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ISSUE BRIEFS

RESIDENTIAL HEALTHCARE FACILITIES

By

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Residential Health Care Workgroup

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The Hulda B. & Maurice L. Rothschild Foundation

The Rothschild Foundation is a national private philanthropy with a primary interest in improving the quality of life for elders around the country, in long-term care communitiies. Currently, the Foundation is supporting the development of alternative long-term care programs and built environment designs, as well as regulatory change.

The Center for Health Design

THE CENTER FOR HEALTH DESIGN®

The Center for Health Design (CHD) is a nonprofit organization that engages and supports professionals and organizations in the healthcare, construction, and design industry to improve the quality of healthcare facilities and create new environments for healthy aging. CHD's mission is to transform healthcare environments for a healthier, safer world through design research, education, and advocacy.

Foreword

**Residential Health Care Facilities
2014 Guidelines Revision Project**

The *Guidelines for Design and Construction of Health Care Facilities* is used as code in over 40 states by facilities, designers, and authorities having jurisdiction for the design and construction of new and renovated health care facilities across the nation. The Facility Guidelines Institute (FGI) is responsible for the *Guidelines,* which are updated on a 4-year cycle by a group of volunteers, — the Health Guidelines Revision Committee (HGRC). The committee is made up of experts from all sectors of the healthcare industry: doctors, nurses, engineers, architects, designers, facility managers, health care systems, care providers, etc. For further information and/or to view the *Guidelines*, go to the Facility Guidelines Institute's website at www.fgiguidelines.org.

The 2010 *Guidelines for Design and Construction of Health Care Facilities* has launched into the 2014 cycle for revisions. In preparation of the 2014 revision cycle, The Center for Health Design and the Rothschild Foundation teamed together to identify areas for improvement within the Residential Health Care Facility portion of the *Guidelines*, specifically related to nursing homes. This resulted in a working meeting of long term care experts that came together to work on proposals for the 2014 *Guidelines* on topics such as culture change, resident-centered care, alternative care models, utilization of mobility devices, incorporation of wellness centers and programming, improvements to resident rooms, and access to nature and outdoor spaces by residents. The work completed by this group has been developed into formal proposals that have been submitted through the FGI website for the 2014 *Guidelines.*

Concurrently, the FGI and the Steering Committee of the 2014 *Guidelines* revision process agreed that a separate volume for residential health care facilities is needed within the marketplace to support not only the positive culture change that has been occurring within the long term care field, but to also assist with updating guidelines currently utilized within different states. This has resulted in the proposal of the *Guidelines for Design and Construction of Long Term Residential Health, Care, Support and Related Facilities* as a separate standalone publication.

The public proposal process closed on October 31, 2011, and the HGRC voted on final proposals in the end of January 2012. A public comment period on all the proposals that have been made for both Volume 1 (acute care and ambulatory care facilities) and Volume 2 (residential health, care, and support facilities) will begin in May, 2012 through mid-December, 2012. Voting on the comments is slated for 2013 with the final publication completed in 2014.

Many thanks are extended to the following dedicated volunteers who have provided many hours in preparing and filling in templates for the formal proposals to be completed and their generous time in writing the following issue briefs that review the current 2010 *Guidelines* language, identify the needs for improvements, the provision of recommendations, and the supportive research and references required to submit a proposal to the HGRC for consideration.

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I. Access to Nature

Facilitated and edited by Jane Rohde, AIA, FIIDA, ACHA, AAHID, LEED AP
Workgroup participants: *Jerry Smith, Jeanette Perlman, Tom Jung, Naomi Sachs*

Evidence based research, as well as anecdotal information has revealed that access to nature and natural light has a positive influence on the well-being of individuals. An added dimension to the focus on natural light is that of space that is either specifically adjacent to the facility or an interior space that has natural elements or designed components of nature, such as atriums, and is reminiscent of the outdoors.

Since the 2010 *Guidelines for Design and Construction of Health Care Facilities* provides requirements for different types of health care facilities, this workgroup has focused on each of the residential health, care, and support facility types. In support of proposals for the 2014 revision cycle, the following comments are provided by the workgoup.

- It has been demonstrated that the longer individuals remain inside of buildings, the less likely they are to venture outside. Their world becomes closed in and a fear of the outside represents the fear of the unknown.

- Evidence based outcomes demonstrate that older individuals who stay indoors develop depression and/or depression that may be a co-morbidity of a physical disease/diagnosis, worsening their overall wellness.

- Older individuals who remain in a tertiary care facility for 3 days or more decompensate or decrease their cognitive abilities. This is shown in behaviors and in physical changes.

- Contact with nature, both wild and designed and passive and active, results in improved health outcomes through stress reduction, sensory stimulation, exercise, exposure to natural light, and increased opportunities for social connection.

- Anecdotal information correlates outdoor experiences with playgrounds and passive and active gardens that result in improved behaviors and communication skills for children, adults, and older adults.

- Anecdotally, there is more effective communication among families that visit patients and residents when outdoor spaces are available for utilization. The outdoor environment creates a sense of harmony, therefore influencing how people speak with each other.

- Outcomes are documented on the positive effects of daylight, especially for people with depression and dementia related to re-setting circadian rhythms.

- There is both anecdotal and evidence based information on the positive role that visual and physical access to nature has on decreasing stress, increasing alertness, and reducing turnover in residential health care staff.

There are opportunities for outdoor space in tertiary care facilities, independent living settings, nursing home/care facilities, assisted living facilities, specialty care such as Alzheimer's, dementia, mental health facilities, children's facilities, hospice, and adult day care settings in urban, suburban, and rural settings. Each of the facilities in the different locations presents challenges; however, the challenges offer opportunities for creative solutions resulting in positive outcomes.

Tertiary care facilities in the urban setting may be designed with interior courtyards, exterior gardens, and/or rooftop decks with planters. Most urban areas today require a setback for new buildings, and this provides an opportunity for gardens or green space. It is recognized that more tertiary care facilities are concerned about interior gardens due to infection control and allergies issues. Research in this area is ongoing and not conclusive, therefore, not included herein at this time.

Independent living settings and assisted living facilities focus on both health and hospitality. For urban settings, a courtyard or roof garden is recommended. For the suburban and rural setting, outdoor interactive gardens are recommended and often include walking paths. Walking paths could also have par course equipment to be used without assistance by the residents. There should also be opportunities for private settings but not outside of the immediate view of any staff in assisted living facilities; should a resident fall or need other types of medical assistance, it is recommended that staff sight lines be maintained.

A significant body of research highlights the physical and emotional benefits of gardening and other horticultural activity. Residents who like to garden can benefit

by having raised planters with flowers and vegetables to tend. This becomes a purpose-driven activity and a responsibility that maintains well-being. A greenhouse can extend the seasons and provide space for storage of tools, soil, watering cans, etc. Ideally, a horticultural therapy program would provide opportunities for guided people-plant interaction.

Since not all residents enjoy gardening, passive gardens and walking paths are important for the mental and physical well-being of residents, since everyone can enjoy passive interaction with nature, especially if that nature can also at least be viewed from indoors. As individuals grow older, not using the mind routinely and not exercising the limbs frequently leads to mental health challenges and physical problems. Not using the body also affects digestion, and often it is observed that residents who sit constantly experience digestive problems. Purpose-designed outdoor spaces have been shown to foster social connection and support, reducing the sense of isolation and loneliness often present in residents in extended care environments.

Nursing homes are one of the most challenging types of facilities in many respects. These are facilities where the oldest and/or the frailest with the highest degree of nursing care requirements are found. However, it is known that a patio with plantings or a passive garden, either indoors or outside, adds to the mental well-being of the individual. Providing interior gardens and outdoor gardens/scenery with year-round interest that can be viewed from indoors affords even the frailest residents the ability to maintain a connection with nature and the outside world. Too often, residents in nursing care facilities never see the outside, and their world becomes smaller and smaller.

Evidence shows a correlation between confinement and depression, providing the incentive to add more outdoor space that can be utilized regularly. This requires easy accessibility without the need of staff assistance. The two most significant barriers to people's—especially the elderly—use of the outdoors are at the entrance to the outdoor space: doors and thresholds that are difficult to navigate (both weight of doors, as well as hardware operation, and smooth transitions between indoor and outdoor surfaces at the threshold). It is, therefore, critical that projects provide access to outdoor space as an initial site and building design consideration during the programming phase. Therefore, the proposals completed are intended to be located within the new *Guidelines for Design and Construction of Residential Health, Care,*

Support, and Related Facilities volume in the Environment of Care section as main body text requirements and appendix information for access to nature for all types of residential facilities.

Individuals with Alzheimer's and other cognitive challenges require secure environments that are safe and nurturing. This could be within a long term care setting or an adult day care setting. Many residents with Alzheimer's disease develop a tendency to wander. They usually have a destination in mind; however they often cannot identify the destination and/or it is unrealistic. Therefore, if a resident with Alzheimer's disease does not have a place to walk and still be secure, he/she can become very agitated and want to get out. He/she feels imprisoned and can become angry and combative with staff, family, and other residents.

The suggested outdoor spaces should include passive gardens, interactive raised planters for purpose-driven gardening, and walking paths that can facilitate the wandering need but still remain safe in a circuitous design. Enough seating must be provided to allow for frequent places to rest, and seating must be easy to get in and out of without the risk of falling. Areas outdoors must be within the observation of staff and yet open to residents to use by themselves. For residents with dementia that are living in urban settings where outdoor spaces may not be possible, the same type of outdoor gardens and walking paths can be brought internally into the planning of the physical setting. Spatial requirements must be considered carefully within the programming process and must include access to natural light.

Residents with Alzheimer's react to lightness and darkness and space. Natural light helps alleviate symptoms of depression and dementia, but too much bright light can be disruptive. In residents' rooms, light should be more carefully moderated, but in public areas, access to natural light is paramount. However, direct sunlight and glare should be avoided, especially for older adults. Access to daylighting should be part of all residential facility planning and design.

Pediatric facilities for tertiary care and for long term care must also include outdoor space with special considerations. Play and exercise are vital for children's physical, cognitive, and emotional development. Research indicates that contact with nature and nature-based learning and play can further facilitate such positive development. In all settings it is important to establish age-appropriate playgrounds or play

equipment. When outdoor space adjacent to a facility is lacking, a playground may work if it is within reasonable proximity to the facility.

However, if that is not feasible, then creating indoor play space is preferable, as long as it is within the age appropriate designations. Children react even more than adults do when they cannot exercise their bodies, blow off steam, and use their imagination to enhance their minds. Furthermore, the interaction with other children will have a positive influence on their well-being. No matter how complicated a child's illness may be they are still experiencing the changes that take place as they are developing.

Outdoor space for long-term pediatric facilities must include playground equipment that is age appropriate, walking paths with nontoxic plantings, and provision of places for unstructured play. This benefits not only the residents, but also family members and siblings.

The outdoor spaces for hospice facilities should be family oriented places where families of residents can take their respective family member outdoors conveniently, safely, and with dignity. The outdoor spaces are also helpful to families that need to cope with the loss of a loved one. Therefore, the most effective design would consist of healing gardens that have patios with moveable tables and chairs. Water features within the garden are soothing and the ambiance created will support family engagement in the process of accepting a death and grieving.

For all facilities, importance of access to nature by staff should not be underestimated. Staff turnover, particularly among nurses, is a serious and ongoing problem. Anecdotal research has indicated a lower rate of staff turnover in facilities with access to nature. Evidence based research has shown that views of nature can reduce stress and improve alertness, both of which directly affect resident safety and satisfaction. Outdoor spaces allow staff a respite from the extreme stress and pressure of caring for residents and dealing with family members and other visitors. They can also facilitate good exercise habits, such as walking paths near or around a facility.

Additionally, for all facilities, best practices should consider the following:

- Shade and protection from sunlight and glare should be provided. Note that if young trees are planted, additional or temporary architectural shade structures

(such as arbors, pergolas, shade sails, gazebos) should be provided. Also note the visual phenomenon of "cliffing" in older adults: avoid shade structures such as unplanted or unscreened arbors that have strong contrasting light and dark lines on the ground plane creating a striped effect.

- Safe walking surfaces and paving that has reduced glare (stained concrete is often ideal for older adults).

- Signage and cues, both in and outside of building, is important for wayfinding and to make people aware that there is accessible outdoor space.

- Visual access to the outdoors—whether of designed gardens within the facility or nature outside—should be provided whenever possible, with the caveat of being conscious of resident privacy (actual and perceived).

- Provision of residents' physical access to the outdoors, even within a secured environment as long as staff sight lines are maintained.

In summary, regardless of the type of facility and the region or location, there is enough evidence and anecdotal information to support the creation of outdoor space and access to nature that is interactive and/or passive. The careful design and construction of outdoor space (even interior places of respite) is just as important for the health and well-being of a resident as are the medical treatment and interventions provided within residential facilities. The expansion of the Environment of Care section to include access to nature, outdoor environments, and access to daylighting have all been included within proposals for the 2014 *Guidelines for Design and Construction of Residential Health, Care, Support, and Related Facilities.*

II. Culture Change

Facilitated and edited by Jane Rohde, AIA, FIIDA, ACHA, AAHID, LEED AP
Workgroup participants: *Kimberly Nelson Montague, Cathy Lieblich, Larry Funk, Gaius Nelson, Karla Gustafson*

The Nursing Home Reform Act of 1987 established quality standards for nursing homes nationwide that emphasized the importance of quality of life and residents' rights. Quality of life is perceived by residents partly as a product of their health, social supports, and environment and is related to their sense of well-being, level of satisfaction with life, self-worth, and self- esteem. Policies, practices, and operations of a facility have a direct impact on resident's' quality of life; while the care model has an indirect effect—through the approach of the inclusion of family and community in daily life (Kane, 2003).

Culture change began as a movement to change long term care from an institutional model of care toward one that is residential in scale and person-centered. The culture change movement began promoting programs in an effort to deinstitutionalize long term care and is rapidly being adopted into every level of the continuum of care. The continuum of care includes independent living settings, adult day (health) care, assisted living facilities, nursing homes, and hospice settings. Over the past two decades state regulators, advocacy groups, and providers have introduced the concepts of culture change into the continuum of care—including but not limited to The Eden Alternative®, Wellspring™, Planetree©, The Green House Project®, and other types of small house, household, and neighborhood models.

It is critical to understand that culture change is driven by organizational philosophy that reevaluates roles of all staff, a resident-centered care model approach, and operational functions, focusing on positive outcomes of residents vs. simply changing the physical setting. The designed environment *supports* the organization, resident, staff, and operations to allow for positive culture change to occur.

Culture change has not been adequately addressed in the 2010 *Guidelines for Design and Construction of Health Care Facilities.* Information about culture change is found in two locations in the 2010 *Guidelines*:

1. Appendix (A4.2-1.2.2.2), which briefly states that, "Culture change in long term care should address movement away from an institutional model toward one that is residential in scale, has homelike amenities, facilities wayfinding and allows residents and direct care workers to express choice in meaningful ways."

2. Appendix (A4.2-2.2.3.3), which states, "Family-centered care models and other forms of culture change are often implemented in pediatric long-term care facilities."

As a result of reviewing the 2010 *Guidelines*, culture change needed to be defined and included within the continuum of care guidelines. Through further discussion, the Environment of Care section has been recommended as the appropriate location for information on culture change, because the discussion and direction of a project starts in the programming process prior to the actual physical design of all long term care settings. In addition, the specific nomenclature of "resident-centered" has been proposed for the 2014 *Guidelines* within the Environment of Care physical setting considerations, utilizing definition of culture change and resources within the appendix material to support the main body text. During the proposal review by the HGRC, this was further refined to "person-centered" to be more all-inclusive.

The Pioneer Network, a not-for-profit organization, advocates for culture change and supports the following definition of culture change that was utilized as a basis for 2014 *Guidelines* proposals:

Culture change: The common name given to the national movement for the transformation of older adult services, based on person-directed values and practices, where the voices of elders and those working with them are considered and respected. Core person-directed values are choice, dignity, respect, self-determination and purposeful living. Culture change transformation supports the creation of both long- and short-term living environments as well as community-based settings where both older adults and their caregivers are able to express choice and practice self-determination in meaningful ways at every level of daily life. Culture change transformation may require changes in

organization practices, physical environments, relationships at all levels and workforce models—leading to better outcomes for consumers and direct care workers without being costly for providers. (www.pioneernetwork.net)

In addition, to the Pioneer Network, the following resources provide information and processes to develop a culture change approach:

- Planetree: www.planetree.org

- Action Pact: http://actionpact.com/

- The Eden Alternative : www.edenalt.org

- National Alliance of Small Houses: http://smallhousealliance.ning.com

- The Green House Project: www.thegreenhouseproject.org

- SAGE P.L.A.C.E (Program for Living and Achieving Culture-change Environments): http://www.sagefederation.org/sage_place.aspx

- Senior Living Sustainability Guide®: www.withseniorsinmind.org

- Association of Households International: www.ahhi.org

In summary, proposals submitted to address culture change within the 2014 *Guidelines* include:

- Information within the Environment of Care section under "resident-centered" and applicable to all residential health, care, support, and related facilities for both the main body text and the related appendix

- Definition of culture change provided for inclusion in the glossary

- Research listing provided for support of proposals

III. Household and Small House

Facilitated and edited by Jane Rohde, AIA, FIIDA, ACHA, AAHID, LEED AP
Workgroup participants: *Jane Rohde, Jude Rabig, Margaret Calkins*

With the advent of culture change in the long-term care market, it was viewed as necessary to provide minimal guidelines that would assist authorities having jurisdiction and designers to identify different requirements based upon different models of care and facilities being provided for long-term care residents. Research is available for improving long-term care environments through culture-change initiatives (resident-centered models) and different types of environments that substantially differ from a traditional institutional model. However, because of existing institutional models, the guidelines also need to continue to support improvements in traditional settings as well.

After reviewing the existing 2010 *Guidelines* text, a comprehensive approach focusing on typologies was utilized as a basis for organizing different types of nursing home settings. Subsequent to the restructuring and rewriting of the text by this workgroup, the Specialty Sub-Group of the overall Health Guidelines Revision Committee utilized the same approach for not only nursing homes, but for other residential care facilities, including a new chapter on independent living, assisted living, hospice, and adult day care.

For nursing homes, different configurations of models are proposed as follows: institutional, cluster, and connected and freestanding household. Neighborhoods are defined as cluster, connected households, and freestanding households that may be grouped together in a neighborhood that provides shared activity, therapeutic, and support areas.

The following definitions have been proposed for the 2014 *Guidelines for Design and Construction of Residential Health, Care, Support, and Related Facilities*:

- An *institutional model* typically includes 40 or more residents in a double-loaded corridor configuration with centralized service/community areas, staff work areas, and resident support areas.

- A *cluster model* typically includes up to 10 residents that would be grouped in neighborhoods of 21 to 40 residents directly adjacent to decentralized service areas, optional satellite work areas, and optional decentralized resident support areas, such as dining.

- A *connected and freestanding household model* typically includes 10 to 24 residents in a grouping that may be freestanding or located within a larger facility and/or attached to another similar household. Households may share some support spaces/services. The model includes a residentially scaled kitchen and living room design in conjunction with a reorganization of staff to provide resident-centered care.

For each typology proposed for the main text, the related appendix material includes a clear description of each model, functional programming information, guidelines for the physical setting, and, where appropriate, additional resident and staff benefits of the model. In addition, a table that includes model type characteristics has been proposed to provide clear information for both designers and authorities having jurisdiction.

In summary, the overall goal of the workgroup is to provide both minimum requirements and additional best practices information within the appendix that support the trend of culture change and resident-centered care that is intended to improve not only the physical environment, but also the quality of life and outcomes for residents and staff.

IV. Resident Operated Mobility Devices

Facilitated and edited by Jane Rohde, AIA, FIIDA, ACHA, AAHID, LEED AP
Workgroup participants: *Melissa Pritchard, Skip Gregory, Ron Proffitt, Robert Mayer, Karla Gustafson*

The use of resident operated mobility devices (i.e., motorized wheelchairs, scooters, etc.) and other assistive equipment increases with age as the rate of functional abilities decline in older populations (Freedman, Martin, & Schoeni, 2002). There has been a noted increase in the use of battery-operated wheelchairs and power chairs in senior living settings. Considering the increasing demographics of the U.S. senior population and given factors such as the rise in the number of people with obesity and its association with a variety of debilitating chronic diseases and conditions directly impacting ability to ambulate (Cooper & Cooper, n.d.), the usage of battery-operated vehicles is likely to continue to increase.

The increase of resident-operated vehicles can be of concern. The ability of a resident to operate a vehicle can be a safety and liability issue. Facility owners/operators have an obligation to monitor residents' safe usage of battery-operated vehicles in accordance with providing a safe living environment, while supporting high quality of life and as much independence as possible. The legal obligation to provide ongoing observation of residents can be interpreted to extend to the use of battery-operated vehicles as a safety issue per *United States vs. Hillhaven* (Utah, 1997) under Title 22. The Court determined that reasonable, safety-related restrictions could be imposed. Any rules and regulations imposed must be no more restrictive than necessary to meet safety-related concerns (Goldman, n.d.). Safety-related concerns for residents, staff, and visitors need to address the rules and regulations of operating the mobility device in regards to speed, right of way, parking, passing, courtesy of the corridors, use of warning sounds, rear-view mirrors, etc.

The ability to operate a battery-operated vehicle requires the user to be able to safely transfer in or out of the vehicle. There needs to be a certain sufficiency in body strength, mobility, and stability to safely operate a battery-operated vehicle

(The National Institute for Rehabilitation Engineering, 2003). Other determinates of a resident's ability to safely operate a vehicle include the possible need for a skills test, special permit, and/or requirement of personal liability insurance.

Recovery from damages is the right of a facility owner/operator. Inclusion in a resident's admissions agreement for damages that a resident may cause to their apartments, to the community, or to another person may cover this requirement. However, before requiring additional insurance, consideration would need to be given to the potential of this action being interpreted as violating the rights of someone using a mobility device who is an individual with disabilities. This would make the requirement for special insurance illegal under the Fair Housing Act by Department of Justice (DOJ) and HUD (U.S. Department of Housing and Urban Development Office of Fair Housing and Equal Opportunity, 2004).

Further, with the Centers for Medicare and Medicaid Services (CMS) and private insurers no longer reimbursing for facility-acquired medical errors, infection, falls, and other never events (National Quality Forum), safety in senior living settings has become an even stronger and important focus of care providers. Effective October 2012, CMS will withhold 1% of regular reimbursements based upon performance (30% based upon patient/resident experience and satisfaction); therefore not only safety, but quality of life are in the forefront in relation to reimbursement in long term care settings. Thus, the provision of guidelines for resident operated mobility devices is appropriate, needed, and well-timed.

The design of the physical environment is directly impacted by the presence of resident operated mobility devices necessitating the inclusion and consideration of issues related to equipment storage at point of use, charging station locations, corridor widths, battery storage, and appropriate maintenance areas for equipment in senior living settings.

The Patient Handling and Movement Assessment section of the 2010 *Guidelines for Design and Construction of Health Care Facilities* addresses battery-operated mobility devices only in regard to areas of storage and space and clearance. Specific to common elements of long term care facilities, the 2010 *Guidelines* state that the resident should be provided with adequate storage near points of use within dining areas including adequate space and clearance for residents' utilization of ambulation devices. Consideration of mobility devices in relationship to resident and patient

usage during the functional programming process had not been fully defined and included within the 2010 *Guidelines*.

In preparation of proposal changes for the 2014 *Guidelines for Design and Construction of Health Care Facilities*, the following was considered to avoid unintended consequences in providing detailed guidance on designing long term care settings in relation to resident operated mobility devices:

- Battery operated vehicles may not be in the best interest of the resident who is capable of weight-bearing exercises and may need physical exercise to avoid muscle and tone loss. The use of battery operated vehicles for staff convenience vs. resident's best interest should be considered. Therefore, this has been included within proposal language for the 2014 *Guidelines* within the functional program process.

- As outlined in detail above, the Department of Justice and HUD, under the Fair Housing Act, disallows facilities from requiring persons with disabilities to pay extra fees or deposits as a condition of receiving a reasonable accommodation. (U.S. Department of Housing and Urban Development Office of Fair Housing and Equal Opportunity, 2004). This illustrates the importance of evaluating the need and use of resident operated mobility devices from the beginning of the programming and design process to reduce construction costs for retrofits and/or create ambulation issues for residents (limiting appropriate access to devices, etc.).

- Accidents caused by battery operated vehicles have resulted in licensing deficiencies and lawsuits. Example: *United States vs. Hillhaven* (D. Utah, 1997). Understanding that providing not only physical access, storage, and clearances, but also operational policies and procedures are important for facilities. As noted above, this often includes residents passing a driver's test that includes a license for safe operation of a mobility device to reduce potential risk.

Specific design considerations utilized as background for the 2014 *Guidelines* proposals include:

- Storage evaluation to include review of specific space requirements for a resident to park a vehicle near a point of use such as the dining room, activity area, or in a resident's own room.

- Clearance consideration examines the ability of the resident to safely access his or her vehicle. Once the resident has safely accessed the vehicle, there must be enough room for him or her to navigate the vehicle into traffic thoroughfares. Vehicle thoroughfares must be allotted enough clearance for a resident to safely operate the vehicle to avoid collision with other residents, individuals, and objects.

- Additional functional program storage issues to be considered include the emerging designs of battery operated vehicles such as standing, bariatric, and smart wheelchairs (Cooper & Cooper, n.d.).

- The maintenance issues of charging/recharging batteries for mobility devices require the examination of location issues in the general facility as well as resident rooms. The heights of outlets or docking portals should be determined based upon the resident care population.

In summary, it is generally recognized that there is an increase in usage of resident operated mobility devices in long term care settings. This is supported by evidence based research information on aging demographics. The workgroup proposal recommendations provided for the 2014 *Guidelines* clearly address storage, clearance, operation, safety and liability, and maintenance issues of resident operated mobility devices.

V. Resident Room

Facilitated and edited by Jane Rohde, AIA, FIIDA, ACHA, AAHID, LEED AP
Workgroup participants: *Melissa Pritchard, Skip Gregory, Ron Proffitt, Robert Mayer, Karla Gustafson*

The workgroup reviewed and evaluated the criteria for resident rooms currently provided within the 2010 *Guidelines for Design and Construction of Health Care Facilities.* Current language utilizes a performance approach to the design of resident rooms. The goal of the workgroup was to consider additional guidelines that would be expanded based upon research and a best practices approach, as well as performance approach. The evaluation of resident rooms also included the review of the 2010 elements provided for potential modifications, additions, etc. The noted increase use of battery operated vehicles and other equipment, including the residents' use of technology, add to the impetus of evaluating the criteria for resident rooms.

Criteria for resident rooms are currently located only in the nursing homes section of the 2010 *Guidelines for Design and Construction of Health Care Facilities.* For the new volume, *Guidelines for Design and Construction of Long Term Residential Health, Care, Support and Related Facilities,* the criteria for resident rooms should be evaluated for inclusion within the Common Elements section for Residential Health Facilities (nursing homes and hospice), as well as providing facility-specific performance criteria for nursing homes, hospice, and assisted living facilities).

Physical environments have the potential to assist or create obstacles for an individual. The level of functioning ability of a resident correlates directly with the influence of the environment (Lawton and Nahemow, 1973). A physical environment that supports independence and incorporates the personal belongings of a resident increases the basic sense of satisfaction and enhances his or her quality of life. A physical environment that provides space for a resident's personal possessions and furnishings empowers the resident, giving him or her a sense of control and satisfaction. There is a meaningful relationship between an individual and his or her belongings (Bowman, 2008).

Privacy has a dominant place in a resident's life. The Nursing Home Reform Act of 1987 requires residents' rights to privacy. Lack of privacy contributes to a resident's lack of self-esteem (Bowman, 2008). A resident's room becomes his or her home. "Home is a psychological state, as an expression of self, and as a physical structure" (Calkins). Home is a place that is familiar, where one feels a sense of control and security.

Federal regulations require quality-of-life issues for residents that include dignity, self-determination, and participation. There are stipulations for providing activities, social services, accommodation of needs, and an environment that is safe, clean, comfortable, and homelike. Descriptive findings show resident rooms, storage space, and bathroom amenities sparse and often lacking common function-enhancing and life-enriching features that are required to achieve these stipulations (Cutler, 2008).

In order for a resident's room to meet federal regulations, a review of present accommodations and features should be evaluated compared to guidelines and recommendations. Primary physical environment areas of focus include storage space, bathroom amenities, square footage, and usage for life-enriching features.

Storage that includes accessible clothes rods and shelves as well as space for assistive equipment, technology, personal items, and personal hobbies should be provided. Federal regulations currently do not address bathroom storage, and state requirements vary from state to state. If space is specified, it is generally limited to shelf space. Therefore, inclusion of storage for personal effects in both a resident's room and bathroom was reviewed within the 2010 *Guidelines for Design and Construction of Health Care Facilities* to inform proposals for the 2014 *Guidelines for Design and Construction of Long Term Residential Health, Care, Support, and Related Facilities*.

Privacy, ease of access, and accessible storage would provide function-enhancing as well as life-enhancing abilities to a resident. Privacy issues of a bathroom need to consider sight lines from adjacent areas. Ability to transfer is an additional consideration when evaluating the quality of life and dignity issues of a resident. Transfer information, types and positions of grab bars, and minimum clearances for accessibility have been evaluated and included within proposal for the 2014 *Guidelines* based upon research currently in process by Georgia Tech and work within the physical therapy field completed by Tracy Morgan at the Vancouver Coastal Health Authority.

In lieu of mandating minimum square footages, there is an effort to provide minimum clearances within resident rooms to maximize the opportunities for creative design solutions. Private rooms are not mandated within the 2010 *Guidelines* for residential facilities; however, there is a minimum requirement that provides that a resident shall not have to go through another resident's living space to gain access to a shared bathroom. Therefore, the standard side by-side bed configuration is no longer allowed in new construction of residential health, care, and support facilities. There are some populations that may benefit from sharing a resident room, and this would be determined during the functional programming process.

Minimum clearances within a resident room need to consider storage, mobility issues, as well as space for a resident to perform meaningful activities. Proposals for improvement of the resident Mobility and Transfer Assessment have been submitted that further address not only personal storage, but also equipment and point-of-service storage for supplies. The Mobility and Transfer Assessment also includes information on details that assist residents to remain as mobile and independent as possible—creating supportive physical settings vs. limiting.

Inclusion of advancements in lighting research, understanding of glare, and lighting installation strategies can enhance the activity levels of normal aging eyesight. A group of lighting experts from across the country came together to take on this task, and proposals have been completed that not only address lighting, glare, and daylight within resident rooms, but throughout all spaces within residential health, care, support, and related facilities. Further, a proposal to create a separate building system section daylighting and artificial lighting has been developed and submitted.

Overall, the workgroup evaluated resident rooms utilizing the filter of Federal requirements for nursing homes and legislation to further develop guidelines that enhance residents' quality of life. The results of this review included proposals for not only the resident room, but positive impacts on other areas of all types of residential facilities as well.

VI. WELLNESS CENTER

Facilitated and edited by Jane Rohde, AIA, FIIDA, ACHA, AAHID, LEED AP
Workgroup participants: *Sara Marberry, Ingrid Fraley, and Richard Wilson*

One of the current trends in healthcare is the inclusion of wellness programs offering complementary and alternative therapies and preventative screenings. A recent survey by the American Hospital Association indicates that 37% percent of hospitals are offering such programs, which are utilized by people in the community, as well as patients and staff in hospitals.

Many residents in residential health, care, support, and related facilities also have access to wellness programs. These programs may be offered in freestanding wellness center facilities that are adjacent to or affiliated with a continuing care retirement community (CCRC), community hospital, or other type of residential health, care, or support facility. They may also be offered in spaces that are located within CCRCs, hospitals, or residential health, care, and support facilities themselves. Wellness centers also may be part of community-based programming, such as within or adjacent to a YMCA or other type of service organization.

In the 2010 *Guidelines for Design and Construction of Health Care Facilities*, there is no reference to wellness centers in any type of healthcare facility. By not including any mention of wellness centers, the *Guidelines* are missing out on a critical trend that is occurring in residential health care and will soon get a boost in the United States from the health care reform law. Under the Patient Protection and Affordable Care Act signed into law by President Barack Obama on March 23, 2010, starting in 2014, employers can offer increased incentives to employees for participation in wellness programs or for meeting certain health status targets. In addition, wellness centers provide proactive ways for monitoring of chronic diseases to avoid/decrease frequency of acute episodes that often lead to hospitalization.

The health reform law increases the amount of the potential reward/penalty to 30% of the premium. The bill also would create a $200-billion, 5-year program

to provide grants to certain small employers (fewer than 100 employees) for comprehensive workplace wellness programs. Coupled with the aging demographic, this could result in construction of new wellness center facilities and/or renovations to existing ones to support increased demand.

Therefore, language has been proposed into Volume I of the *Guidelines* that references the existence of wellness programs and explains the concept of a wellness center within the diagnostics section. In addition, proposed language about wellness centers has been   included in the new Volume 2 of the *Guidelines*, which will focus on residential health, care, support, and related facilities.

A wellness center is a place where there is access to programs that support the integration of the physical, social, intellectual, emotional, spiritual, vocational (occupational), and environmental components of wellness to help people of all ages and fitness levels live healthy lifestyles. Meaningful programs should be multidimensional and may include:

- Acupuncture

- Aquatics

- Chiropractic

- Health care case management programs

- Physicals and wellness screenings

- Exercise and fitness training (both inside and outside, including healing gardens)

- Massage therapy

- Nutrition (often including bistros)

- Orthopedic medicine

- Personal training

- Physical therapy

- Special sports teams (i.e. Paralympics)

- Preventive imaging

- Spa services

- Complementary therapies: horticultural, animal, art, music

- Resource centers

- Other learning opportunities, such as lectures, trips, classes

These programs may be offered in separate facilities that are adjacent to or affiliated with hospitals, residential health, care, and support facilities, or adult day care centers. They may also be incorporated into spaces within acute care, residential health, care, and support, or adult day care settings. Supportive spaces include clinics, rehabilitation areas, fitness centers, aquatic centers, respite areas, classrooms, gardens, equestrian centers, etc.

The proposal for the 2014 *Guidelines* cycle include an outline and basic information that has been approved and accepted by the HRGC to be part of the Volume 2 text that will be issued for public comment.

Wellness is critical to preventative care and benefits people of all ages and vocations—from grade-school children to working professionals, stay-at-home parents, and retirees. A balance of mind, body, and spirit must be achieved if individuals are to have lifelong health and wellness. As the age demographic in the United States increases, successful aging in place as envisioned by the boomers will be dependent upon individual health, personal responsibility, and access to affordable services. To ensure quality of life, proactive wellness initiatives will successfully integrate lifestyle with longevity.

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