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RESIDENTIAL HEALTH CARE FACILITIES
2014 GUIDELINES REVISION PROJECT

Access to Nature

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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 (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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- Jane Rohde, JSR Associates Inc. (Project Facilitator)

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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.*

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