia. Examples include lever-action handles instead of door knobs, and pressure-plate light controls instead of the common switch. Koncelik (1976) proposes self-correcting design of objects in the microenvironment (e.g., door locks with recessed tumblers to "guide" the key, thereby directing and correcting the movements of people with dementia.)
This simple, one-story structure provides several compensations for decreased capabilities. For example, the absence of stairs and level changes will reduce physical demands; familiar residential layout will be consistent with past experiences and will reduce cognitive complexity.

This telephone attachment can be programmed to automatically dial up to ten frequently-called or emergency numbers. It is unique in that its large, easy-to-press keys each hold a picture or photograph, allowing the person with dementia to continue using the telephone without having to remember a sequence of numbers (The Picture Dialer, from The Perfectly Safe Childcare Catalog).

Lever action door handles compensate for decreased capabilities among the general population of elderly people, and especially among people with dementia.
THINGS FROM THE PAST

While people with dementia often cannot remember or be taught to remember recent events (Gwyther, 1986), their long-term memory remains relatively intact until the later stages of the disease. In addition, the emotional components of memory may remain even after other components are lost (Coons, 1985). The utilization of familiar objects—things from the past—can provide opportunities for the exercise and celebration of these remaining capabilities.

The incorporation of objects from the past may assist in the retention of ties to the healthy and familiar through the creation of personalized and homelike environments. Articles and events from the past provide people with dementia with opportunities to reflect upon past experiences and environments (Rapelje, Papp, & Crawford, 1981); such emotions and memories often serve to stimulate social interaction. In particular, the ability of residents to bring some of their own belongings and furniture to the facility can help to create a familiar environment. Objects from the past may be incorporated into residents' rooms, interspersed throughout the public area of the facility, or aggregated in a "museum" area.
Spaces for familiar and common activities of daily living, such as a domestic kitchen and laundry/clothes drying area, provide a connection to a normalized life style. A simple activity like baking cookies can evoke associations of the past and foster social interaction with other residents, visitors, and caregivers.

Prominent images, from family pictures, both recent and older, to the picture of a favorite cat, can trigger reminiscence. Media is not limited to still photography; movies and video displays also work well.
SENSORY STIMULATION WITHOUT STRESS

Levels of sensory and social stimulation in environments for people with dementia often differ dramatically from those commonly encountered in home environments. In some cases there may be a virtual absence of stimulation characterized, for example, by monochromatic, repetitive spaces with little or no ongoing activity. In other cases, residents may be bombarded by very high levels of stimulation including intercoms, alarms, and—as often occurs in dining rooms—the presence of large numbers of other people. Therefore, attention should be paid to regulating the character and intensity of sensory and social stimulation to provide, in Mace's (1987) terms, "stimulation but not stress." Environments for people with dementia should amplify important messages at the same time they dampen extraneous stimuli.

Messages can be amplified through the provision of adequate contrast between important environmental features (e.g., signs, furnishings, stair treads) and their surrounding background (e.g., walls or floors). Where needed, levels of sensory stimulation and involvement can be increased through the use of textured wall hangings, pieces of carpeting, birds, plants, or an aquarium. Extraneous stimuli can be dampened through the use of carpeting and other sound absorbing materials, as well as through the elimination of distracting background sounds such as intercoms.

Finally, staff behaviors such as touching and hand holding can provide residents with both tactile involvement and positive social stimulation. Conversely, the elimination of overwhelming large group spaces can minimize negative social stimulation.
Environmental features such as signs and furnishings should contrast with their background.

Pets and plants can often provide desired levels of sensory stimulation and involvement.

It is essential that important stimuli, whether these be verbal or auditory, not be forced to compete with extraneous noise.
In contrast with the preceding principles for planning and design, guidelines in this section are more "physical" in character, focusing on architectural—rather than policy and program—variables. Specifically, the common theme of these four guidelines is the arrangement of spaces relative to one another to provide areas for specialized activities, define levels of privacy, or ensure views and use of the exterior.

The special characteristics of people with dementia necessitate building organizations that are particularly easy to understand and within which it is easy to find one's way. To maintain the homelike character of the environment, familiar spaces (e.g.; outdoor planting areas, private bedrooms, semiprivate spaces for socializing) should be provided. The organization of these spaces can increase the responsiveness of the environment to the specific needs of people with dementia (e.g.; wandering paths should link major social spaces and should reinforce wandering as a meaningful activity; activity spaces should be clustered in a pattern similar to those in familiar single-family homes). In addition, environments must reinforce the sense of dignity, privacy, and autonomy of people with dementia. For this reason, it is important to organize space to provide opportunities for private conversation and reflection, normal socialization, and the exercise of independent choice and decision making.
OPPORTUNITIES FOR MEANINGFUL WANDERING

Wandering is one of the many difficult behaviors attributed to people with dementia. Gilheid (1984) and Coons (1988) identify three types of wandering behavior: (1) wandering as a consequence of disorientation, which may be as much a result of an illegible environment as of an incapacitated resident; (2) habitual activity stemming from previous experience; and (3) restless activity-seeking typically found in environments that provide little to engage residents.

To reduce wandering from disorientation, facility design must ensure that the environment is easily understood and that people do not get lost. Thus, repetitive modules should be avoided and memorable and unique landmarks should be introduced to provide residents with orientational cues.

In acceptance of the notion that wandering may be a habitual activity for some residents, walking paths should provide for more than mere physical exercise. Such paths can allow residents opportunities for passive involvement in activities without requiring them to participate, thus exposing them to social/sensory stimulation. Coons (1988) contends that wandering behavior actually subsides in a rich and supportive environment that provides residents with opportunities for involvement and participation.
PUBLIC TO PRIVATE REALMS

Oftentimes, environments for people with dementia do not provide sufficient variation in the levels of privacy available to residents. This is the result of organizational factors (e.g., staff members who do not knock and wait for permission before entering residents' rooms), architectural characteristics (e.g., large, undifferentiated dayrooms as the sole public or semi-public options), and combinations of the two (e.g., a policy that mandates and resultant design that offers only shared resident rooms). Providing opportunities along a gradient from public to private spaces offers residents control over desired level of sensory stimulation, social interaction, and involvement in activities.

Facilities for people with dementia should provide spaces for solitude (such as private rooms, and quiet nooks for one person), as well as for small group interaction (such as sitting areas separating each resident room from the rest of the household, and small outdoor alcoves for private conversations). Many residents also suffer from understimulation and lack of socialization in large, impersonal, and sterile environments. Sociopetal (interaction-encouraging) spaces that are easily accessible to all residents, and that are friendly and inviting in character, are welcome public places in such facilities.

Each of these residential clusters offers a continuum of spaces from public (living rooms) to semi-public (dining/activity area) to private (residents' rooms).
POSITIVE OUTDOOR SPACES

Outdoor spaces can provide unique and relatively less expensive settings offering residents a degree of autonomy and choice by allowing opportunities for both socialization and retreat within a safe and controlled environment. The outdoor environment is an excellent tool for enhancing a nonmedical, noninstitutional, positive image of the facility among people with dementia, staff, and family. Such spaces also provide an important link with natural elements.

Wheelchair-accessible raised planting beds allow residents to participate in gardening. Water features such as pools, fountains, and waterfalls, located in well-landscaped outdoor spaces, can provide visual, tactile, and auditory stimulation. Outdoor spaces should be kept simple and safe from physical and perceptual obstacles to movement and ambulation, at the same time allowing for easy surveillance. Enclosures can be defined unobtrusively (e.g., with plants or building mass), so not to be obvious or disturbing to residents. In recognition of the physical frailty of elderly dementia patients, a positive microclimate can be created by ensuring protection from excessive sun or harsh winds.

Large, undifferentiated, open spaces may be disorienting for people with dementia. Open spaces should be broken down through the creation of alcoves, which accommodate small group activities and places for solitude and retreat. Such spaces can serve as interest points along an outdoor walking path, and will aid in spatial orientation, at the same time creating an outdoor environment supportive of a rich mix of activities.
This final set of principles focuses on specific spaces for particular activities or events. Recommendations are made for the types of activities that must be accommodated, for the characteristics that these spaces should embody, and for the therapeutic and organizational goals that should be supported through the design of these spaces. For example, one such recommendation is that kitchen facilities be provided for use by residents, family, and caregivers; such kitchens might be used by residents to independently carry on familiar and healthy activities, such as doing dishes, making a cup of coffee, or chatting over the kitchen table. To meet the needs for autonomy and control, maintain links with residents' pasts, and provide opportunities for socialization, kitchen spaces for use by residents should be residential in character and scale, a quality that might be achieved through the use of domestic furnishings and finishes (e.g., curtains in the window, a tablecloth covering a wooden table for four people, and pictures or a calendar on the wall and refrigerator). These domestic kitchen spaces can also be designed to fulfill the organizational need for opportunities for unobtrusive surveillance of residents, easily met through the provision of a kitchen "island" in the space that serves as an informal "observation point" for staff members.
ENTRY AND TRANSITION

The entry represents one's first impression of any facility for people with dementia. For this reason, it should be welcoming and noninstitutional in character. This can be achieved through the maintenance of residential materials and scale in the design of this space. The entrance and transition area should also function to decrease confusion and disorientation for visitors as well as people with dementia. The design of an entrance and "cloak room" that is removed from the sight of residents will limit interruption of ongoing activities by others entering or leaving the building. A "disguised" entry and storage area will also prevent residents from rummaging through their own and others' belongings, and will decrease attempts to wander away from the unit or facility.

For the same reason, the entry represents an area where surveillance is desirable and necessary. Instead of disturbing alarm systems or humiliating "beeper" devices, surveillance can be sensitively provided by situating an administrative office where an employee can unobtrusively monitor coming and going from the unit, or by introducing technological devices at the entrance that effectively prevent unsupervised exiting (such as doors that only open when the user simultaneously presses two nonadjacent buttons.)

The entrance is shared by the two wings. Unobtrusive control is provided by the office space and the controlled doors leading to the wings.
The friendly and homelike exterior signifies a familiar and comforting environment to residents and family caregivers alike.

A drop-off point near the entrance, sheltered from the elements, makes coming and going a protected and comfortable experience.
COMMON AREAS FOR EACH FAMILY

In environments for people with dementia, the social structure of "family clusters" should be supported through the physical organization of public spaces. The continuum of spaces ideally ranges from the essentially private resident room to the shared public areas of activity within each family cluster. The goal for the design of these common areas is to increase opportunities for social interaction among residents, as well as to ensure provision of opportunities for individuality, privacy, and autonomy.

One appropriate technique for establishing common areas involves the centralization of various activities at the core of each family cluster. This activity core becomes the public center of the cluster, much as the living room, dining room, and kitchen represent the core of family homes. Activity areas should be established adjacent to, but not interrupted by, circulation paths (Howell, 1980). This encourages participation in highly visible activities, but does not lead to disruption of ongoing events. When possible, it is desirable to carve small subspaces out of larger activity areas to create alcoves for passive participation or retreat, again in recognition of residents' need for privacy.

Common areas should be roughly complementary to those found within homes in terms of both scale and ambience. These domestic qualities will reinforce the residential nature of the space and highlight the ordinary activities of daily living, some of which might be as simple as food preparation in a small kitchenette or family activity around the dining room table.

Each residential cluster has a living area for its eight residents. The living room is a semi-public transition between the public area at the core and the private rooms on the periphery.
DOMESTIC KITCHENS

Domestic—small-scale, residential—kitchens in the home and in congregate living environments can provide for more than just essential food preparation. Accessible and safe kitchen areas for use by people with dementia make available many meaningful and therapeutic activities and experiences, including such familiar household tasks as washing dishes, setting tables, sweeping, and folding towels. To facilitate this, the kitchen or kitchenette should be designed with plenty of seating and workspace at small "kitchen" tables. Provision of a kitchen in a day care center or long term care facility also enhances its domestic ambience, which can be further reinforced by the substitution of tile, wood, and bright, cheerful carpeting for stainless steel and high gloss monochromatic institutional surfaces.

The serving kitchen is centrally located, in proximity to the three separate dining areas. The kitchen also functions as one of the activity areas along the internal wandering path.

The provision of a kitchen for use by people with dementia can reinforce the organization of a facility into small family "households". Its design should facilitate the kind of comfortable, informal socialization and reminiscence that often takes place at the family kitchen table. At the same time, the familiar kitchen "island" can function as an excellent point for informal surveillance of the facility by the care provider; this is a practical and noninstitutional alternative to the traditional nurses' station.
The small kitchenette can be used to serve half of the residents in the facility. This kitchenette does not replace the full-service kitchen; however, beverage-making, snack preparation, and the like add to the domestic character and act as catalysts for social activities.

This kitchen counter provides an unobstructed view of the dining area, the entry to the living room, and an outdoor activity area.
INTIMATE DINING AREAS

While there is no evidence to suggest that meals are as highly anticipated by people with dementia as they are by the general population, there is evidence to point out the potential stress that can accompany this activity (Snyder, 1984; Hiatt, 1981; Roach, 1984), often as a consequence of the loss of ability to feed oneself and increased difficulty in the manipulation of utensils. Large, undifferentiated dining areas can engender overstimulation as a consequence of too much noise and too many people, thereby leading to agitation and confusion. Mealtimes, however, still hold the potential of serving as social and nutritional activities. Maintenance of eating patterns developed over an individual's lifetime can provide continuity with the past, and can increase the scope for reminiscence.

Spatial organization that breaks dining spaces into separate subrooms or zones reduces the institutional image associated with a large dining room where great numbers of people are seated at long tables. Intimate dining areas with small tables seating family-sized groups of two to six people can evoke associations of home; these may also be more comfortable for residents, and more manageable for staff. Noninstitutional furniture, together with a residential decor, can help create a domestic ambience, thereby deinstitutionalizing the space and evoking associations of "home."

Small dining areas are associated with each residential cluster; each dining area is intimate in scale and includes three tables with seating for eight residents and a few guests. These dining areas overlook an outdoor area as well as an indoor wandering path.
The selection and arrangement of furnishings in this dining area were designed to create multi-functioning spaces for intimate dining and household-based activity areas.

The wooden tables and chairs, plants, lighting, and small scale of the dining room create a residential and home-like environment.
ACTIVITY ALCOVES

Facilities for people with dementia often force residents to choose between very public spaces (e.g., large dayrooms) and very private spaces (e.g., their own bedrooms). Either of these extremes can be problematic. The presence of many other people in large, undifferentiated lounge areas may result in sensory and social overstimulation; these spaces likewise fail to provide that measure of privacy desired for interaction with family and friends. Retreat to one’s bedroom may lead to confusion of day and night and may still (in semi-private rooms) fail to provide desired levels of privacy.

Thus, the provision of a range of spaces from among which residents are able to choose can support interaction, privacy, and sense of control. Such spaces needn’t be large (e.g., a window bay is sufficient), but they should have some demarcation of their boundary (e.g., railing, change of flooring material) from the surrounding area. It is likewise desirable that these areas overlook ongoing activity, either indoors or out, and that they occur along paths of movement, thus providing landmarks for orientation and places where wanderers might stop.

Here a shared activity area both contains and is surrounded by activity alcoves for informal social contact and small group dining.
RESIDENTS' ROOMS

In typical single-family homes, the bedroom is among the most private regions of the dwelling, the place where sleeping, grooming, dressing, and bathing occur; other, less private activities take place in other areas. However, in many facilities for people with dementia, the bedroom loses this quality of privacy. It may be shared with one or more other residents, and activities such as visiting with family and friends may take place here as well. Indeed, in many cases, the only alternative settings for social contact are large, anonymous day rooms or the corridor.

It is possible to respond to this need for resident privacy in a variety of ways. Many care providers now believe that, to the extent possible, all residents should have private rooms. In instances where rooms will be shared, the compatibility of roommates' personalities and temperaments should be considered.

Whether private or shared, resident rooms should create a continuum of zones for semi-private—as well as private—activities. Spaces for socialization and other activities should be located closest to the entrance of the room and the more public corridor beyond. Areas for sleeping and toileting are positioned in the most remote and private area of the room.

People with dementia do not usually require more in the way of demanding medical care than other elderly persons (at least until the later stages of the disease), and so bedroom and other furnishings based upon hospital requirements are neither necessary nor appropriate. Traditional, homelike furnishings will engender residents' associations of their rooms with familiar, residential bedroom activities and functions.

For these reasons, resident rooms should provide opportunities for personalization. This may include the use of furniture and bedcovers from one's home, as well as the provision of space for personal mementos and pictures on the wall.

Nocturnal wandering and restlessness are examples of problems for which environmental design may serve as a partial solution. For example, soft, soothing colors in the bedroom may support the use of this space for quiet activities and retreat from overstimulation, and reinforce its association with sleeping. The removal of "day time" activities (e.g., socialization) from this space may further reinforce this association.

Finally, rummaging in (and subsequent misplacing of) one's own and others' possessions is a problem that is often associated with residents' rooms, and which consumes a great deal of staff time and energy and causes frustration on the part of family caregivers. Strategies to enhance recognition of one's own room and belongings may help to reduce this problem. Pretty, distinctively-colored, washable bedspreads in each room (perhaps again bedcovers from home) and matching valences over the windows or in the doorway may help residents to recognize their own rooms, as will familiar pictures, throw pillows, and other artifacts from home. Residents' rooms should include sufficient space for storing their belongings out of sight, where they do not create a temptation for rummaging. If two residents share a room, it may be wise to assign a different set of furnishings (e.g., two different sets of matching dressers, chairs, beds, and nightstands) to each resident to help each differentiate his or her own belongings.
These attractive bedrooms furnishings are quite similar to those the resident may have used most of his or her life. They could easily be combined with a favorite dresser or chair from home to help maintain ties to the past (by Sunrise Medical/Joerns).

Whenever possible, space for public or social functions should be provided outside of the resident’s room. However, a comfortable chair or two in one corner of the room may be appropriate for residents who wish to use their room for private conversations with visitors or for quiet retreat and solitary activities. One practical, multi-functioning choice is a comfortable, easy-to-clean lounge chair that doubles as a fold-out bed for use by spouses visiting overnight (by Lazy Boy Healthcare).
DIGNIFIED BATHING

Bathing can be one of the most difficult activities performed by people with dementia and their caregivers. Because of physical deficits (including psychomotor deficits that may affect the sense of balance) and decreased attention to personal grooming, the person with dementia often requires assistance in bathing or at least in getting into and out of the bathtub or shower; however, being lifted into a tub or shower can easily be an unsettling or even terrifying experience. In addition, the resident may resent the indignity of being assisted in bathing; many of the various institutional bathing devices (e.g., "cranes" or hydraulic lifts to hoist the resident into the tub) compound this indignity. These circumstances often combine to create a dislike of or an aversion to bathing in the person with dementia.

Bathing involves many potential threats to safety and security. The caregiver may experience difficulty in lifting and maneuvering the person with dementia, which is especially problematic in the domestic setting, where the caregiver is likely to be an elderly spouse. Fear of falling during bathing or showering may increase the aversion to bathing of people with dementia. Caregivers in facilities for people with dementia are rightly concerned about minimizing the likelihood of falling in the bathing area. An additional safety concern is that unsupervised wandering into bathing areas may result in accidents. Design of bathing areas must respond to these valid concerns.

Whenever possible, people with dementia should be allowed and encouraged to take responsibility for those grooming activities (including bathing, whenever possible) that they can still accomplish with minimal stress or anxiety. Autonomy ought to be facilitated; for example, a resident may need assistance to use the bathtub, but could possibly take a shower independently, seated on a wooden chair in a shower with no lip and a downward sloping floor. In such a situation, independent showering may be a more attractive alternative to the resident; this opportunity should be provided.

Much of the equipment and many of the furnishings that have been developed to make bathing easier for the caregiver (e.g., hydraulic lifts and raised bathtubs) will probably seem strange to the person with dementia (indeed, to most people). Ideally, "bathing areas should be set up to be as reassuringly familiar and smoothly operational as possible. Bathing equipment that requires [people with dementia] to be suspended in unfamiliar contraptions" will likely be perceived as strange, threatening, and undignified (Hyde, 1989, p. 39). In addition, noisy and crowded [group] bathing areas do not provide a calm setting or promote dignity for residents.

Negotiable and Safe Bathrooms

Accessibility and safety are major issues that must be resolved in the design and furnishing of bathing facilities for people with dementia. People with dementia may have a great fear of falling in the bathroom; however, a variety of measures can be incorporated to reduce the risk of falling, including the use of nonslippery surfaces for floors (rubber backing can keep rugs from slipping); the installation of grab bars above the tub and along the walls; the placement of a nonslip chair in the shower; and the use of a textured, nonslippery surface in bathtubs and shower stalls; and the use of a floor
drain and positive drainage angles to ensure that water will not collect on the floor. Water temperature levels should also be limited to prevent scalding.

Many modifications can also make bathing facilities more accessible to people with dementia and to caregivers, when they are involved. These modifications need not be elaborate or expensive contraptions—they can be as simple as a shower stall designed without a lip or edge and with just a slightly sloping floor to allow water to drain. If the doorway of the shower is large enough to accommodate a wheelchair, a person can be pushed directly into the shower and showered in the chair.

To ensure a safe bathing area, locks can be removed from doors to prevent people with dementia from inadvertently locking themselves into the bathroom, while still allowing them the privacy of using the bathroom alone (when feasible). In institutions, the bathing area should be designed and located so that it is not visible to solitary wanderers and cannot be entered without a staff member’s awareness.

**Space for the Caregiver**

"What I do to get her out of the tub is, first of all, I wipe up the water from the floor with plenty of towels so it isn’t too slippery; then I get her out of the tub in stages—let me tell you that isn’t easy with a wet body that doesn’t cooperate—and then I prop my body, sort of wedge it, between the counter and the tub, so that we won’t slip and take a tumble, and then I pull her up leaning against me. There isn’t room to do it any other way. Mind you, we did have a fall one time, and got pretty bruised too!" (Husband-caregiver, age 75, from Gnaedinger, 1989).

Because bathing and showering frequently require at least some degree of caregiver assistance, areas for bathing should be designed for maximal efficiency for caregivers. Efficiency can be provided without sacrificing the dignity or privacy of people with dementia. One means of achieving this is through the modification of the floor plan and layout of bathing areas. For example, bathtubs can be situated so that at least two and preferably three sides are accessible to the caregiver, with enough room on the sides of the tub to allow a wheelchair to be maneuvered directly to the edge. Showers should also be large enough to allow room for a caregiver to assist with showering; if the shower can accommodate a wheelchair, less physical exertion is required on the part of the caregiver because residents can be showered right in their chairs, and may now be able to shower themselves without assistance. Removing glass enclosures around the tub also makes assisting with bathing easier for the caregiver and recognizing the bathtub less confusing for the person with dementia (Pynoos, Cohen, & Rosner, 1990). A fold-down chair on one wall of the shower accommodates the person who must be seated while showering, without inconveniencing others. These modifications will also make the bathing area easier to clean and maintain.

**Domestic and Private Bathing**

To alleviate the anxieties of people with dementia, bathing should be maintained as a normal and domestic activity to the greatest extent possible. When it is impossible to use familiar furnishings like residential tubs and showers, bathtubs with a hinged, "walk-in" back or side are preferable to those that require the person to be hoisted over the edge. Because bathing is a private activity by nature, "group" bathing areas should be discouraged, and the privacy of people with dementia should be maintained and encouraged by providing shower curtains, doors, changing areas, etc. For the same reason, people with dementia should be allowed to bathe themselves when possible, with the minimal amount of caregiver assistance necessary. This can be
facilitated by arranging the necessary items for bathing in the proper order.

Place for Grooming

Bathing and showering are activities that may frequently require the presence or assistance of a caregiver; however, the same is not true for grooming activities such as hair brushing, teeth brushing, make-up application, and related activities. Although the bathing area should be located so that it is not accessible to solitary wanderers, the grooming area can serve as an independent activity alcove, and many of the normal bathroom accessories (e.g., toothbrushes, combs) associated with it can be readily available to residents at all times. A special, accessible place designated for this activity may enhance residents' attention to and competence in personal grooming, reinforcing their sense of independence and self-reliance.

While regulatory standards may control the use and storage of some items in this area (e.g., nontoxic liquid soap instead of familiar bar soap is mandated in some states), caregivers should facilitate independence and responsibility for personal grooming activities by making hair brushes, washcloths, etc., visible and accessible whenever possible. Clear marking and independent storage of each person's towel and toothbrush, (e.g., each resident might have his or her own shelf) can lessen the confusion that often leads to "borrowing" of other residents' possessions.

Additional Reading Materials


A hand-held, wand-type shower provides great flexibility for the caregiver or the person with dementia, and can be especially helpful when using a shower or tub chair during bathing (from Calkins, Namazi, Rosner, Olson, & Brabender, 1990).

This bathtub (from Kebo Parker Healthcare Systems) can be easily entered and exited through a door that opens on the side, allowing the resident to be seated upon entering. There is no need for residents to be lifted over the edge of the tub, which can be frightening and disorienting.

A tub tray that fits over the edge of the bathtub keeps items needed for bathing visible and in the proper order so they can be easily reached by the person with dementia or caregiver (based on Comfortably Yours).
INDEPENDENT TOILETING

Although incontinence is a major problem for many people in the advanced stages of dementia, facilitating toileting can reduce the problem in the intermediate stages. Toileting areas should be easily locatable and identifiable and should be designed to be used independently by the person with dementia whenever possible. These characteristics will increase the ease with which most continent people with dementia can find and use these facilities, making toileting more dignified for all residents and making the assistance of residents a less demanding task for caregivers and staff members.

Normally, toileting is considered a very private activity. However, people with dementia are often unable to locate toilet facilities independently or to remember to use them without being reminded by others. Because of both the embarrassment of accidents and the need for assistance from others, toileting may become a less than private and dignified activity. Even upon locating the toilet area, people with dementia may have difficulty using these facilities independently because of problems of limited access or difficulty in entering and using the facilities without assistance. Incontinence becomes a major problem in the advanced stages of dementia in terms of sanitation, loss of dignity, and associated stigmatization.

At home, the difficulties of hygiene and housekeeping associated with incontinence are often more than the family caregiver can handle. Family caregivers report that incontinence is one of the most burdensome effects associated with Alzheimer's disease (Pynoos & Stacey, 1986), and may often be a critical factor responsible for relocating people with dementia from their homes to some other setting. Incontinence is quite problematic for staff members in any type of facility for people with dementia, necessitating extra time and effort in caregiving and clean-up. In addition, assisting people with dementia in locating, identifying, and using toileting facilities is time-consuming for both professional and family caregivers.

Independent toileting is an activity of daily living that ought to be supported and extended for as long as possible. The self-esteem and dignity of the person with dementia may be closely associated with autonomy and the preservation of privacy and independence in toileting. To assure independent use of toileting facilities, one must increase the visibility of these areas to people with dementia and explore alternative means of enhancing residents’ awareness of the need to use such facilities. Facilities for people with dementia should also increase the relative ease of finding toileting areas, as well as employ strategies such as encouragement of regular toileting. Whenever possible, facilities for people with dementia should maintain the familiar appearance and usage of toileting areas, and should avoid alternatives that invade residents’ privacy (e.g., group toileting areas) or that obscure the intended use of the areas (e.g., a powder room or lounge area in a public restroom may obscure the function of the toileting area for some residents).

Proximate and Accessible Toilet Areas

Oftentimes, problems associated with incontinence can be resolved by providing several alternative toileting areas for resident use, and situating these proximate to areas where residents congregate. In residential facilities, toile-
ing areas should be associated with individuals’ rooms; this will increase the likelihood that residents will be able to locate the toilet area without assistance and will use toileting facilities with relative frequency. Where it is not possible to situate a toilet and sink in each resident room, toileting facilities should be located in immediately adjacent areas. Because toileting often follows dining, toileting areas should be located proximately but unobtrusively relative to dining facilities. In addition, restrooms placed liberally throughout a facility will reduce the time it takes people with dementia to locate and to reach a toileting area. A large number of small restrooms located throughout the facility may be more appropriate than a few large restrooms in this regard. In the early stages of the disease, directional signage may help the person with dementia to locate the bathroom in the home context, although this strategy is less effective as the disease progresses and the resident loses the ability to comprehend written instructions. In addition, some family caregivers report that rearranging furniture in the home to clear a direct path to the bathroom may decrease incidents of incontinence, although this may have the adverse effect of engendering confusion in an unfamiliar environment (Calkins et al., 1990).

**Recognizable Restroom**

People with dementia often have trouble in locating and recognizing toileting areas. In addition to reducing the distance that residents must traverse to reach a restroom, modifications can be made to make the restroom itself more recognizable as such. Calkins (1988) suggested the use of a line at eye level to lead residents directly from the dining area to the restroom following meals (thereby alleviating the need for residents to remember complex directions to find this area). Simple additions to the outside and door of the restroom (both the public restroom and those within the resident’s room), when used consistently, will be recognizable cues to direct the residents to the restroom, and to help them to recognize it when they arrive. Such modifications might include consistently painting the door frame and the door of the bathroom a bright, contrasting color, or devising a familiar, three-dimensional marker and a large, identifiable sign to use near the door of all restrooms (again, signage may only be effective during the early stages of the disease, at which time people with dementia are more likely to be living at home) (Calkins et al., 1990).

**Autonomous and Private Toileting**

Many modifications to toileting areas can increase the independent use of these facilities by people with dementia. For example, a simple grab bar installed alongside the toilet can alleviate the need for caregiver assistance. Making toilet areas more familiar to people with dementia will also increase the likelihood that they can use these facilities independently, and that they will not use the toileting area improperly (e.g., by voiding into wastebaskets). Private bathrooms for use by one person will be most familiar to people with dementia; where facilities for more than one person are required, independent and private toileting can still occur by providing doors (without locks) on each toilet stall to provide privacy without increasing the likelihood of people inadvertently locking themselves into the stall. Fixtures in toileting areas should be residential and familiar to residents, as they may be unable to recognize the use of unfamiliar equipment (e.g., sink “levers” that are easier to manipulate than faucet handles but are recognizable to residents may not be a wise choice for use in bathrooms for people with dementia).

In most instances, those people with dementia who are confined to wheelchairs will require some assistance in toileting. The provision of a
raised toilet seat may make it easier to transfer the resident out of the wheelchair. Toileting areas that are accessible to handicapped persons should also be large enough to accommodate a caregiver, and should include sufficient space for maneuvering an electric wheelchair, which requires more space than a manual chair. Because toileting is often associated with agitation and catastrophic reactions among people with dementia, finishes and surfaces that reduce reflected noise and increase sound absorbency will limit overstimulating noises that can frighten or agitate.

In public spaces, toilet rooms should be located near dining areas to support resident use of these facilities after eating. This prominent location assures that residents will be able to easily locate toilet rooms. The situation of the toilet away from the door within the room affords privacy to the user and provides room for caregiver assistance when necessary.

Ideally, resident rooms should each contain a toilet room with a toilet and sink. This arrangement will be familiar, and hence recognizable, and may increase independent and regular toileting.

Toilet room modifications to increase safety without sacrificing independence or privacy include removing door locks and dangerous medications from the bathroom, and installing a raised toilet seat and grab bars alongside the toilet (Calkins et al., 1990). Grab bars that are brightly colored and contrast with the walls may be easier to recognize and therefore more effective than noncontrasting models. This grab bar has a spring up and down movement so that it can be moved out of place when not in use, and will lock in up or down position by turning to the left or right (from HEWI Bathroom Accessories).
Toilet rooms should include sufficient space to allow for wheelchair manouevering (manual and electric) and caregiver assistance.

Many simple and inexpensive modifications may increase independent usage of toileting areas by people with dementia. For example: (a), a brightly painted door and recognizable canopy, and (b), an identifying pictograph sign mark the entrance to this public toilet room, located near the dining area. Residents may easily locate and identify these spaces when they are prominently located and incorporate consistent signs and other cues to signal toilet rooms, such as a painted line along the wall that leads to the toilet room from the dining area.
PLACES FOR VISITING

Visitation from family and friends is an important component in the lives of people with dementia. It is therefore important for facilities to provide spaces for visiting outside of resident rooms, crowded dayrooms, or corridors, none of which readily accommodate this activity. It is reasonable to assume that, at least in the early stages of the disease, residents might benefit from opportunities for relatively private conversations. Environments supportive of visitors’ needs may also encourage more frequent visiting, which would be beneficial for people with dementia, family members, and staff. To this end, residents and their visitors should have the opportunity to meet and converse in small and intimate settings.

Persons with dementia may become passive and unresponsive. Under these circumstances, visiting can become a frustrating experience for family members, who may find conversation difficult. Spaces for visiting might remedy this situation by including things from the past to serve as catalysts for conversation with people with dementia, whose long-term memory may be relatively intact. It would also be useful for such spaces to offer “something to do.” Places for visiting might be situated accessible to the outdoors, encouraging visitors to take a walk with a resident. These spaces might also provide some simple games or craft materials for activities that residents and visitors could do together.

Visiting can be accommodated in a range of public and private spaces: (a) is a private and intimate, quiet den overlooking a landscaped view. (b) is a semi-public dining area, and (c) is an “action”-oriented domestic kitchen, where visitors and residents can engage in familiar activities together.

Small, semi-public spaces, such as alcoves, can be equipped for visiting by including magazines, games, crafts, and picture albums of facility activities to offer “something to do” while visiting.
STAFF RETREAT

Care for people with dementia is an extremely demanding and draining job, from which family caregivers and staff members will need an occasional break. In addition, some of the tasks involved in this job require a place where activities such as charting and private conversations with physicians and colleagues can take place without interruption from residents or visitors. Environments for people with dementia should include a space (or spaces) for staff retreat, work task completion, private conversation, socialization, and decompression. These places can also serve as the location for any dangerous equipment or supplies (e.g., hot plate, coffee pot, medication) or personal items (staff members' purses and coats) that should be kept from the person with dementia.

To meet these needs, staff retreat areas should provide comfortable seating, sufficient storage space, and a convenient work area for those who will use it. In addition to a break area and work space, the staff retreat area may serve as a resource, training, and information center for staff members, by including such items as journals, staff mailboxes, and a bulletin board with postings of policy changes and upcoming events. The staff retreat area should be accessible to staff members and yet out of the path of residents. The design of such a place should reinforce the residential image of the environment, and staff members' perception of themselves as valuable people. Caregivers' and staff members' access to a private place for temporary retreat in the home or the facility can increase the quality of life and of caregiving for both groups.

The building organization provides a range of spaces to meet staff needs: (a) is a private staff lounge, used primarily for rest and retreat. (b) and (c) are office spaces, from which staff can exercise a degree of control over egress, materials, and activities.

Comfortable seating, provisions for snacks and coffee, and pleasant views to the outdoors can make a short break a real delight.