As great as all outdoors: A study of outdoor spaces as a neglected resource for nursing home residents

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Abstract

Purpose. Previously, most information on outdoor amenities in nursing homes and the use of outdoor space by nursing home residents has been anecdotal. Using data collected from the Center for Medicare and Medicaid Services (CMS) study on Quality of Life (QOL), this paper describes the availability of outdoor amenities in 40 nursing homes and the resident’s perception of their use of that space. Design and Methods. Resident data were collected from 1988 residents in 131 nursing units in 40 nursing homes located in 5 states on a broad array of topics including how often they get outdoors and if that amount was as much as they want, too much or not enough. For each of those 1988 residents, staff was questioned on how often the resident participated in planned outdoor activities. Environmental data were collected using theoretically-derived observational tools that were developed to observe in detail the physical environments experienced by those 1988 nursing home residents at three nested levels: their rooms (112 items), the nursing unit (140 items); and the facility as a whole (134 items). These analyses focus on the presence or absence of items specific to outdoor space at the unit and facility level. Results. Descriptive statistics showed great variation in outdoor amenities and access to those amenities across facilities. The majority, 55.7% (n=73), of the 131 units environments had no items featured on the outdoor amenities index. Of the residents who are physically able to go outdoors, thirty two percent do so less than once a month. Implications. Only recently have the effects of the outdoor environment on well being been systematically studied. This resident-specific data collection on the availability of outdoor amenities and
research at the resident level permits hierarchical analysis to examine the effects of outdoor space on resident quality of life.

Key Words: Outdoor amenities, Environmental assessment, Resident use of outdoor space
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Life outdoors has been an important part of living since the beginning of time. The use of gardens as a place for therapeutic healing can be traced back to ancient Greek, Asian, and Roman cultures where healing temples for their gods were created. The temple for the Greek god Asclepiad (god of healing) was built to include healing gardens, mineral springs and bathing pools as a place for people to come and worship, recreate and heal (Larson & Kreitzer, 2004). Anecdotally, the therapeutic benefits of outdoor space and views of nature (combined with fresh air and exercise) have been widely believed (leading to prescriptions for mountain and beachside cures, pursuit of brisk walks, and small children bundled in snowsuits spending requisite daily time outdoors in winter climates), but only recently have these benefits been systematically studied in healthcare and long-term care settings. Beyond therapeutic benefits, being outdoors arguably is positively associated with improved perceptions of quality of life. Yet outdoor space, outdoor amenities, and access to outdoor space have often been ignored in the design phase or simply value engineered out of a project due to cost when in reality outdoor spaces are especially important to persons sequestered in institutional settings. When outdoor spaces are available to nursing home residents, most often the accessibility and functionality of those spaces are ignored. It is as if they are not considered an integral part of the overall physical environment. Yet we argue that outdoor spaces have the potential of increasing a resident’s quality of life and well-being and should be maximized for their potential of providing additional living spaces.

Utilizing findings from a CMS Quality of Life (QOL) study (Kane, et al, 2003) that interviewed and assessed the physical environments of 1988 residents in 40 nursing
facilities located in 8 states, this article describes the availability of outdoors spaces adjusted by the number of beds in the facility, amenities located in those spaces, the availability of direct access off of a nursing unit, a critique of the outdoor spaces available, and some examples of window views to the outside world that create a sense of being a part of that outside world without leaving the sanctity of the resident’s home.

Theoretical Framework

The Ecological Theory (Lawton & Nahemow, 1973) is as pertinent to outdoor spaces as it is to indoor spaces. Briefly, the theory states that as the aging process continues and the gap between the demands of the environment and the older person’s competence widens, there is a loss of mastery over necessary environmental characteristics that can lead to the older person not using or living limited lives in their environments. Peoples’ behavior in their environments is directly related to the design of the spaces and that an optimal environment is designed to meet the specific needs and preferences of a person (Cutler, 2000; Kahana, 1975; Christenson, 1990). The ecological model theorizes that behaviors are a function of the interaction of individual factors with the physical, social, psychological, and cultural dimensions of their environment. Behavior and affect are outcomes of a person’s level of competence interacting with an environment’s level of press. To function at the highest level possible, a person’s ability must match demands placed on him or her by their environment. Too little demand results in lack of stimulation, boredom, and even de-conditioning, while too much demand can result in stress and inability to negotiate the environment. The docility hypothesis suggests that the lower level of competence the greater the influence of the environment. Used in isolation, the Ecological Theory emphasizes how the environment
stimulates competence and social activities at the expense of considering how the environment fosters other desirable outcomes such as maintaining a sense of continuity, individuality and a sense of place.

Abraham Maslow’s (1954) theory of the Hierarchy of Basic Human Needs is a useful conceptual framework for understanding individual needs. Although not originally designed for use in environmental research, it has become a mainstay of housing curriculum as a framework that outlines basic human needs and the way the environment can satisfy those needs both in the workplace and in housing (Denhardt, Denhardt, & Aristigueta, 2002; Lindamood, 1979). The hierarchy is based on the assumption that people are motivated by unsatisfied needs and that certain lower needs need to be satisfied before higher needs can be achieved.

Recently, the Maslow framework was used in a study of the living environment of a continuing care retirement community. Using a predictive model of research, Paul Eshelman and Gary Evans (2002) looked at function and personal meaning as predictors of place attachment and self-esteem. The study determined that once lower level functional needs (physiological and safety needs) are met, both place attachment and self-esteem (social, self-esteem, self-actualization needs) are elevated by environmental features that are preferred by the resident and are a part of favorable memories.

Access to a pleasant and safe outside area in a long-term care facility was found to be a predictor of satisfaction in a study by Greene, Hawes, Wood and Woodsong (1998). The study looked at how family members define quality in long-term care settings. Six focus groups of family members of people with dementia who were living in or had recently been discharged from an assisted living facility to a nursing home were
conducted to gain insights into participants’ experiences, perceptions, attitudes about quality and satisfaction. Comments were grouped into four major areas: facility staffing; services; environmental features; and facility operational policies and practices. Environmental features found to be indicative of quality include: a safe environment; access to a pleasant and safe outside area that provides refuge for residents; sufficient space for a range of activities; single-story buildings; a design that did not isolate residents; and personal space that is homelike, clean and allows for personal belongings.

The belief that nature can play a role in quality of life and health care has come into focus since the 1980’s when non-traditional therapeutic healing options have become an addition to the traditional medical interventions. In a well documented study of the effects of a window view of nature on outcomes for surgical patients, Roger Ulrich (1984) found that patients with views of nature went home three-quarters of a day sooner, had reduced costs amounting to $500 per case, used fewer heavy medications, had fewer minor complications such as nausea, and exhibited better emotional well being compared to patients in identical rooms who viewed a brick wall (Berry, et al, 2004).

Rachel Kaplan (2001) looked at the psychological restorative benefits of a view from home, finding that windows provide opportunities for prospect-refuge—i.e. a place for viewers to see out (prospect) while at the same time offering a safe place to be (refuge). The penetration of sunlight from windows was related to increased satisfaction and well being, although the study did not determine if the view content affected the outcomes.

Recent attention to the benefits of sunlight has been somewhat over-shadowed by contemporary eagerness to avoid sunlight as a way to limit our chances of skin cancer.
But the Harvard Health Letter (2004) suggests 10 to 15 minutes a day twice a week provides vitamin D synthesis that can provide relief for seasonal affective disorder (depression caused by lack of sunlight), help reset a person’s internal clock thus promoting good night time sleep and has been found to reduce agitation in residents with dementia. The experience of nursing staff at one nursing facility found that several hours of outdoor activity in the morning greatly reduced unwanted behaviors later in the day and has helped cut its use of psychotropic medications by 40 percent (Gold, 2004).

In their book Healing Gardens: Therapeutic Benefits and Design Recommendations, Clare Cooper-Marcus and Marni Barnes (1999) offer the following design principles for providing outdoor spaces that focus on improving the overall sense of wellness for the users of that space. The principles include:

1) **A variety of Spaces:** Spaces for individual, group and family use that support solitary use or congregate use. Create spaces that are easy to access and provide furniture that is supportive of the population using the space.

2) **Prevalence of Natural Green Material:** Reduce the amount of concrete and other hard surfaces.

3) **Encourage Exercise:** Provide a hard surface wandering path at least 3’ wide.
   Example: create a prayer trail with seating along the way.

4) **Provide Positive Distractions:** Examples include a waterfall or small fishpond.
   Other examples offer opportunity for residents to become involved by providing a raised garden platform or push lawnmowers.

5) **Minimize Intrusions:** Consider placement of outdoor space away from parking lots but yet in a location that is not void of life activity.

6) **Minimize Ambiguity:** Place clearly identifiable features and furniture in the outdoor space for ease of use.

**Methods**

**Instrument Development**

The instruments we used to assess physical environments were developed as part of an overall study of quality of life in nursing homes. One set of study objectives required that we develop and test measures of quality of life as resident outcomes. The
resultant measures tap eleven quality of life domains: comfort, security, functional competence, relationships, meaningful activity, enjoyment, individuality, dignity, autonomy, privacy, and spiritual well-being. Each of these outcomes is potentially fostered or impeded by conditions of the physical environment (Kane, 2003; Kane et al, 2003).

To measure physical environments directly, we developed tools that allowed us to assess the unique environments of all residents, beginning with their own dedicated spaces (room and bath), the spaces they share with others on the nursing unit, and the spaces they share with all residents in the facility. For our purposes, we defined environment as “the fixed, semi-fixed, and unfixed components of the physical structure, the furnishings, fixtures, décor, and equipment used.” We recognized the diversity of NF residents and the differing preferences and requirements residents might have for their environments, and that some residents would be limited to their near environment because of their frailty. With those goals in mind, we generated a pool of environmental items conceptually associated with resident quality of life (QOL), which pertained to 3 environmental levels: resident room, nursing unit, and facility. We excluded “backstage” areas such as laundry, staff offices, mechanical rooms and any other spaces that residents did not use in their daily life.

All items were observable and clearly defined, and noted for their presence or absence. The 112- item room and bathroom checklist was applied to each resident in our sample. In addition to outdoor spaces, the nursing unit tool, which included 140 items, looked at nursing stations, corridors, common tub/shower room, lounge and dining spaces, noise, distances and light levels. The goal of assessing outdoor spaces at the unit
level was to determine if there was outdoor access directly off the unit and to assess the amenities in that outdoor space. The 134-item facility level tool included all other outdoor and indoor-shared spaces, potentially used by residents, family members, and visitors that were not assessed at the unit level. Any outdoor spaces that were not captured during the unit level assessment were captured at the facility level. Generally, facility level outdoor spaces and amenities were geared towards use by staff, family members and residents who were capable of independently leaving their units.

**Field Work**

**Sample.** The environmental assessment checklists were applied in 1999-2000 during the first wave of a national CMS study to develop Quality of Life measures in nursing facilities. The sampling decisions were designed to achieve a sample evenly divided by urban and rural location and size of facility (Kane et al., 2003). Eight facilities were randomly selected in each of 5 states (CA, FL, MN, NJ, and NY). In each state in the study, one home was randomly selected as an exemplar from those named in a telephone query of experts whom were asked to name a facility in their state with an unusually high QOL. Up to two facilities were randomly selected based on 70% or more private rooms. The remaining facilities were slotted by size and rural/urban status. This sampling procedure resulted in a sample that varied greatly in size, privacy, and physical amenities. Thus, the sample for each state should have included several nursing homes likely to offer better-than-standard environments with the majority of homes reflecting the typical standard in the geographic area.

The starting point for the assessment of physical environments was the 1988 individual residents randomly selected for the study. At the individual level, the sample
was stratified to be as evenly divided as possible between those functioning at higher and lower cognitive levels (using the MDS). The resident sample was further divided among up to 5 units in each facility, and residents in private rooms were over sampled up to 20% of the sample when that was possible. The average number of units per facility was 3 and any dementia SCU or Medicare rehabilitation units were automatically chosen with the other units chosen by random. The procedure yielded 131 distinct nursing unit environments with 21 of those units designated as SCU dementia units.

Data Collection. The room and bath data were collected by 40 research interviewers who also interviewed each resident or their family proxy, interviewed a frontline staff member about each resident, and performed a variety of observational studies. The first author visited all 40 facilities and completed the multiple unit checklists and the overall facility checklists. During that visit, she also conducted a qualitative appraisal of each facility to identify innovative designs as well as noting areas that could be improved upon. After each visit, detailed field notes about each facility were transcribed into a descriptive narrative. The study design also included lengthy interviews with the administrator, the director of nursing, the director of social work, and the director of activities in each facility as part of the search for facility practices that might prove to predict better resident quality of life. We drew on those interviews as well to derive information about policies and practices regarding the use of outdoor spaces.

Results

Description of Sample.

In our sample, 18 facilities were 1 story, 7 facilities had 2 stories, another 7 had 3 stories, 7 had 4 stories and 1 facility was 6 stories high. Of the 131 nursing units, 21
were designated as special care units. Of those 21 SCU units, 13 (61.9%) have direct access from the unit to outdoor space, 10 of which were located on the ground floor and the other 3 on a second story. Most often the direct access was locked and residents were only able to use the outdoor space when escorted by a staff or family member or on the rare occasion when outdoor activities were scheduled.

Despite the over sampling for facilities with private rooms and residents in private rooms, 1152 (58%) of the 1988 residents were in two-bedded rooms and 256 (13%) were in rooms with 3 or more beds. The room and bath assessments showed that 52% (734) of residents in shared rooms had a view of the outdoors from their bed or their bedside chairs without looking across a roommate’s bed. Double-bedded rooms were typically organized so that only one resident had access to the window space. The exception were found in 2 recently renovated facilities where all double rooms were divided with floor-to-ceiling partial walls and each resident had their own window; these semi-private rooms were sufficiently private to permit residents to use completely separate window treatments in their portion of the room. Another issue with windows that we did not set out to measure routinely but that we observed during the visit concerned the height and size of the glass panes. One six-story facility comprised entirely of private rooms organized those rooms around the periphery of the building (20 per floor) and each room had a wide almost floor-to-ceiling window that occupied most of the wall. In contrast, most other facilities utilized higher and smaller windows, cutting off the view from wheelchairs and various locations in the room.

Residents were surveyed as to how often they get outdoors and if that amount is the amount they prefer. Of 1068 residents who were able to complete the interview and
for whom we could construct scales, 334 (32.2%) responded they went outdoors less than once a month, 143 residents (13.4%) responded being outdoors less than once a week, 179 residents (16.8%) about once a week, 169 residents (15.8%) several times a week and 233 residents (21.8%) said they went outdoors every day. When asked if that amount was too much, not enough, or the right amount 692 residents (61%) said it was the right amount; 39% of the residents said it was not the right amount.

Families were surveyed as to how often their relative gets outdoors and if that amount is the proper amount. Of 1780 family responses, 769 families (43.3%) responded their relative gets out as much as he/she wants, only 6 families (.3%) responded that amount was too much, 618 families (34.7%) responded the amount was not enough and 387 families (21.7%) responded they did not know.

Staff members were surveyed on how often residents participated in several categories of planned activities. Table 1 shows the frequency of resident participation in three types of planned activities: exercise, social, and outdoors activities. The finding show variation between participation in the activities and especially very limited participation in planned outdoors activities. For 1988 residents, responses showed residents participated daily in planned exercise activities at a higher rate than either the social or outdoor activities. Seven hundred and seventy seven residents (39.1%) participated in planned exercise activities daily, 334 residents (16.8%) participated less than daily, 221 residents (11.1%) participated about weekly, 135 residents (06.8%) less than once a week, 86 residents (04.3%) participated less than once a month and 435 residents or (21.9%) of the sample did not participate at all. For planned social activities, results for 1988 residents showed that 612 residents (30.8%) participated daily, 412
residents (20.7%) participated less than daily, 290 residents (14.6%) participated weekly, 223 residents (11.2%) participated less than once a week, 109 residents (05.5%) participated less than once a month and 342 residents or (17.2%) did not participate at all in planned social activities. When asked about the amount the resident participated in planned outdoor activities the responses showed considerably less participation. Of the 1988 resident responses, 956 residents (48.1%) did not participate in planned outdoor activities at all, 324 residents (16.3%) participated less that once a month, 334 residents (16.8%) participated less than once a week, 177 residents (08.9%) participated about weekly, 105 residents (05.3%) participated less than daily and only 92 residents (04.6%) participated on a daily basis. These numbers show very low involvement in outdoor activities by the residents in our sample.

(Insert Table 1 about here.)

Outdoor spaces per beds in the facility ranged from one outdoor space for 200 residents to three outdoor spaces for 55 residents. Table 2 shows the number of outdoor spaces by state, number of beds and number of units. New Jersey and California were tied for the most outdoor space, followed by Minnesota, New York, and Florida in last place. In this sample, climate did not determine the amount of outdoors spaces per bed, but the number of stories in the facility did.

(Insert table 2 about here.)

We developed an Outdoor Amenities Index including10 items with the potential to expand socialization and stimulation opportunities outdoors for residents, families and staff. Table 3 summarizes the outdoor amenities found at the unit and facility level. Out of 131 units, only 58 units (44.3%) had direct access to an outdoor environment. Thus,
residents on 73 units (55.7%) had no access to the items featured on the outdoor amenities index without leaving their immediate unit. Even in those units with outdoor access, amenities varied between facilities and often access remained locked throughout the day. In 6 units (10.3%), there was no seating available, and when seating was available it was not covered 24.1% of the time. The outdoor space was secured or enclosed 75.9% of the time and an outdoor hard surface walking path at least 3 feet wide was available 58.6% of the time. (Areas were determined to be secure at unit or facility levels if they were enclosed either from the location of an inside courtyard or the area was fenced.)

Facility level amenities were assessed separately from those found at the unit level. Thirty-nine of the 40 facilities (97.5%) assessed had at least one outdoor space that included some amenities. Approximately, two-thirds (65%) had a secured outdoor area, 87.5% had a hard surface walking path and 82.5% of the facilities provided a covered seating area.

We were also interested in the extent to which the facilities facilitated the ability of residents to wait outdoors for rides from family members, or to sit comfortably immediately inside the facility, an issue in both cold winter climates and sunny humid climates. Very few facilities provided an outside area at the entrance to the facility where residents could sit and watch the activity of people coming and going. When the space was available, it was a popular place with the residents, often preferred to an inner courtyard area.

(Insert table 3 about here.)
Following the environmental assessment of each facility, descriptive narratives were written for each facility that described extraordinarily varied facilities and 131 varying units within them – some with an abundance of enrichments and some with substantial environmental deficits. Even an abundance of outdoor spaces did not guarantee that the spaces were supportive of residents using them independently. Generally, those facilities with limited outdoor spaces were large facilities both in the number of beds and number of stories high.

Providing outdoor spaces connected to special care units provide both a challenge and an opportunity. The challenge is to create a secure outdoor space that doesn’t provide a view beyond the space because often residents will make an effort to elope beyond the parameters of the space. A very common mistake is to fence the area with a see-through material such as metal chain link. In one Florida SCU, a resident placed a table on top of a chair and simple climbed over the chain link fence. No effort had been made to camouflage the fence with plantings or vines so the resident, who had lived in the area all of her life, recognized familiar landmarks beyond the fence and successfully left the confines of the outdoor space. Unfortunately, the response of the administrator was to lock the access to this space rather than take steps to camouflage the fence.

In contrast, two excellent examples of outdoor spaces were found on SCU units, one in Florida and the other in Minnesota. An outdoor butterfly garden was created in a central courtyard area on the second floor between two nursing units, one SCU and one skilled, in a Florida facility. Automatic doors facilitated access to this enchanted space directly from both units. A simple code was required for those returning to the skilled unit while the door automatically opened for the resident returning to the SCU unit.
Because there were walls on all four sides fencing was not necessary. Abundant plantings, flowers, trees, birdbaths, and fountains created an idyllic setting where butterflies flourished and families and residents visited.

A SCU unit in a rural Minnesota facility maximized the value of nature for the residents with good design of indoor and outdoor spaces. Large “windows to the world” with windowsills were filled with African violets that provided views of the ever-changing Minnesota weather along with vista views of the fields and river beyond. A secure outdoor patio was located directly off of the unit. Because this is a rural community and most of the residents lived on farms previous to coming to the home, an effort was made to create outdoor space that was familiar to the residents and space that was not just for passive enjoyment but space that could be used as an activity. A resident made good use of a push lawnmower cutting the grass on a daily basis and the cucumbers and tomatoes, when ripe, became salads using recipes that somehow the residents had not forgotten. Each of the twenty residents on the unit had a sun hat that was conveniently located on the wall adjacent to the door leading to the patio. The patio area was just the perfect size for a small garden, walkways, patches of grass, a bright umbrella table and a glider where three friends sat together on a daily basis. Residents were encouraged to use this space independently.

Time and again, we assessed outdoor spaces that were plentiful in amenities but were not used by residents mainly because of the location of that outdoor space. A three-story New York facility that was attached to a hospital recognized the need for outdoor space and created a very attractive solarium-outdoor patio combination. This facility was unique in our sample in that it did not have a central reception area, but rather,
administrative offices were located immediately inside the entrance. Offices, therapy rooms, a large activity room, a vigil room – co-occupied with staff computers – and the solarium/patio area were all located on the first floor with resident rooms located on the second and third floors. The new solarium room was located at the very end of the first floor. It is a lovely room with floor to ceiling windows and several skylights. Doors from the space lead directly to an outside area complete with lovely plantings and patio furniture. Staff was very proud of this new area and it is a lovely space but residents do not use it because of its distant proximity to resident rooms. The administrator admitted that the location is very problematic and is making efforts to better utilize the space for resident activities.

Unfortunately this scenario was repeated often in our assessment of the 40 facilities. Beautiful outdoor spaces were built, often with community support, but it was unrealistic to think that residents could make use of the spaces, either independently because of their distance from resident rooms or with the assistance of staff because of the time required to assist residents to the space. One facility built a lovely large chalet type screen porch 500 feet from the facility. Access was off the activity room, where previewing the residents was possible, but there was no hard surface path leading to the porch which greatly reduced access for residents in wheel chairs. Staff at another county facility with offices on the first floor and resident rooms on the second and third floor was ecstatic over the construction of an outdoor patio space. This facility was in a rural area with a large amount of acreage but the choice was made to construct the patio directly adjacent to the parking lot. Efforts were made to camouflage the parked cars with plantings but soon those plantings died from car exhaust. The patio was a great distance
from the main entrance and no hard surface path led to the patio. Consequently, staff mainly utilized the space during breaks.

Central patio areas often went unused for a variety of reasons. In some, access was locked, in others the space was small and close to resident room windows so residents felt as if they were invading the privacy of others, but mainly residents reported the space as “being boring”. There were some exceptions to this such as the facility that enlisted a resident to open the door and greet all those that entered the outdoor space. The outdoor space became a place to socialize and to watch the rabbits in the “rabbit den”.

In contrast, the most used outdoor spaces and indoor window spaces were those that either had a view of or were located in a setting of real life activity. Residents expressed how they enjoyed sitting outside the main entrance and watching the activity. Efforts should be made to accommodate this activity in a safe way. For those residents who fear leaving the security of the building, views from windows provided an alternative. During a renovation process, one facility designed a lounge adjacent to the entry with floor to ceiling windows. Chairs were strategically placed in front of the windows and residents waved to staff and visitors as they left and greeted those arriving. A special feature of the windows was that they overlooked a garden where rabbits frolicked on a regular basis. As far as usage of space, this lounge area was used constantly throughout the day.

An example of a view from a window that became an activity for residents, visitors, and staff was located in a facility in a small rural New York town. The people in the town had great school spirit and were active spectators of athletic functions. The facility was 5 stories high and had previously been a county independent living setting
The qualitative component of the assessment and the programmatic interviews yielded some positive examples on the way facilities promoted or discouraged getting residents out of doors. For example, one urban facility reached out to a community garden association and a youth group to create a model urban garden that could be used by residents and other neighbors on the cul-de-sac where the facility was located. Another facility utilized a fleet of donated cars to take residents for rides around campus. A third facility used golf carts to take residents on rides through the lovely residential area where the facility was located, the golf carts having the added advantage of offering fresh air and opportunity to interact with neighbors. In a facility characterized by rather crowded indoor spaces with largely 4-bedded rooms, the activities director expressed his philosophy favoring normal activity such as building projects and painting projects in the very pleasant outdoor space. This enabled residents to participate or watch as he made repairs and undertook practical projects of interest to many. That particular facility, not coincidentally, sported a scarecrow in its garden.
Discussion

We have described physical environments where outdoor spaces and amenities were available but rarely used in contrast to those that were well-used, and places where windows to the world provided views of real life activities and those where little of interest was to be seen. Simply put, residents cannot use outdoor space if it is not available to them or the distance to traverse is too long for them to use outdoor space independently and staff is not available to assist them. This was often the case in multistoried buildings or when there is not direct access off of the nursing unit. Our impression is one of many missed opportunities—for example, places where plantings and bird feeders could have been established outside windows at the end of the corridors, and places where paved walkways or seating were needed.

Our study verified the paucity of opportunity for individual residents to be outdoors and their desire to do so. For almost 50% of the 1988 residents in our sample, a staff member who knew them well said they never were included in outdoor programming. Furthermore in the views of residents and of their family members interviewed for the quality of life study, close to 40% felt that they did not get outside as much as they wanted; these findings are even more compelling because of the propensity of nursing homes residents and family members who refrain from criticisms and complaints in discussions of their satisfaction.

Certainly some facilities were located in areas where the outdoors was more difficult to utilize than others. A facility on an urban strip in San Jose comes to mind: fast food joints were located on either side; a six-lane road was located in front, and a crowded parking lot in back. A virtue could be made of the interest that would be
generated by this commercial strip and programs could be developed to accompany residents outdoors, but the area was not conducive to safe outdoor life for the most disabled of the residents. In contrast were a number of facilities, including most of the county homes in the sample, where the location would permit numerous inviting spaces at relatively low costs but where the actual creation of safe outdoor places on the periphery of the buildings was minimal or nonexistent.

The checklist approach provided the bare bones of the availability of outdoor spaces, which could then be the building blocks for programmatic efforts. The actual extent to which and way the spaces are used depends on facility policies (including policies on permitting residents to be outside on their own), and facility practices such as having outdoor barbecues, encouraging family to go outside with residents on the grounds and making sure that seating and tables are clean, dry, and in good repair.

Other than fire egress regulations, federal regulations do not take into consideration outdoor spaces in the standards or the nursing home survey process. This seems rather peculiar because based on the intent and goals of the federal regulations that apply to well-being of nursing home residents; one might expect encouragement of outdoor access or even minimal requirements for outdoor space in nursing facilities. When writing about the regulations, Karen Schoeneman, (2004) a CMS employee who trains surveyors in the survey process, noted:

These regulations say that residents of nursing homes have the right to choices over their schedules, activities, and anything that is important to them (F242); that the environment should accommodate their needs and preferences (F246); that they can refuse treatment (F155); and that they should be helped by the home to attain their optimal quality of life (F240) and quality of care (F309). (p. 34)
The reality, however, is that even if spending time outdoors is a strong preference of an individual resident there are no regulations that require that outdoor space be provided by the nursing facility. At the state level, if regulations pertaining to the outdoor environment are in place, most often they apply to special care dementia units and emphasize the safety of the grounds.

In our view outdoor space is an important part of the overall physical environment of any nursing home, and, therefore, outdoor spaces should be assessed for their availability, accessibility, functionality, aesthetic interest, and conduciveness to privacy and to social relationships. Our glimpse of 40 nursing homes suggested both promising approaches and that much room for improvement remains. We emphasize that viable outdoor space will depend not only on the physical environment itself but on a variety of programmatic and policy choices relating to the use of staff and volunteers and the resolution of the ever-present conflict between resident preferences and perceptions of responsibility for resident safety.
Table 1. Resident Participation in Planned Exercise, Social and Outdoor Activities

<table>
<thead>
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<th>% Resident participation in:</th>
<th>% Planned Exercise Activity</th>
<th>% Planned Social Activity</th>
<th>% Planned Outdoor Activity</th>
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<td>Frequency</td>
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<td>30.8</td>
<td>04.6</td>
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<td>20.7</td>
<td>05.3</td>
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<td>11.1</td>
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<td>08.9</td>
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</tbody>
</table>

Source: Staff interviews tailored to each of the 1988 residents in the study. For less than 2% of subjects for each item, the staff member replied that they “did not know.” Those responses are distributed across the categories in the same frequency as the actual.

Table 2. Summary of Number of Outdoor Spaces by State, Number of Beds and Number of Units

<table>
<thead>
<tr>
<th>State Facility Located In</th>
<th>Number of Beds</th>
<th>Number of Units</th>
<th>Number of Facility Outdoor Spaces</th>
<th>Number of Unit Outdoor Spaces</th>
<th>Total Number of Outdoor Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>MN Total</td>
<td>1033</td>
<td>30</td>
<td>8</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>FL Total</td>
<td>1194</td>
<td>30</td>
<td>7</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>CA Total</td>
<td>818</td>
<td>22</td>
<td>8</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>NY Total</td>
<td>888</td>
<td>27</td>
<td>8</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>NJ Total</td>
<td>1052</td>
<td>22</td>
<td>8</td>
<td>16</td>
<td>24</td>
</tr>
</tbody>
</table>
### Table 3. Outdoor Amenities at Facility and Unit Level

<table>
<thead>
<tr>
<th>Outdoor Features at Unit Level (n=131)</th>
<th>%</th>
<th>Outdoor features at Facility Level (n=40)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct access to outdoor area from unit</td>
<td>44.3</td>
<td>Outdoor patio area</td>
<td>97.5</td>
</tr>
<tr>
<td>Outdoor seating</td>
<td>39.7</td>
<td>Flower garden</td>
<td>97.5</td>
</tr>
<tr>
<td>Outdoor table</td>
<td>35.9</td>
<td>Outdoor seating</td>
<td>95.0</td>
</tr>
<tr>
<td>Covered seating</td>
<td>33.6</td>
<td>Outdoor table</td>
<td>92.5</td>
</tr>
<tr>
<td>Covered patio area</td>
<td>33.6</td>
<td>Hard surface walking path at least 3’</td>
<td>87.5</td>
</tr>
<tr>
<td>Flower garden</td>
<td>33.6</td>
<td>Equipment for recreational activities</td>
<td>82.5</td>
</tr>
<tr>
<td>Outdoor area secured</td>
<td>33.6</td>
<td>Covered seating</td>
<td>82.5</td>
</tr>
<tr>
<td>Covered table</td>
<td>32.1</td>
<td>Covered patio area</td>
<td>82.5</td>
</tr>
<tr>
<td>Hard surface walking path at least 3’</td>
<td>26.0</td>
<td>Secured outdoor area</td>
<td>65.0</td>
</tr>
<tr>
<td>Raised garden planter</td>
<td>20.6</td>
<td>Raised garden planters</td>
<td>52.5</td>
</tr>
</tbody>
</table>

Unit Mean 3.33, Standard deviation 4.15

Facility Mean 8.2, Standard deviation 1.87
References


