

***The Environmental Side
of the Culture Change Movement:
Identifying Barriers and Potential Solutions
to furthering Innovation in Nursing Homes***

**Pre-symposium Background Paper
to the April 3rd, 2008
*Creating Home in the Nursing Home:
A National Symposium
on Culture Change
and the Environment Requirements***

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This pre-symposium background paper is intended to provide the history of the culture change movement as it pertains to the physical environment, a summary of current research into building design issues and innovations, and a review of relevant federal long term care and Life Safety Code regulations for nursing homes. It is part of contract number HHSM-500-2005-00076P between the Centers for Medicare & Medicaid Services and Edu-Catering, LLP and authored by Carmen Bowman. The content of this paper does not necessarily reflect the views or policies of the Centers for Medicare and Medicaid Services. For more information, contact Carmen Bowman at 303-981-7228 or carmen@edu-catering.com.

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Introduction

This background paper serves to set the stage for the April 3rd, 2008 Centers for Medicare & Medicaid Services (CMS) and Pioneer Network co-sponsored *Creating Home in the Nursing Home: A National Symposium on Culture Change and the Environment Requirements*.

Culture change has been defined by the Pioneer Network as “a transformation anchored in values and beliefs that return control to elders and those who work closest with them. Its ultimate vision is to create a culture of aging that is ‘life-affirming, satisfying, humane, and meaningful.’ Culture change can transform a ‘facility’ into a ‘home,’ a ‘resident’ into a ‘person,’ and a ‘schedule’ into a ‘choice.’” CMS has been supportive of culture change efforts since 2002 and has now entered into a partnership with the Pioneer Network that represents the culture change movement nationally. Together, CMS and the Pioneer Network are hosting a national one-day symposium open to the public and a one-day invitational workshop for stakeholders organizations and culture change experts on the physical environment in nursing homes, the regulations, and culture change.

Creating Home in the Nursing Home: A National Symposium on Culture Change and the Environment Requirements will take place on April 3, 2008 at the Wardman Park Hotel in Washington, DC. The symposium will focus on changes to the physical environment of nursing homes being made by innovators and how these changes relate to Federal and State regulations and the Life Safety Code.

The Symposium features national expert presentations on private rooms, household and residential models, lighting and glare, issues and ideas regarding “creating home,” a presentation on the Life Safety Code by the National Fire Protection Association, State success stories, national stakeholder response panels to each topic, and public commentary through open microphone sessions.

An invitational workshop for stakeholder organization leaders, culture change experts and researchers, and regulators will follow the *Creating Home* symposium to review findings, make recommendations, and determine initiatives such as:

- What research should take place to provide needed answers concerning resident outcomes, costs, and the feasibility of making various changes to the physical environment of nursing homes?
- What activities should take place within States, led by State-level culture change coalitions, concerning the study and possible change recommendations for state regulations and codes?
- What activities should take place concerning the study and possible change recommendations for Federal requirements?
- What activities should take place concerning the study and possible change recommendations for the life safety code for long term care facilities?
- What education and training should be considered regarding culture change methods and successes?

- What groups (committees, task forces, study groups) should be formed to consider these issues and on what schedule should they convene? (CMS/Pioneer Network letter 1/10/08, see Appendix A.)

CMS is serving as a leader in the culture change movement by partnering with the Pioneer Network to offer this unique and historic opportunity for sharing and discussion on these environmental topics that are an important part of providing residents of nursing homes with optimal quality of life.

Chapter 1:

The Importance of the Physical Environment - the Importance of Home

There are many ways of framing the concept of environment - the social environment, the total environment, the atmosphere or milieu - but we are limiting our use of the term to the physical environment of the building and what is in it in terms of furniture and decor, equipment, lighting, flooring, the layout, and use of spaces.

There are many regulations regarding the physical environment - Federal, State, local, and Life Safety Code - with which nursing home providers are required to be compliant. Culture changing innovators report that regulations at each of these levels sometimes hamper the changes toward providing home they want to make, and that changes to their buildings are the most expensive of the culture changes. Thus, many providers become discouraged to pursue innovative ideas by requirements they believe to be unreasonable and/or by the expense of it all and they worry that what they build will be subsequently found out of compliance.

The *Creating Home* symposium and subsequent invitational workshop have been designed precisely for this – an opportunity for regulators, innovators, providers, researchers, and the interested public to gather together, put their issues on the table and work toward identifying barriers, dissolving myths, resolving issues and suggesting potential solutions. The symposium and workshop seek to be a catalyst to identify what future work and commitments are needed to be made by all affected stakeholders to further creating home in the nursing home.

“Older adults rely on their environment to compensate for increasing frailty and sensory loss, and when judgment and mental competence fade, the significance of the physical environment increases” says gerontological designer Betsy Brawley, drawing upon the theories of the late M. Powell Lawton (2005). Lawton and Nahemow contributed the ecological theory to the field of long term care design that the environment has the potential to assist or create obstacles to higher functioning and the docility hypothesis that the lower the level of functioning, the greater the influence the environment has on behavior (1973). CMS taps into this concept by requiring in the federal regulations for nursing homes that facilities assist their residents to attain or maintain their highest practicable level of physical, mental, and psychosocial well-being. This concept originates from the historic Nursing Home Reform Act of the OBRA of 1987. Barbara Frank, formerly with the National Citizens Coalition for Nursing Home Reform and involved with the passage of OBRA ‘87 explains why this term, “highest practicable” was chosen during Part I of the “From Institutional to Individualized Care” four-part CMS satellite broadcast series on Nov. 3, 2006:

The authors of OBRA specifically chose practicable instead of practical. *Practicable* refers to what someone is innately capable of, regardless of external circumstances. *Practical* refers to the limits of those external circumstances.

In line with Lawton and Nahemow's ecological theory, "design support" refers to multiple cues that reduce demand on the user of a particular environment. For example, "design support" allows one to enjoy walking in an outside area without the frustration of having to figure out how to return (Brawley, 2006). Donald Norman calls this "natural mapping" where the environment itself contains the information necessary for its use, rather than having to rely on knowledge held in the user's head (1988). Not surprisingly, a 2003 study of residential environments found that when the environments were familiar and easy to understand, this was associated with reduced aggressive and agitated behavior and fewer psychological problems (Zeisel, 2003). Although an entire separate paper could be devoted to the environment and persons with dementia, this paper will speak to the building environment as it affects all persons who have made a nursing home their home and the staff who work there.

Most people have had some exposure to what we will refer to in this paper as a "traditional nursing home." These nursing homes often have the characteristics of long hallways, a large nurses' station in the middle of a spoke of "freshly buffed" tile floor hallways, and one large dining room where everyone eats together. "Hall A," "Hall B" or "Hall C" may indicate where one lives. Call lights often blink over resident room doors and buzz at the nurses' station along with the occasional beeping of personal alarms to alert staff when someone stands up who could fall - so many noises that are disturbing and unfamiliar to a person's home. Too often the people living in this place called a nursing home are seemingly forgotten, asleep in their wheelchairs, slumped over or awake and repeatedly crying out, "Help me, help me," or "I want to go home." When you think about it, you can't blame them for wanting to go home.

Traditional nursing *homes* don't look much like a home. They closely resemble the institutional hospital setting, as indeed that was their model. However, a hospital is not designed to be a home, but rather a place where one stays temporarily in order to get acute medical care for the short term. This has been the most common model for nursing home construction since the 1950's. "There is no theoretical underpinning for designing nursing homes in this manner - no theory that dictates that this is supportive of either good care or positive quality of life" (Calkins, 2005).

Shortly after the publication of OBRA '87, pioneering individuals in the area of long term care first envisioned, and then created long term care facilities which provided homes for residents with more normal living environments for smaller groups of people, where they could help themselves, make their own decisions, and live in a warm, cozy, quiet home atmosphere.

Steve Shields, CEO of Meadowlark Hills, Manhattan, Kansas says, "If you really stand there and climb into it, you see just how very oppressive and unnatural it is" (2003). Steve is known for interrupting a large construction project in order to stop the building of another traditional institutional nursing home, a model that most of America does not want and does not think of as home. After some study and visiting one of the only household-modeled

nursing homes existing at the time (Big Fork Valley Communities in Minnesota), Shields embarked on a journey to remodel his facility. The facility was transformed into household settings where elders are cared by staff they know (referred to as consistent staffing), homemakers care for the home and cook homemade meals, and a new philosophy exists that the people living and working in the households make the decisions.

As these pioneering individuals continue to analyze the institutional culture of nursing homes, it has become evident that in some cases the physical environment and daily routines are designed to serve the needs of the staff and, often “the bottom line.” For example, double loaded corridors, meaning resident rooms on each side of the hallway with two to four residents in each, generally represent more revenue than private rooms - even though private rooms are most often preferred by residents as discovered in the 2004 *Quality of Life Study* by the University of Minnesota funded by CMS. Large dining rooms make it easier for staff to serve meals to all residents at regimented times; wheeling a medication cart to the dining room three times a day is perceived as less labor intensive than walking to each resident’s room and administering their medications; offering only one meal choice for all residents is easier regardless of personal preferences, and on and on it goes. “No longer are the needs of the institution to come before the needs of the individual,” is how Wendy Lustbader, original member of the Pioneer Network, radically said it in *The Pioneer Challenge: A Radical Change in the Culture of Nursing Homes* (2000).

Some innovators are bumping up against some regulations that serve the functionality of the institutional model more readily than the needs of the individuals living and working in them. Karen Schoeneman, an original member of the Pioneer Network says, “It’s the same deal over and over again of having old regulatory language and needing to decide how it relates to something new that was not thought of when it was written. For example, our Federal regulation that bedrooms must have direct access to an exit corridor was developed to eliminate the practice of having one bedroom located behind another, which is a fire safety issue that was encountered in old buildings that were turned into nursing homes long ago. Now the issue is resurfacing in Green Houses that are built to look like homes and do not wish to have the institutional look of a corridor.”

Nursing Homes Managing Editor Laura Bruck interviewed Benjamin Schwarz, PhD, assistant professor of Environmental Design at the University of Missouri at Columbia at the time, who frankly says, regarding the poor design of nursing homes:

Walk into many nursing homes and your impression is of a place to die, rather than a home in which to spend your final years. Nursing homes are simply not the type of structures that elders and their families want or need. Consequently they're disliked, even dreaded, by the very people for whom they're supposed to be designed. In my book, I relate the story of a man who actually jumped from the window of his independent living apartment rather than move into a nursing home. While this example is extreme, it is horrifying to think that anyone might be more afraid of living in such an environment than of death itself. In my admittedly biased view, nursing home design is simply based on the wrong model - the medical model. While this might be suitable for acute care settings, where people stay briefly and then

return to their former lives, it's entirely inappropriate for the nursing home, which is supposed to be the residents' final home.

Schwarz has done extensive study of long term care in other countries, particularly Europe, and has found “there is very little about the physical environment of these European facilities to suggest you're actually in a nursing home.... we tend to view aging as a pathology, as something to be fixed (the medical model), while these other cultures tend to view aging as a stage of life and a time for potential growth rather than only decline” (1996).

In this 1996 interview, Schwarz gave a prediction regarding nursing homes as we know them:

But I do believe that the days of nursing homes as we know them are numbered, primarily because of three driving forces: First, the number of people using long-term care services outside the home will continue to grow - no news here. Second, financing for those facilities will become increasingly complicated and difficult to obtain, as we are seeing in various states. Third, and probably most important, the residents, their families and nursing home staff won't tolerate the present state of affairs forever. I realize that the LTC industry has a strong lobbying body and change is difficult, particularly when we're talking about people's livelihoods. But these trends will continue to grow and, ultimately, I think nursing homes as we know them will essentially be out of business. Long-term care will not be structured according to the medical model.

“At Home”

Steve Shields teaches that we have many homes in our lifetime; our child home, perhaps a college dorm room, our first home and then one or several others, but each is nonetheless home. He describes the feeling when you are home as “ah” - that wonderful feeling of kicking off your shoes and just being home. Wouldn't we all agree we want people to feel they are *at* home, not *in* a home?

Dr. Maggie Calkins is a well known gerontological designer, researcher, steering committee member of the Society of the Advancement of Gerontological Environments and author of numerous books and articles supporting changes to improve residents' quality of life in nursing homes. Dr. Calkins makes the case:

Often when a resident says “I want to go home” they are not necessarily referring to the house they came from, but rather to a state of being that was comfortable, ordered, and fundamentally orienting. They want to return to a place that makes sense, where they can feel comfortable and not threatened by a myriad of things they cannot understand.... The physical environment plays an important role in helping people feel either comfortable and at home or out of place and uncertain in a given setting (Calkins, 2003).

LaVrene Norton, Executive Leader for Action Pact, Inc. and household model expert and Steve Shields, authors of *In Pursuit of the Sunbeam* which focuses on how to create home using the household model (Chapter 5 explains the household model), have studied and worked hands-on to create true home for persons living in nursing homes. They teach that home is “a basic necessity for a wholesome and balanced life,” it is where “we establish our place in the world,” and “nowhere is our self-identity reinforced more than at home.” Instead, they point out, all too often in institutional care, identity becomes a person’s room number or diagnosis (2007). Shields talks a lot about “slumping,” after a visitor to Meadowlark Hills once asked, “Where are all the slumpers?” at the end of the tour surprised there were none because of his enriched environment. What is meant by the term “slumping” is when people are slumped over in a wheelchair asleep or simply disengaged from life. Indeed, creating home has so many advantages as Shields and Norton explain:

Many would argue that slumping is the result of age and disease. Yet, we have witnessed time after time how the condition reverses and elders begin to blossom once the warehousing approach to nursing care is replaced by environments elders can identify as “home.” We can’t feel a sense of wholeness, safety and belonging, exercise autonomy, experience joy, build community or fully actualize without the sanctuary of home (2007).

“We have an intrinsic need for a home – our dreams are around it,” said Shields to Beth Baker, author of *Old Age in a New Age*. “They’re pretty central to us. Why, when you need one the most, do you suddenly not have one? Wherever you reside and live has to be home. Period” (Baker, 2007).

Again, something many would not dispute, we all need home, we all deserve home, the Federal regulations even require this but why is it home is lacking for so many living in nursing homes today in America?

Homelessness

Judith Carboni researched and published in 1990 on the subject *Homelessness among the Elderly*. Carboni defines “home” as “the experience of a fluid and dynamic intimate relationship between the individual and the environment - the physical, social, and psychological spaces around the individual. This relationship consists of interactions and transactions between the individual and these spaces, and is profoundly significant to the individual because it provides the critical connection to meaning in life.”

Whereas, “homelessness” she defines as “the experience of the negation of home, where the relationship between the individual and the environment

<u>Homelessness</u>	<u>Home</u>
Meaningless Space	Lived Space
Insecurity and Uncertainty	Safety and Predictability
Powerlessness and Dependence	Power and Autonomy
Non-Personhood	Identity
Disconnectedness	Connectedness
Without Boundaries/Public	Privacy
Placelessness with No Journey	Journeying
	Carboni 1990

loses its intimacy and becomes severely damaged. This shattering of the highly significant relationship is perceived as an insult to the individual's meaningful existence.”

Carboni draws this correlation between homelessness and elders living in nursing homes:

Elderly residents in nursing homes face non-personhood: identity becomes murky because they no longer have a special bond with a place that held a significant, personal meaning. Informants [in Carboni's research] demonstrated a pervasive sense of uprootedness and non-belonging, as well as confused feelings about self and identity. ... the roots that fed each informant's identity and provided nurturance were more than merely pulled up; it seemed that the roots were actually severed. For example, how can one recover the roots of one's house if it is sold, how can one identify with a place that is no longer there? When possessions are dispersed among relatives or sold, they are no longer available to the individual for interaction and meaning; the relationship with objects and their memories become severed.

The elderly individual wandering the streets is easily identified as homeless, yet there is an entire population of elders who suffer silently, enduring the painful state of homelessness within the confines of the total institution of the nursing home. To view as homeless these individuals who are, in fact, sheltered and fed seems incongruent; however, when one acknowledges these unrecognized homeless, the increased understanding can direct us in the discovery of ways in which we can alleviate or reverse the process (1990).

Since the passage of the Nursing Home Reform Act of OBRA '87, providing care “in a manner and in an environment that promotes maintenance or enhancement of each resident's quality of life” has been required by Quality of Life at 42 CFR §483.15, Tag F240 not to mention an entire section dedicated to quality of life. Under the Quality of Life section of the Federal regulations at 42 CFR §483.15, much of what has been described as the makings of home by Carboni have also been required, such as the right to Dignity at 42 CFR §483.15(a), Tag F241, the right to Self-determination and participation at 42 CFR §483.15(b), Tag F242, and a Safe, Comfortable, Homelike environment at 42 CFR §483.15(h), Tag F252 as well as the right to Privacy at 42 CFR §483.10 (e), Tag F164 in the Resident Rights section 42 CFR §483.15. And yet as Carboni shows, the experience equals that of homelessness for many.

To aide in the reading of regulatory language in this paper, Karen Schoeneman of the CMS Division of Nursing Homes explains the regulatory nomenclature this way:

Nursing homes that participate in the Medicare or Medicaid programs must comply with the regulations for Federally-certified nursing homes that are contained in Title 42 of the Code of Federal Regulations (42 CFR), Parts 483.1 through 483.75. These regulations can be found at http://www.access.gpo.gov/nara/cfr/waisidx_06/42cfr483_06.html. CMS has divided this regulatory language into segments known as Tags (or F Tags). The Tag numbers for nursing home regulations are all preceded by the letter “F” which was assigned by CMS to distinguish these Tags from Tags for other provider types such as hospitals (A), home health providers (G), etc.

When surveyors cite a deficiency, they use the Tag numbers. Each Tag contains, in addition to the regulatory language, explanatory guidance for surveyors that fleshes out the meaning and provides intent, definitions, guidance, probes for investigation or investigative protocols for surveyors as appropriate (not all Tags have all these components). This guidance is popularly known as the “interpretive guidelines.” The document containing the regulatory language, Tag numbers, and interpretive guidelines is known as Appendix PP of the State Operations Manual, which can be found at http://cms.hhs.gov/manuals/Downloads/som107_ap_pp_guidelines_ltcf.pdf. Nursing homes must comply with the regulatory language, and should find the interpretive guidelines valuable as well, since they are CMS’ authoritative interpretation of the regulatory language and are used by surveyors to complete their investigations during the survey process.

Chapter 2:

Quality of Life includes Physical Environment: The History of OBRA '87

The groundbreaking 1986 Institute of Medicine (IOM) study *Improving the Quality of Care in Nursing Homes* gave voice to persons living in nursing homes, and because of it, quality of life began to receive more attention. In this study, (URL address listed in the bibliography) it was found that important aspects to quality of life according to nursing home residents themselves include the environment:

The quality of life experienced by anyone is related to that person's sense of well-being, level of satisfaction with life, and feeling of self-worth and self-esteem. **For nursing home residents this includes a basic sense of satisfaction with oneself, the environment**, the care received, the accomplishment of desired goals, and control over one's life. For instance, a resident's quality of life is enhanced by close relationships and meaningful interchange with others, **an environment supporting independence and incorporating personal belongings**, and the opportunity to exercise reasonable control over life decisions [emphasis added] (p. 51).

One of the "prime components of residents' concepts of quality" was "the quality of the living environment, particularly ... the ability of residents to have personal possessions and furnishings in their rooms" (p. 382). Privacy was found to have such a dominant place in residents' lives that: "lack of privacy for visits with family and friends, for medical treatment, and for personal solitude contribute[d] to lack of self-esteem" (p. 51). Privacy and the ability to have personal possessions and furnishings - doesn't seem like too much to ask.

The IOM study led to a congressional hearing called Nursing Home Reform held by the House of Representatives Committee on Energy and Commerce, Subcommittee on Health and the Environment on May 12, 1987. At this hearing, the bill H.R. 2270 Medicaid Nursing Home Quality Care Amendments of 1987, introduced by Representatives Dingell, Waxman, Pepper, Stark, Roybal, Scheufer, Florio, Leland, Richardson and Bruce, was heard. Much of the bill was based on the IOM study. Many organizations and individuals affected by poor quality of care in nursing homes testified. When the bill passed it was from then on known as the Nursing Home Reform Act of the Omnibus Budget Reconciliation Act (OBRA) 1987 (OBRA '87).

Anthony Robbins, a professor at Boston University School of Public Health and former Health Commissioner for the State of Colorado, testified at this hearing and gave a glimpse of what the focus was during the inspection process prior to the Nursing Home Reform Act:

Not surprisingly, the early concerns of State and Federal officials charged with protecting nursing home residents were for fire safety. Thus, the earliest inspection and enforcement systems were concerned with the physical structures. The question was whether the facility had the capacity to care for nursing home residents. Inspectors looked at the facility for fire safety, doors, exits, stairs, alarms, sprinklers, etcetera ... (1988).

The IOM study and this hearing brought about the realization that a more resident outcome-oriented survey process was needed beyond only looking at the physical environment. Although safety is important, this shows us that the strong focus on safety within the nursing home building has existed since the beginning of nursing homes in the 1950's and 1960's. And this strong focus still exists today. Rob Mayer of the Rothchild Foundation funder of the NHRegsPlus website (more about NHRegsPlus can be found below) links this strong safety focus to today, "There's no question that the regulatory environment is based on a culture of the '50s and '60s, with an emphasis on safety and risk avoidance. Most people would agree that the pendulum has swung too far in the direction of safety" (Smokler, 2007).

With each set of new regulations set forth by CMS, CMS begins by publishing a Notice of Proposed Rulemaking in the Federal Register. This includes a Preamble explaining the intended changes to current language and soliciting public comment on the intended regulatory language. CMS then reviews the public comments and makes final changes to the draft, providing an Overview section that summarizes the comments and CMS responses. This final version is also published in the Federal Register and becomes a revision to the Code of Federal Regulations (CFR). In the Preamble to the OBRA '87 regulations, CMS, for the first time, draws the correlation between quality of life and the physical environment, broadening the consideration of physical environment beyond the concept of fire safety alone:

Quality of life is a complex concept reflecting the characteristics of an individual's relationship to his social and physical environment. Quality of life has both residents' rights and physical environment dimensions. It reflects the relationship between the resident and the physical and human environment in which he or she lives. ...we have chosen to reorganize the proposed quality of life requirement to include those provisions that best reflect an individual's ability to influence, and be influenced by his or her physical and social environments and to participate fully in these environments to the full extent of his or her functional abilities (Medicare and Medicaid; Requirements for Long Term Care Facilities; Final Rule with Request for Comments, Federal Register, February 2, 1989, p. 5327).

Presently, culture change innovators are trying to change the environment in many ways. Some are renovating existing buildings into households with a full service kitchen, living room, dining room and private rooms. Some are building residential homes where nursing services are available. Others are making bathing areas warm and inviting, pantries and snack bars available for residents to help themselves, food cooked-to-order for residents, kitchens available for residents and staff in order to cook and bake, accessible laundry areas, accessible outdoor areas, and more comfortable living areas. Traditional nurses' stations, audible call bell systems and overhead paging are often removed. In some cases innovators are also running into Federal and State regulations and Life Safety Code provisions that prohibit them from exercising some of their new, innovative ideas for creating home.

Chapter 3: CMS Support of Culture Change

CMS' support of culture change was evidenced by its September 2002 satellite broadcast to all surveyors entitled "Innovations in Quality of Life – the Pioneer Network." The broadcast taught surveyors about common culture change innovations that might be encountered and how compliance with federal requirements might be maintained within culture changed facilities.

From 2004-2006 CMS conducted a project in twenty-one states in which CMS' contractors, the Quality Improvement Organizations (QIOs), taught several hundred volunteer nursing homes the principles and practices of culture change.

In June of 2005, an interview between Karen Schoeneman, the CMS culture change lead and Thomas Hamilton, the CMS Director of the Survey and Certification Group, entitled "Culture Change in LTC Facilities" was recorded for distribution to the QIOs for their use in training facilities about culture change and the regulations and survey process. In it Mr. Hamilton says, "Facilities that are moving to resident directed care are actually fulfilling the mandates of the OBRA '87 law." Regarding compliance with CMS regulations, he stated that "Although there are some constraints in terms of not obstructing hallways or handrails, there appear to be no significant problems." He also said "We're quite pleased that this effort is taking place" and "we plan to continue our effort..." Mr. Hamilton extended the support of CMS and State agencies encouraging them to "work together to handle any regulatory issues that arise as facilities begin to change" and by welcoming questions from organizations or providers regarding regulations and culture change. He very supportively concluded with "We've been absolutely delighted in the work that State agencies and QIOs have been undertaking with nursing homes to promote effective culture change. We've heard some inspiring examples of the culture change efforts in many states. We look forward to much more progress." Karen Schoeneman expressed her "... enthusiasm for efforts homes are making toward culture change. Changing institutions, even very good ones, into real homes is a wonderful goal that is bound to lead to a better life every day for the residents, their families, and staff as well, and I applaud the efforts of those already on this path."

CMS funded and co-developed [with this author] the Artifacts of Culture Change measurement tool and made it available to the public April of 2006. The Artifacts tool serves to provide providers with a means to measure concrete changes they have made as a result of organizational and philosophical changes to which they have committed. How to obtain the Artifacts tool is listed in the bibliography and more about the Artifacts tool is found in Chapter 12.

CMS has answered many questions from providers seeking to make changes to create home. On December 21, 2006, a Survey and Certification memorandum was released that included answers CMS has given regarding various culture change practice questions received since 2004. See Appendix B for this memorandum.

“Culture change” has impressed CMS so much so that it was included in the CMS Administrator’s 2007 Action Plan for Quality Improvement in Nursing Homes.

Projects on the Action Plan included:

- A series of four satellite broadcasts entitled “From Institutional to Individualized Care,”
- A series of Pic-Tel and teleconferences for CMS Regional Offices and State survey agencies on various culture change topics, and
- Initiation of and co-sponsoring the upcoming 2008 *Creating Home* national symposium and workshop, as well as this background paper in preparation for it.

In a February 2007 response to an inquiry by the Mississippi Senate and House delegations regarding the Green House® Project, Leslie Norwalk, Acting Administrator of CMS stated that CMS is supportive of the culture change movement and “believe[s] these innovations more fully implement the Nursing Home Reform provisions of the Omnibus Budget Reconciliation Act of 1987, from which our nursing home regulations are derived.” Additionally, CMS offered its contribution to the movement by stating, “It is our goal to have State agencies assist innovative providers in determining how changes they wish to make to improve the lives of their residents can be compliant with the Federal regulations that protect all residents.” Now that’s support.

Currently, CMS Central Office staff, Regional Office staff and many State survey agencies are actively participating in State culture change coalitions, conferences, groups and projects. The involved CMS and State survey officials are serving as role models to those CMS regions and State survey agencies not involved, hopefully inspiring them to become part of this exciting movement.

CMS contracted with the University of Minnesota to conduct the 2004 study *Measures, Indicators, and Improvement of Quality of Life in Nursing Homes* to develop and test measures and indicators of quality of life for nursing home residents. Additionally, several aspects of the physical environment were studied such as lighting, seating choices in public spaces, distances residents need to travel from bedrooms to dining and activity areas, and private rooms, as well as how they affect resident quality of life. Data was collected from 1,988 residents living in 131 nursing units in 40 nursing homes located in five States.

The study found that being in a private room and having fewer roommates was associated with better quality of life. Not surprisingly, it was found that the more people sharing a room, the less likely each was to have ample space for privacy and activity, and great disparity was observed in amenities found in a private room versus a shared room (Kane et al, 2004).

Many environmental deficits were identified in the majority of homes studied, the most profound of which had to do with poor lighting:

- Lighting levels that were so low that they approximated conditions of blindness,
- Inadequate showers: “dark, dank, dismal,”
- Few knobs and switches operable by residents,

- Cluttered corridors,
- Closet rods out of resident's reach: only 7% of the closet rods were located 36 to 48 inches from the floor,
- Lack of horizontal work space for residents,
- Lack of a resident's bedside chair,
- Lack of access to the outdoors (much more below),
- Long distances residents needed to traverse to dining rooms, bathrooms and bathing areas: distance from the farthest resident room to the nearest shower or tub room ranged from 20 to 270 feet, 3 to 82 feet from room to primary bathrooms and 13% of residents had to travel outside their room to a shared bathroom down the corridor
- lack of common space: 15% of the homes lacked even one space, all others had only 2 - 4 lounge spaces,
- bathrooms shared by up to 20 residents,
- a general absence of life-enhancing features, and
- "noxious noise" - auditory alarms, intercom paging, screaming or calling out by residents, "musik," and loud yelling or calling out by staff (Kane et al, 2004).

Regarding noise, the researchers reported that one sound by itself was less problematic, but when all six were combined, the noise level increased dramatically. On some units the sound of auditory alarms was constant. Resident screaming was heard on 20% of the units and staff yelling or screaming on 9%. At times staff acknowledged ignoring a resident's call because "that resident is constantly turning on their call button and they don't need anything" (Kane et al, 2004).

Throughout their work, Rosalie Kane and colleagues remind us that nursing homes should be dwelling places first and clinical workplaces second. Thankfully, with the changes that most culture changing homes are making, the focus is becoming more on "home" and less on "nursing."

Chapter 4:

Progression of the Environmental Side of the Culture Change Movement

Progression of this movement includes pioneers who began with renovation into neighborhoods and households, the formation of the Eden Alternative® and Eden's progression into the Green House® Project and other residential models.

Pioneer Network Formation

The Pioneer Network came into existence in 1997 bringing together a small group of like-minded innovators with the goal to spark a national grassroots movement to transform the culture of aging. The importance of the environment is identified in one of the core values named by the forward-thinking pioneers: "Shape and use the potential of the environment in all its aspects: physical, organizational, psycho/social/spiritual." Several early innovators saw the need to transform the environment right along with the many institutional systems within a nursing home.

Work of Early Pioneers

In the 1990's, two pioneers, Charlene Boyd of Providence Mount St. Vincent and Sister Pauline Breancier of Teresian House in Albany, New York, renovated into neighborhoods. Other pioneers such as Garth Brokaw of Fairport Baptist Home in Fairport, New York and Steve Shields of Meadowlark Hills in Manhattan, Kansas were each separately in the process of renovation in the late 1990's but stopped midstream realizing they couldn't, in good conscience, build the same old flawed model. Each team of staff ended up deciding "if it's not reflective of home, we're not going to do it or build it." Both ended up (without knowing about the other) creating households much more reflective of a person's home instead of the traditional long hallway nursing home design. Often indicative of a movement whose time has come is just this like-minded people coming to the same realization independent of one another that things must change. So the movement began with pioneers cutting a new path by transforming the physical environment to set the stage for changes needed by both those living and working in long term care.

Chapter 5: Neighborhoods and Households

Within the culture change movement there are the distinctions of neighborhoods and households. Features of a neighborhood include residents dining in neighborhoods instead of a large main dining room, consistent staff working with residents, and practices such as neighborhood Resident Councils. According to Calkins, neighborhoods are also sometimes referred to as clusters of households that share common community areas reflective of a neighborhood in the community at large such as libraries, beauty/barber shops, community rooms, courtyards, cafes and snack bars, and shared staff spaces (Calkins, 2003). In some cases, development of neighborhoods can reflect a stage toward developing households. As far as the physical environment goes, however, neighborhoods typically involve no structural changes.

The Stage Model of Culture Change developed by Les Grant, Associate Professor and Director for the Center for Aging Services Management at the University of Minnesota and LaVrene Norton, Executive Lead for Action Pact is a tool that assesses the degree of culture change across the five organizational systems of decision making, staff roles, physical environment, organizational design and leadership practices. Four stages are identified: Stage I - Institutional model, Stage II - Transformational model, Stage III - Neighborhood model, and Stage IV - Household model.

Using the Stage Model description, in the household model, staff work in cross-functional, self-led work teams. The hierarchical organizational structure is “flattened” through the elimination of traditional departments and decentralizing core services. The physical design is a self-contained small home setting where 16-24 or fewer residents live who have their own full kitchen, living room and dining room. The full kitchen has its own cook top, oven, microwave, refrigerator, freezer, dishwasher, sink, cupboards, dishes and utensils. Personal laundry is done within the household by staff, residents or family. Staff work areas are better integrated into resident common living areas eliminating the need for a medication cart or nurses’ station.

Although costly, there are profound advantages to renovating the environment. Garth Brokaw of Fairport Baptist Home in Fairport, New York loves sharing the story of how they were trying to serve 42 people with dementia three times a day in a large dining room who didn’t always want to eat at those times or in a large dining room or with so many people. He reports that the noise level was “incredible” as was the acting out and inappropriate behaviors. When they turned the large dining room into three smaller ones, “Overnight, I kid you not. Overnight it changed the whole environment on that unit. Just that” (Baker, 2007).

At Meadowlark, Shields discovered the importance of identifying “the sanctity of the home:”

Our gutted, T-shaped nursing home plant produced three cozy homes, where elders and staff united to create a new sense of life. Three new homes were built homes with front doors, doorbells, porch lights, and mailboxes. What we were building was a house. A home. With a living room, a kitchen, a dining room, a fridge and a spice rack, a roast in the oven. A place where folks could gather to cut up lettuce, chop

onions, make jokes, tell stories, argue a little once in a while, laugh and just live. We started to talk about ‘the sanctity of the home.’ We had to name it so people would remember that we need to treat healthcare households and the people in them like we do every other house and host in America: knock when you go to the front door. And wait for an answer. Be invited in. Be offered a seat, or asked to join in a card game, or help throw some chicken on the grill (Shields, 2004).

Shields and Norton who together developed the households at Meadowlark Hills have also created the resource *In Pursuit of the Sunbeam: A Practical Guide to Transformation from Institution to Household*. Both the book and expanded toolkit are helping to guide the way in returning to home via the household model. Together they also developed six design principles for the household model several of which affect the physical environment:

Principle 1: Seek normalcy in all things.

If it wouldn't be done at home, rethink it.

Principle 2: Home is our sanctuary.

Involve residents in creating a home that invokes the feeling of, “Ah, I'm home.”

Principle 3: Home is where we host our visitors.

A household typically includes small areas where residents can host guests such as a living room, dining room, den/TV room, private dining room, patio, etc., and it should go without saying that residents and their guests are welcome to use the kitchen and help themselves to whatever is in it.

Principle 4: All homes have a front door.

It is true that all homes do have a front door. As Norton and Shields state, “Plain and simple, it isn't a house without a front door.”

Principle 5: All homes have a kitchen.

It is widely recognized that most people gather in the kitchen when visiting friends or hosting a holiday meal and where we congregate as a family daily. Again it is just plain true that all homes have a kitchen. This has probably been one of the main driving forces for the household model.

Principle 6: All homes have recognizable dimensions of privacy.

It seems we've become confused in long term care and overly worried about social isolation. It is important to remember, Norton and Shields remind us, that “privacy does not equal isolation.” In a home, rooms close to entrances tend to be semi-public areas that welcome guests whereas rooms separated from guest areas are private. In the traditional nursing home design, other than the bathrooms, almost all spaces are public. Resident rooms are located along the major thoroughfare hallways and doors are usually left open, allowing anyone to peer into the residents' only private space, yet this is not typical of a person's home.

Norton and Shields have learned that fire safety regulations vary not only from State to State but also from county to county within a State. Generally any time the household kitchen has an open cooking appliance, additional fire suppression systems and/or physical separation of this appliance from exits is needed. Some interpretations of the codes may require a 20-minute firewall

“The obvious truth is that kitchens are necessary for preparing and serving meals, but in a home, kitchens are just as necessary between meals for building and sustaining relationships, and for nourishing the soul.”Norton and Shields, 2006

and/or a physical smoke partition between cooking appliances and all other living spaces. Sometimes this necessitates a “back of the house” kitchen immediately behind a “front of the house” kitchen, usually designated by fire officials as an “activity center.” According to the regulations in place in Manhattan, Kansas, they found they needed two refrigerators - one for residents’ food so residents can help themselves and one for the food served to all residents for meals. Similarly some providers have found that in their States two dishwashers were needed - one residential dishwasher for resident use and one in a staff-access-only pantry or “back of the house” kitchen that maintains higher temperatures (2007). Specific Life Safety Code regulations are talked about later in this paper.

These various requirements in various States highlight issues such as higher temperatures being required for a dishwasher in a nursing home than in a residential home keeping individual resident foods separate from the foods to be used for meals for the residents. It is hoped that the symposium and workshop will serve as a place for these issues to be discussed.

Shields and Norton remind us that the hallway is an important but misunderstood feature of home. Hallways in our homes actually function as privacy buffers, indicating to visitors these are more private areas into which you only go if invited. However, in traditional nursing homes, hallways are designed to be main thoroughfares rather than privacy buffers. What the household model does instead is place bedrooms and bathing areas down a short hallway beyond the living and dining social spaces. This is consistent with our personal home designs. The authors also specify that ability to control access to private spaces is important:

Because traditional nursing homes use bedroom hallways as public thoroughfares, many who are trying to leave behind the old ways identify halls as the enemy. We visualize a long, dark tunnel cluttered with equipment. For many of us, that image symbolizes the ills of the system. As a result, emerging designs often completely eliminate halls by circling resident bedrooms around social areas. This design option sacrifices residents’ ability to control access to their private spaces. Halls, although generally too long, are not the problem. The problem is how we use them and to what we connect them (Norton and Shields, 2007).

Nurses’ stations exist because nursing homes were patterned after hospitals, not homes. Norton explains here, nurses’ stations do more harm than good, although harm was certainly not their original intention:

Often the first thing people see when they visit the traditional medical model nursing home is the nurses' station. It is the control center amid a buzz of activity, and it stands as a physical barrier separating the nursing staff from residents and family members as if to say, 'We (staff) are in charge.' Re-creating spaces to be shared by residents reduces the barrier between residents and staff created by the titanic nurses' station. Caregivers are more available to residents and family members. Together they can sit in the comfort of the living room to discuss care plans instead of standing at a large desk in the lobby area. Responses from residents, families, and workers in nursing homes that have made these changes are primarily positive.... Now, with room to converse, play cards, host visitors, and interact with staff, once-listless residents are awakening to the possibilities of friendships and community.... Simply put, 'If it looks like a hospital, we'll feel like a patient. If it looks like a house, we'll feel at home' (Norton, 2005).

Requirements for nurses' stations fall under State regulations, as there is no Federal requirement. Each State is different, however; some require nurses' stations, and some do not. Some State regulations require that the nurses be able to see down each hall from the nurses' station which the culture change movement points out is incongruent with attentive care since nurses are not sitting at a nurses station at all times nor should they in order to care for residents. Some States, like Ohio, are simply softening language in their State regulations. For instance, the Ohio change in regulation that became effective 1/10/07 simply changed the requirement from a nurses' station to a nurse area.

The household model is taking the lead in removing and replacing the institutional hallmark of the nurses' station. In my experience as a former surveyor and now culture change consultant, I have also seen some homes, although not on a journey toward creating households, have also removed nurses' stations and replaced them. Some have replaced them with fish tanks and bird aviaries which some residents thoroughly enjoy. In other cases they have been replaced with television viewing areas which unfortunately, in nursing homes that have not changed the institutional culture, have become somewhat of a "parking lot" where staff "park" residents. In some cases where a staff office has been created, staff has been found to be "hiding" and inaccessible to residents or family members. As indicated by Norton above, the rationale for removing nurses' stations is to bring staff closer to residents, not further away, with simple gathering areas where staff can also work.

By virtue of households being smaller, the large medication carts are no longer needed. Most homes that have moved into the household model have built locked medication storage cabinets in resident rooms. Evergreen Retirement Center in Oshkosh, Wisconsin decided to keep them central but built locked medication storage right into the dining and living areas.

A very positive environmental feature of the household is installing household rather than large institutional sized washers and dryers for residents' personal laundry. Homes that have done this report many advantages:

- A decrease in lost clothing and complaints,

- Residents have the opportunity to do their own laundry if able and/or interested,
- Family members can stay and visit while doing laundry,
- Shrinkage and wrinkling is eliminated, and
- Even if clothing is not marked, staff can identify who it belongs to since they care for a smaller number of residents consistently (Brecahier, 2005).

Some States require two sets of washers and dryers separated for facility linens and resident personal laundry. Two areas might also be required, one for soiled and one for non-soiled items. In other words, “dirty” and “clean” areas. Norton and Shields suggest the “clean” side of the laundry come complete with folding tables and hanging rods within reach for residents who enjoy doing laundry (2007).

Norton and Shields found the fire code bewildering when they redesigned Meadowloark Hills. According to them:

Regulations do not inhibit the Household Model, although interpretations in some states can make it more difficult than in others. The Fire Code is the greatest regulatory challenge to the Household Model. Its single focus is fire safety, as it must be. The problem is that local, State and Federal fire marshal offices don’t always use the same code. The local office may use one issued in a particular year, the state another year and the federal yet another. While approval for your plans may be granted, brace yourself for the first fire inspector “walk through” after the building is complete. It can be as if plan approvals never took place and the price tag can be startling. Annual inspections may bring up new issues with long-standing situations never before identified as problems. Fire Marshal inspections are one of the regulatory system’s most expensive for providers (Norton and Shields, 2007).

Chapter 6: The Eden Alternative® and the Green House® Project

The progression of the culture change movement also includes the Eden Alternative®. The Eden Alternative® was created by Dr. Bill and Judy Thomas in the early 1990's as a concept of home that reflected more of a garden where people grow than an institution where, in essence, growth is usually stunted. The Eden Alternative® is a philosophy grounded in 10 principles typically applied to a traditionally built nursing home. However, after ten years of working to recreate nursing homes through the Eden Alternative®, Dr. Thomas became convinced that change wasn't happening as quickly or as deeply as it could. So he decided the best way to uproot the institutional nature of nursing homes was to begin from the bottom up and "the Green House® would be the Eden Alternative® made real" (Baker, 2007). Thomas envisioned homes that look like any person's home and proceeded to find the right people interested in building new, free standing residential homes for people needing 24 hour nursing care. The "home" part of "nursing home" would finally take the forefront.

The Green House® Design

The first Green Houses were built in Tupelo, Mississippi in 2003. According to the Green House® Project website, Green Houses are residential homes for no more than 10 persons needing nursing levels of care. They are built to blend architecturally with neighboring homes. Green Houses are designed to be "warm" by virtue of a cozy, smaller residential home floor plan, decor and furnishings chosen by those who live there and most importantly by honoring the opinions and preferences of the people who both live and work in them. High levels of sunlight are built into the design of each resident's room; plants and easy access to the outdoors bring to life the green part of "green house." Smart technology is also used via computers and paperless medical records, pendant/bracelet call systems and wireless pagers, electronic ceiling lifts, adaptive devices, and high-speed Internet access with large-screen monitors for web-based activities, telemedicine, communicating with family and friends and webcam viewing of on-site animals and woodlands (Volzer, 2003).

The Green House® Project captured move-in day on a DVD for those residents who moved from the traditional nursing home to the first Green Houses in 2005. On it, a resident named Mary Adams, who has dementia, is observed in the large nursing home before moving to be fed by others, non-responsive, and in a wheelchair. Upon moving into her new Green House® home, staff and family are astonished, as is anyone viewing this DVD, to see Mary take a fork from her family member's hand and feed herself. And by the end of the day, not only is Mary talking and making decisions, she is singing! The Green House® Project has shown without a doubt that the physical environment affects people for either good or bad. The institution had caused Mary to shut down. Her new *home* gave her a reason to keep living. The environment holds great potential in affecting people's lives for better or for worse.

Something unique about the Green Houses is that they give privacy and community equal priority. Privacy is given priority by each elder having their own private room with bathroom and locked medicine cabinet. Community is also given priority. A residential-

style kitchen affords the opportunity for both staff and residents to prepare meals and a large family-style dining table provides a natural place for community meals. The heart of a Green House® is the hearth - an open living area with fireplace onto which resident rooms open. The dining and kitchen areas are also open creating cozy places for people to congregate.

The typical hallmarks of the institutional nursing home are not present – there is no nurses’ station, no medication cart and no public address system. Wheelchairs are not as prevalent, since the small size of the house promotes more walking (Kane et al, 2007). When nurses visit a Green House®, they ring the doorbell as they would when visiting any person’s home (*Culture Change Now*, 2003). In Beth Baker’s visit to a Green House® in Tupelo, Mississippi, she found how normal life is there. Residents sit outside after supper enjoying the evening. Some choose to help fold laundry while others choose not to. She overheard one staff member call another in a neighboring Green House® to borrow ice cream, another called to borrow an iron in order to press a shirt for a resident going to a funeral. “It all seemed so natural, like any close-knit community where a neighbor would borrow a cup of sugar” (2007).

Safety measures are incorporated using induction cook tops (stove tops that do not get hot because heat is transferred from the element directly to the pot or pan) and gas shut-off valves when cooking appliances are not in use. Stove guards are available to be placed on the top of the stove if staff needs to leave the kitchen while food is cooking. Retractable gates can prevent entry into the kitchen if necessary and locked cabinets and drawers keep chemicals and sharp utensils out of reach (The Green House® Project Guide Book, 2007). These precautions are well thought out as means of preventing potential accident hazards while making it possible to live in a home instead of an institution.

In the CMS 2005 DVD interview with Thomas Hamilton, Karen Schoeneman explained, “The Division of Nursing Homes has also had some contact with the Green House director who showed us the architectural drawings for a standard Green House. We reviewed these and found no particular problems with how those small settings operate.”

In the February 2007 response to an inquiry by the Mississippi Senate and House delegations regarding the Green House® Project, Leslie Norwalk, Acting Administrator of CMS stated that after reviewing program and policy materials and the standard Green House® architectural plan, CMS found “no barriers that would prevent them from being qualified as nursing homes under Federal regulations.” (See Appendix C for this letter.)

In the December 2006 Survey and Certification memorandum with answers to culture change questions, a summary of questions and answers from a June 2006 CMS video conference of CMS Central Office and Regional Offices with leaders of the Green House® Project was included (Appendix B). Two questions asked by CMS and answered by the Green House® Project were in regards to regulations and the Green Houses:

Green House Question 6: Do you intend to request any waivers from the federal regulations for future Green Houses?

Answer 6: We intend to comply with all provisions of the federal regulations for future Green Houses.

Green House Question 7: NFPA 101-2000 edition, section 18: 5.2.2 exception No. 2 requires fireplaces be separated from patient sleeping areas by a 1-hour fire resistance rating. RO staff asked how their plan met their requirement.

Answer 7: The Green House staff stated that the fireplace shown in the plan was not a working fireplace and therefore, did not have to meet the references code section.

Although the hearth, which includes a fireplace, is the heart of the Green House, the fireplace cannot be used, according to the Life Safety Code. Further clarification was requested from James Merrill, the LSC lead for nursing homes at CMS who identified the following from the Life Safety Code:

Exception 2, 18/19.5.2.2 Fireplaces shall be permitted and used only in areas other than patient sleeping areas, provided that such areas are separated from patient sleeping areas by construction having not less than a one hour fire resistance rating and such fireplaces comply with the provisions of 9.2.2. In addition, the fireplace shall be equipped with a hearth that shall be raised not less than 4 in. and a fireplace enclosure guaranteed against breakage up to a temperature of 650 degrees and constructed of heat tempered glass or approved material. If in the opinion of the authority having jurisdiction, special hazards are present, a lock on the enclosure and other safety precautions shall be permitted to be required.

Merrill explained that what this is saying is that there cannot be a free standing fireplace in the middle of a common area open to resident rooms. There could only be a fireplace if it was in a separate room constructed of one-hour fire-rated walls to separate it from the sleeping areas of the facility. James clarified that if there were such a fireplace in a separate area, it would have to have a hearth and glass doors to prevent embers and smoke from coming out into the room and to prevent people from getting too close to the fire (Merrill, 2007).

Robert Jenkins, Vice President of the Green House Project, shares that local fire officials are approving gas fireplaces in some States and electric fireplaces in others. Robert also points out that the use of a fireplace first and foremost is for warmth, something older adults often seek, and an often sought-after feature of home. The disparity of interpretations is confusing for those who are building or remodeling and may be a topic for further discussion.

There is another regulatory issue that has come up with the design of Green Houses regarding the arrangement of bedrooms around the central living space area and whether the bedrooms have direct access to an exit corridor as required by CMS regulation 42 CFR §483.70 (d) (1) (iv), Tag F459:

483.70(d)(1)(iii) *Have direct access to an exit corridor,*

Interpretive Guidelines: There is no authority under current regulations to approve a variation to this requirement. Additional guidance is available in the National Fire Protection

Association's Life Safety Code 101 (NFPA 101), 12-2.5.1, which is K41 of the Life Safety Code Survey.

Life Safety Code K41 states:

All sleeping rooms have a door leading to a corridor providing access to an exit or have a door leading directly to grade.

The term "corridor" is not defined in either the CMS Tag F459 or Life Safety Code K41. According to the Merriam-Webster dictionary, a corridor is a passageway into which rooms open. Although we are used to a corridor in a typical nursing home comprising of a hallway with rooms on both sides, a corridor could also have a wall on only one side, especially since there is no definition stating otherwise. In the Green House®, this is indeed the case. Jenkens explains that in a Green House®, the resident rooms open onto an eight foot corridor which surrounds the open hearth area (2008). He points out that to be compliant with the corridor and eight foot (more later in paper) requirements causes this open space to be much larger than what would normally be designed in a residential home forcing this continued institutional feature in the residential home. He also pointed out that it also causes construction to be more expensive (2008).

James Merrill of CMS has stated that perhaps the type of corridor that Green House® bedrooms open up to could be considered an atrium and that the health code of the Life Safety Code does not prohibit atriums. However, an atrium usually involves two stories, and Jim is looking into whether or not it can be applied to a one story building. Apparently, it is also complicated by what goes into that open space. Thus, the issues of corridor and atrium are unclear and are in need of more clarification and discussion, especially since people are seeing, and research is showing (more below), the value of living in a home. Something we all know innately. In fact, Green Houses are being built all over the country through a project grant from the Robert Wood Johnson Foundation. The RWJ Green House® Replication Initiative plans to develop 50 Green House® homes across the country with technical assistance and pre-development loans. As of January 2008, Green House® homes are fully operational in 14 sites in 10 states. By the end of 2008 there will be an additional four sites. States represented thus far are AL, AR, AZ, GA, KS, MI, MS, MT, NE, NY, PA, TX, and WA. These issues need to be settled so that builders and owners of these new properties as well as other small houses do not run into regulatory problems with their building design after they are already built and housing residents.

A study was conducted from May 2003 to December 2004 by Kane et al comparing 40 Green House® residents with 40 residents at two comparison sites. Data collected at baseline and at three six-month follow-up intervals shows that the Green House® is "a promising model to improve quality of life for nursing home residents." Controlling for baseline characteristics, statistically significant differences in self-reported dimensions of quality of life favored the Green Houses over one or both of the comparison groups. Additional discoveries were less ADL decline, less prevalence of depression, less incontinence and less use of anti-psychotics (Kane et al, 2007). This is great news for the Green House® model. Now there is solid research evidence that a more normal home environment contributes strongly to better quality of life and quality of care.

Consider these strong words from Judith Carboni and their application to the Green House® or stand-alone home concept:

When considering homelessness in the institutionalized elderly, a pressing issue is whether nursing homes should exist at all. If the consequence of being institutionalized is to be homeless, and if to be homeless is to lack meaning in life and to suffer intolerable pain, then can we justify providing and promoting this negative experience for the vulnerable and chronically ill elderly individual? Solutions to this dilemma might be found in the exploration and development of alternative settings, similar in structure and philosophy to half-way houses, in an attempt to move away from the total institution of the typical nursing home (Carboni, 1990).

Perhaps Green Houses or any residential-style nursing homes are the half-way houses Carboni envisioned. In fact, the administrator of the first Green Houses at Tupulo, Steve McAlilly, says, “I keep coming back to the physical structure. The environment sets the tone for the culture. This is culture replacement. Culture change is taking an existing structure and trying to change what’s going on. Culture replacement is smashing what’s there and replacing it.” Steve makes the point that by building from the ground up, you are far less likely to slip back into the old institutional mindset and practices (Baker, 2007). “Smashing” the old institutional model and mindset is happening in both the large-sized nursing homes that have divided into households as well as the residential. These free-standing houses are just the final point on the continuum of transitioning from the old institution, through neighborhoods and households in these older, large buildings, to the construction of small houses clustered together.

The Tupelo Green House® project reports that operations are cost neutral for the Green House homes compared to their traditional nursing home (The Green House® Project Guide Book, 2007). These first Green Houses were built to serve persons receiving Medicaid to show that it can be done at the lowest level of reimbursement, according to Steve McAllily (2005). And more good news, the cost to residents to live in a Green House® with their own private room is cheaper than a private room at a typical nursing home (Baker, 2007).

“You can do this without spending more money for the same number of beds,” says administrator Les Parks of the Cottages at Brushy Creek of Greenville, South Carolina which are also small, residential-style homes providing skilled nursing services, although they are not Green Houses. He attributes this in part to the fact that residential construction is less expensive than commercial construction. “Materials and labor are cheaper. At the end of the day, it’s a wash,” Parks said in a 2007 Provider magazine article, adding that the \$172 per day private-pay rate at the Cottages is less than the rate at neighboring SNFs in traditional settings” (Smokler).

Three States Pass Legislation Regarding Green Houses

In three States, Arkansas, Oklahoma, and Wyoming, Green Houses have had such an impact the legislatures have passed legislation supporting the development of them as alternative nursing homes providing skilled nursing care.

Arkansas

Arkansas House Bills 1363 and 1364, signed into law March 2007, provide Arkansas' Office of Long Term Care the ability to provide support, staffing flexibility, and specialized reimbursements to organizations interested in creating a Green House® project or implementing an Eden Alternative program. House Bill 1363 amends Arkansas' Code relating to nursing home staffing standards to allow the Office of Long-Term Care to create separate staffing standards and reimbursement categories for Green House Projects or Eden Alternative homes as determined necessary (www.arkleg.state.ar.us/ftproot/bills/2007/public/HB1363.pdf).

House Bill 1364 amends the Arkansas Long Term Care Trust Fund, an account funded by nursing homes' civil monetary penalties, to allow the Director of the Office of Long-Term Care to use funds from the trust to "enhance the quality of life for long-term care facility residents through the adoption of principles and building designs established by the Eden Alternative or Green House® programs or other means" (www.arkleg.state.ar.us/ftproot/bills/2007/public/HB1364.pdf).

This use of civil monetary penalty (CMP) money in this way is supported by CMS as described in a Survey and Certification policy letter S&C-02-42 released 8/8/02. The letter states, "North Carolina and other states have issued grants to several nursing facilities to fund Eden Alternative Projects, which provide training and other services necessary to support the use of animals in nursing facilities for therapeutic purposes. Because CMP funds collected by a state are state funds, the state may use the money for any project that directly benefits facility residents...." See Appendix D for the Use of CMP Penalty Fine letter.

Oklahoma

In April 2007 Oklahoma Governor signed into law HB 1510 which gives the Commissioner of Health the ability to waive certain provisions of the Oklahoma Nursing Home Care Act if necessary to restore "individuals to a self-contained residence in the community that is designed like a private home and houses not more than 10 individuals" for skilled nursing care much like a Green House® (http://webserver1.lsb.state.ok.us/2007-8HB/HB1510_int.rtf).

Wyoming

Wyoming adopted the Long-Term Care Choices Act (SF89) February 2007 creating an "alternative elder care home" category of nursing homes and a feasibility grant to fund the exploration of one such alternative nursing home. The home is being defined as a fully

detached house for no more than 10 residents providing the highest level of care permitted under Wyoming law to Medicaid-supported residents. The residential home environment is to include private bedrooms and baths, a den, an open kitchen, an office for nurses, open access to all areas of the house, a secured patio, overhead lifts, a restraint-free environment, self-managed work teams of direct care and nursing staff, a home-base facility for the clinical support team members outside and separate from the house, and a “culture of learning and participation by the residents and honors the elder-hood stage of life” (www.legisweb.state.wy.us/2007/Engross/SF0089.pdf).

Chapter 7: Environmental Issues in Long Term Care

The following subsections highlight issues and research that are arising from looking closer at the environment where people live and happen to receive nursing care.

Private Rooms

The majority of resident rooms in nursing homes are what is referred to as “semi-private” meaning one room shared by two people. However, designers typically refer to these rooms as shared instead of semi-private. Gerontological designer Betsy Brawley says that most research, particularly in the last ten years, has shown that private bedrooms are more successful than shared and that “there is little doubt that private rooms are the preferred choice of most” (2006). Private bedrooms lead to improved sleep and fewer interventions needed to promote sleep at night, staff assistance with care can be provided more easily and it is easier to keep track of residents’ personal items (Brawley, 1997).

To understand the setting better, architect David Dillard experienced the nursing home for himself. He shares his experience as a resident of a nursing home in the third edition of the *Culture Change Now* magazine focused on design and its impact on culture change:

‘My head was about six feet from my roommate’s... I could not control the lighting from my bed.... I did not like sharing a bathroom.... This was one of the most awkward roommate situations I have experienced.... I didn’t expect to have a roommate, let alone one in advanced stages of Alzheimer’s... I had to reset my expectations for a good night’s sleep.’ For Dillard, sleep was nearly impossible. His roommate mumbled through the night and his room, its door open, was next to the nurses’ station. ‘I heard every nurse-call beep and conversation that transmitted from Grand Central Station all night long’ (2005).

Residents who were interviewed as part of the CMS Quality of Life study revealed that they greatly preferred private rooms to shared rooms. This research also showed that those facilities deemed to have high quality of life had the most private rooms (Kane et al, 2004). A 1996 study by the American Association of Retired Persons found that individuals over the age of 50 prefer a private room by a ratio of 20 to 1 (Baugh) which only replicates early research showing preference for private rooms found by Lawton and Bader in 1970.

Brawley also predicts baby boomers will insist on more space and storage than commonly offered by the standard nursing home room. Federal regulations at F458 require a minimum of only 80 sq. ft. per person for a shared room and only 100 sq. ft. for a private room. Brawley encourages people building nursing homes, “rather than design rooms for the absolute minimum amount of space possible, we must expand our thinking and design rooms that are sufficiently spacious to encourage a normalized lifestyle.... It is interesting that budget motels and even maximum security prisons provide far more square footage for their ‘guests’ than do most healthcare settings (1997).”

A 2005 study by Maggie Calkins gerontological researcher and Christine Cassella research associate, found overwhelming evidence supporting the benefits of private rooms including clinical, psychosocial and operational factors. Their study also found positive cost implications of constructing new homes with private rooms (2007). More on the results of this study will be presented at the April 3rd, 2008 *Creating Home* national symposium by Maggie Calkins.

The typical semi-private room only offers a cloth curtain for privacy. Some homes have made a commitment to privacy by designing shared rooms with a wall between the two sides of the room giving residents privacy while sharing a common bathroom and closet area. However, they are rare. For instance, of the 40 nursing homes in the Quality of Life study, only two had privacy enhanced shared rooms (Cutler et al, 2006). Privacy enhanced rooms are defined by the Society for the Advancement of Gerontological Environments (SAGE- more about SAGE can be found below) as rooms where residents can access their own space without trespassing through a roommate's space and feel like a private room. Other options include bookshelves, display cases, solid or half-height partition walls.

The University of Minnesota's Rosalie Kane said to *Provider* magazine, "The idea that a grown adult should have a roommate is ludicrous," adding that communal bathrooms also are a thing of the past (Smokler, 2007). Brawley calls it "an affront" by saying "for those accustomed to living at home, one of the greatest affronts often brought by long term care is lack of privacy," and she wisely foresees that "baby boomers will insist on private rooms" (2006).

The first Green Houses, Traceway in Tupelo, Mississippi, show that a preferred mode of living in a residential home with a private room and bathroom can be done under primarily Medicaid reimbursement with costs to residents cheaper than a private room at a typical nursing home (Baker, 2007). However, architect David Houglund of Perkins Eastman explains in Beth Baker's book *Old Age in a New Age* that most states' Medicaid programs reimburse construction costs only up to a point. Capital improvement reimbursements can be so low they compel nursing homes to limit the amount of space devoted to residents, making it virtually impossible to build all or almost all private rooms. Reimbursement is based on maximum square footage in the whole building per bed so includes bedroom, corridor, dining, offices, activity rooms, everything (Baker, 2007). Although most businesses do not receive reimbursement from the government, because nursing homes do, perhaps capital improvement reimbursement is an area for culture change advocates to investigate in their quest to provide home environments that include a greater number of private rooms. Each state has its own rules regarding Medicaid coverage. Most States only reimburse a nursing home for the cost of a semi-private room and will not pay extra for a private room unless medically necessary. The State of Michigan includes in their capital cost formula an additional \$5.00 per person per day for private rooms up to 100 beds (Calkins and Cassella, 2007). Thus, as in the case of Michigan, each State also has the ability to change their rules and make it more advantageous for nursing homes to offer private rooms.

The Federal regulations don't mandate private rooms, although residents certainly prefer them. Do we want the Federal Government to mandate private rooms for new construction? What about the cost implications?

Lighting and Glare

An issue receiving more and more attention by researchers and designers is lighting and glare. As the CMS Quality of Life study found, lighting levels were so low as to be equated with blindness in the 40 nursing homes observed. Lighting measurements in the study were often inadequate at the head of bed, sink and toilet in bathrooms, in shower rooms, at nurses' stations and in hallways making it difficult for both staff and residents to see at optimal level in order to complete tasks.

Researchers and designers like Brawley have discovered that thoughtful attention is often not given to the problem of glare in nursing homes, which is compounded by the loss of vision as we age. "If I could change just one thing, it would be the lighting" says Betsy Brawley in 2002. She then set out to assist long term care providers and designers by publishing two thorough books: *Designing for Alzheimer's Disease: Strategies for better care environments* in 1997 and ten years later, *Design Innovations for Aging and Alzheimer's: Creating Caring Environments* in 2006. Her extensive work is used in this section to draw attention to this important subject, and she will be presenting more detail at the April 3, 2008 *Creating Home* national symposium.

The pupil gets smaller as we age, allowing less light to reach the retina, which results in decreased vision. The aging eyes of a 60 year old require up to three times more light for tasks than the eyes of a healthy 20 year old, and by the time we reach 75 as much as five times more light may be required (Brawley, 2006). Additionally, the thickening and yellowing of the lens as we age reduces the amount of light entering the eye (Noell-Wagoner, 1992). According to Brawley, higher quality and quantities of appropriate lighting can help minimize the effects of normal aging vision and thus maximize our capabilities even as we age. Outcomes to residents living in long term care settings where light levels were increased well beyond recommended minimum light levels are: few sleep problems, less sun-downing, positive staff morale and the added bonus of a great marketing feature (Brawley, 2006).

According to Brawley, glare is a state in which bright light interferes with viewing something less bright. Glare and reflection can cause confusion, agitation and anger, inhibit activity and compromise safety. Glare is controlled by either increasing the brightness of the surroundings or decreasing the brightness of the source, or both. Surface brightness can be increased by illuminating the walls and ceiling and using lighter colors. Indirect light sources provide diffused light, which eliminates or reduces glare and contributes to visual comfort. Glare from windows can be concealed with translucent shades, blinds and valances on the inside or overhangs and awnings on the outside. Indirect light sources such as cove lighting (aimed toward the ceiling) and pendant fixtures (pendant shaped hanging lights that also aim light up toward the ceiling) are easier on the eyes and do not produce glare (2006).

Indirect lighting is rare in a nursing home. Instead the main source of light is direct light in the form of florescent overhead light bulbs. Many reflective surfaces also exist in a nursing home, the most predominant of which is the shiny buffed tile floors. Bright light contributes to eyestrain, headaches and makes it difficult for both staff and residents to accomplish tasks. Brawley teaches that necessary light for older eyes comes from raising light levels substantially, balancing natural light or daylight and electric light to achieve even light levels and eliminating glare (2006).

Many older adults, particularly those living in institutions, don't receive adequate exposure to bright light needed for the synchronization of their circadian system (Ancoli-Israel and Kripke, 1989). This is most likely due to the fact that the best source of bright light necessary for synchronization of the circadian system is daylight. And ironically, circadian disturbances are associated with, among other things, "increased risk of institutionalization" (Chen et al, 2003). Successful daylight designs use large daylight sources that keep the brightness out of the field of view such as skylights, facades with overhangs, awnings, windows, light shelves (windows with a horizontal surface at 90 degrees to the window glass bouncing daylight upward onto the ceiling and then down, thereby controlling glare), skylights, and clerestories (windows high on a wall directly below the ceiling) (Brawley, 2006). Brawley states that because lighting represents 40 to 50 percent of the energy costs of commercial buildings, incorporating daylight has energy efficiency benefits and provides strong "time of day" cues for persons needing them as well.

In a nursing home, it is common to find in each resident's room the insitutional over-the-bed three-way lights that are found in most hospital rooms. Installing lights that would be found in a home rather than in an institution is a fairly inexpensive change to make. Fairport Baptist Home simply replaced the over-the-bed three-way lights with homier lamp-style lights.

Eunice Noell-Waggoner, President of the Center for Design for an Aging Society, shares that where facilities tend to fall down is failing to provide general, even, consistent ambient light levels, often treating lighting as a decoration instead of a vital building design concept. A great idea she gives as a first step for facilities to improve lighting for their residents and staff is to call the local utility company, which will send someone out to measure light levels and give a baseline from which to start (Gold, 2004).

Calkins teaches that all sources of light should be shielded, so residents never look directly at a light source. She advises to have someone wheel you down the hallway in a semi-reclined position and look at the ceiling. Do you find light sources that need to be changed or shielded? Watch for flickering. Fluorescent lamps are prone to flicker, to which younger caregivers may not be sensitive but which may be very disturbing to older visitors and residents. She advises that the next step is to eliminate all overhead fixtures that direct light downward. Is there general ambient lighting? Providing multiple lamps gives the advantage of allowing lighting levels to be easily changed to suit different purposes and moods (Calkins, 2005).

As an advocate for proper lighting, Brawley makes a strong case: “Lighting can and will make a greater difference in the success of a healthcare setting than any other single feature except the healthcare itself” because “visual performance, ambiance, safety and security all depend on lighting” (2006).

**10 Steps to Successful Lighting:
Compensating for Changes in the Aging Eye**

1. Raise the level of illumination
2. Provide consistent and even light levels
3. Eliminate glare
4. Provide access to natural daylight
5. Provide gradual changes in light levels
6. Increase illuminance at task locations
7. Use indirect lighting
8. Improve color rendering
9. Use lighting controls
10. Develop a lighting maintenance schedule

Color

Color can make an environment much more user friendly in the sense of using it for contrast. Maggie Calkins teaches that appropriate use of color for contrast is probably more important than the colors themselves, especially for people with dementia.

Types of Contrast

- Contrast of hue is when two different hues such as red and blue are placed next to each other.
- Contrast of light and dark is when different tints and shades are placed next to each other.
- Contrast of cold and warm occurs when colors of different “temperatures” are placed next to each other such as orange which is warm and blue which is cool.

Calkins, 2003

Chair seats should contrast with the floor so people can see where the edge of the chair is. Sink basins should contrast with the counter top. Toilets and toilet seats should contrast with both the floor and walls to make them more visible. Table settings should provide high contrast between the plates such as a white or light color, with the table or tablecloth or placemat a dark color. Floors should avoid high contrasting bold patterns and borders. Color change at the floor of doorways is good, but if it is very distinct, handrails are best, as changes in hue and value often appear to be a change in level which people think they need to step over. Handrails and grab bars in contrasting colors also ensure they will be seen by a person with visual impairment (Calkins, 2003). Regarding color, Dr. Brawley adds, “Painting every room the same color instantly spells “institutional setting”” (2006). Many of us have experienced in our life time what a new paint color can do to a room, to our homes, and how it can lift our spirits. Model homes experiment with color, why not nursing homes?

Unaccommodating Seating

Designers of long term care buildings are pointing out that seating is not always as accommodating as it could be. Calkins reminds us that

In most peoples' homes, the chairs in the dining room are different than the chairs in the kitchen, or living room, or bedroom. Yet, in many facilities, once the designer has found, for instance, a "good chair" that meets both physical and aesthetic requirements, it is purchased in quantity and placed throughout the building. There are lots of good chairs available on the market, and incorporating several different designs (not just changing the fabrics) will help spaces have a more unique identity. Also, since people come in different sizes, so too should chairs. What is comfortable to a tall gentleman may not be suitable for a petite lady (2002).

Calkins also teaches us that while the Americans with Disabilities Act (ADA) recommends seating at 17.5 – 18.5 inches, this may be too high to be comfortable for shorter people. Having some chairs that are lower for shorter individuals and some chairs with higher and deeper seats for taller individuals will help to meet varied needs (Calkins, 2006). Brawley goes on to say hip joints can be shattered and broken when frail individuals attempt to rise from an inappropriate chair, and it can be difficult to rise from an upholstered chair if the seat is too deep. The new CMS interpretive guidance for Accidents, 42 CFR §483.25(h), Tag F323, effective August of 2007, even mentions furniture that is not appropriate for a resident (e.g. chairs or beds that are too low...) as an example of potential hazards.

Toilet Height and Placement

Toilets can also be too high for shorter people, as the ADA requires a seating height of 17 to 19 inches which does not allow for a short person's feet to touch the floor, according to Brawley. She suggests a 15 inch height works better, and a toilet riser can be added for taller people. Brawley points out that it is surprising that a toilet manufacturer has not refined a better design (2006).

In addition to the above, another example of ADA guidelines not in step with long term care needs is the placement of the toilet 18 inches away from the wall closest to the side of the toilet to support an independent transfer. Brawley writes that the ADA guidelines were developed based on the ability of young wheelchair users, primarily males with good upper body strength. Independent transfers are rare among frail elders who have more of a need for assistance with transfers. Therefore the 18 inch requirement does not create enough room for staff to assist the person with transferring. Brawley suggests that placing the toilet 36 inches from the wall provides the space needed. Moving arm grab bars are a great new solution since they can swing up and out of the way for the transfer and then swing down from the wall for someone to hold onto (Brawley, 2006). At the August 2007 Pioneer Network conference, Brawley also mentioned that although ADA requires round handrails, arthritis is so common, a broader, flatter handrail is better and the person can use their forearm as well. ADA became law in 1992.

Designers like Brawley recommend working with an architect experienced with the special needs of older adults (2007). Any architect working with a nursing home needs to consider the needs of the actual residents who will live there, and not just do whatever the ADA recommends.

ADA

Betsy Brawley explains that the inadequate ADA standards listed above are actually harmful to the older adults living in nursing homes (2008). In fact, Beverly Brandon of the American Institute of Architects made strong arguments already back in 1993 after ADA became law in 1992 that the ADA is “unresponsive to [the] needs of the elderly” and that its “shortcomings are numerous” (AAHA (former name of American Association of Homes and Services for the Aging) Provider News, 1993). The article states that although the ADA specifically references nursing homes under Medical Care Facilities section, it makes no reference to the “unique anthropometric characteristics of an older person either in a standing position, or walker, wheelchair or geriatric chair.” It also states that the guidelines are “based upon a young, physically fit, disabled male’s dimensions and anthropometrics.” Brawley adds that they were created with the disabled male Vietnam veteran in mind, not an older frail person living in a nursing home.

Lack of Access to Outdoor Spaces

Brawley states that outdoor spaces are often ignored during the design of new nursing homes or “value engineered” out of a project due to cost when “in reality outdoor spaces are especially important to persons sequestered in institutional settings.” Then when outdoor spaces do exist, amenities and access are often lacking, “yet we argue that outdoor spaces have the potential of increasing a resident’s quality of life and well-being...” (Brawley, 2006). Silverado Assisted Livings report that they have found “two hours of high intensity light in the morning greatly reduces unwanted behaviors later in the day,” and “utilizing the facilities’ outdoor spaces for sunlight and exercise has helped cut the use of psychotropic medications by 40 percent” (Gold, 2004).

The CMS Quality of Life study also examined the use of and access to outdoor space in the 40 facilities observed. It was found that although 97.5% of the facilities had an outdoor space, only 44.3% of the residents in these homes had access to the space. Of the 1,068 residents who were able to complete an interview regarding how often they get outdoors, 32.2 % went outdoors less than once a month, 13.4% less than once a week, 16.8 % about once a week, 15.8% several times a week and 21.8% everyday. Of 1,780 family responses, 43.3% indicated that their relative gets outside as much as they want but 34.7% indicated their relative doesn’t get out enough (0.3% indicated too much and 21.7% stated they did not know).

Even when outdoor areas existed, they often went unused: they were locked and residents were only “allowed” to use the outdoor space when escorted by a staff or family member or “on the rare occasion when outdoor activities were scheduled.” Or they were too far away from living areas for residents to get to independently, too small of a space, too close to

resident room windows making residents feel they were invading privacy, or residents reported that the spaces were “boring.” Paved walkways and benches - two features that enable residents to walk or push a wheelchair, and rest - were also often found lacking. In this study it was found that other ways facilities succeeded in getting residents outside were garden clubs, rides around campus and golf cart rides through the neighborhood. Golf carts afford the opportunity for fresh air, a covering, and a way to visit with neighbors.

As a former activity director, former surveyor, and now instructor of the activity professionals training course and culture change consultant, I encourage staff, activity staff in particular, to flip the common practice of always holding activities inside by creating an expectation that group activities will be held outside *unless* weather prohibits. This is a simple and efficient way for staff to afford the residents more opportunity to get outside while being present to provide any assistance or supervision needed.

The CMS Quality of Life study emphasized that there are no federal regulations mentioning outdoor space, and the survey process does not evaluate this.

Other than fire egress regulations, Federal regulations do not take into consideration outdoor spaces in the standards of 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 (Cutler and Kane, 2006).

Cutler and Kane go on to point out that CMS requirements include honoring resident choices (Self-determination and participation at 42 CFR §483.15 (b), Tag F242), accommodating the environment to meet individual needs and preferences (Accommodations of Need at 42 CFR §483.15 (e), Tag F246), and helping each resident to obtain their highest practicable quality of life (Quality of Life at 42 CFR §483.15, Tag F240). At the State level, if regulations pertaining to the outdoor environment are in place, most often they only apply to special care dementia units and emphasize the safety of the grounds (Cutler and Kane, 2006).

Of the many nursing homes I’ve walked up to, most are surrounded by grass, lots and lots of grass. Wouldn’t it be easy and not at all that expensive to create paths through that grass with benches and picnic tables, bird feeders and gardens? It was Bill Thomas and the first Eden Alternative home that began questioning this and instead replaced all that traditional, boring grass with blooming flowers and various vegetable gardens, with a forever changing interesting landscape to watch and be a part of if one so chose (1996).

Calkins and colleagues make a strong case for mandating easy outdoor access for persons living in locked secure units:

While this goal of safety is laudable, its execution must be reconsidered. The ethics of locking people up and giving them virtually no access to outdoor space needs to be examined. When these secure units are on upper floors of multi-level buildings, getting outside becomes a rare event. Staff is understandably busy with many care

giving tasks and the extra steps it requires just to get people outside may be more than they can manage. And this is considered acceptable. By contrast, in many States, prisoners – people who have committed crimes – are required to be allowed one hour in every 24 outside. It is the position of these authors that no secure unit should be considered acceptable unless it has direct, and at least partially unrestricted (during clement weather) access to a (secure) outdoor space (Calkins and Mardsen, 2003).

David Troxel, long time advocate for persons with Alzheimer's and co-author of the book *Best Friends Approach to Alzheimer Care* gives well-worth-repeating advice for staff to get residents outside:

Many long-term care communities advertise outdoor space as an important component of quality care... Yet when I visit many of these communities and tour the lovely gardens, I see the impressive architecture, lovely flowers, ponds, and fountains. There is only one thing missing – people! I have asked my friends working in long-term care settings why this is the case. Most acknowledge that these spaces are underutilized. Common reasons for underutilization include lack of outdoor furniture or an appropriate size patio area, space being too hot or too cold, excess glare, lack of staff to be with the residents outside, fear of falls, or just general apathy. When I asked these same individuals whether they would like to see more activities outside, all say yes.

Here are some of his suggestions for rediscovering your outdoor spaces:

Assess the space. Go outside and spend some time by yourself in your program's outdoor space. Is it pleasant for you to be outside? If there are problems, how can they be corrected? Sometimes, inexpensive outdoor furniture with adjustable umbrellas can do the trick.

Talk to staff about your expectation. Program leaders should give staff clear directions that residents should be encouraged to be out of doors daily if weather allows. As with any staff role, to experience success program managers should model the task by taking residents outside for activities and even holding staff meetings on a patio to discuss the benefits of being outside.

Create an outside activity program.

When individuals who have led a productive life have nothing to do, or not enough to do, it leads to frustration, anger, and other emotions that can lead to challenging behaviors. Being out-of-doors helps a person with dementia experience sensory stimulation that is often comforting. Being out-of-doors also uses up excess energy. Take a half hour in a staff meeting to brainstorm 50 things that could be done outside on a nice day.

Doing nothing is doing something.

Sitting on a park bench or outside provides staff members with an excellent opportunity to be one-on-one with a resident. Conversation can build around the sights, sounds, and smells of the outdoor space, even distant views of airplanes (Troxel, 2005).

Betsy Brawley sums it up by saying, “With little or no access to the outdoors or healthy fresh air and sunshine, it’s difficult to see how this environment contributes to a better quality of life” (Brawley, 2006). So what might it take to ensure that residents do get outdoors? Will it take a requirement or regulation much like the one mentioned here above that prisoners are required to be allowed one hour in every 24 hours to go outside if they so desire?

The Bathing Environment

The typical bathing environment in a nursing home tends to be very institutional as Brawley summarizes:

Until recently, bathing environments have been perhaps the least sensitively thought out and most poorly designed spaces in care settings.... Limited lighting and limitless expanses of ceramic tile create noisy environments for aging persons who experience difficulty seeing and hearing. These indignities and being expected to disrobe in a cold room with the overall ambiance of a storage cellar have combined to overwhelm, confuse, and anger unfortunate and unsuspecting residents... (Brawley, 2006).

Brawley offers many ideas to warm the bathing environment in every way. Simple decor can make the bathroom feel more like one is at home. Privacy can be enhanced with private dressing and grooming areas, a private bathroom and foldable screens if nothing else. Slip-resistant vinyl flooring in wet areas combined with moisture-barrier carpet in the dressing and grooming areas can reduce the amount of hard-surface ceramic tile and thereby both noise and any injury from falls. Moisture-resistant acoustical ceiling tiles designed specifically for humid conditions can also help reduce noise. Window treatments, shower curtains, towels and other soft items can add color and life to the space and absorb noise. Ideally, separate temperature controls in the bathing area allow staff to adjust room temperature during bathing and to ensure the room is warm and comfortable when a resident arrives. Windows and skylights can bring daylight and warmth from the sun, indirect cove lighting or pendant fixtures with dimming options are more relaxing and easier on older eyes and a light fixture that provides sufficient light in the shower is very important (Brawley, 2006). Sufficient lighting is even more important in the bathing environment since most people remove their glasses while showering and bathing (AOA, 2006).

Temperature is important to the comfort of anyone being bathed, but older people especially are sensitive to drafts and easily chilled. When taking a shower, anyone is likely to have a significant amount of exposed, wet skin which can quickly feel cold. Also, many of the tubs used in long term care settings only cover the bather from the waist down, leaving the upper portion of the body wet and exposed to drafts and chills. Thus, researcher and designer Maggie Calkins recommends every bathing room be equipped with an extra source of heat. If the caregiver is overly warm, almost to the point of sweating, the temperature is probably about right for the older person being bathed (Calkins, 2003). Common sources of heat include heat lamps or radiant heat panels. However, additional heat sources in bathing rooms are not all that common. Only 15% of the 1,988 homes in the CMS Quality of Life study had heat lamps (Cutler et al, 2006).

Homes need to ensure that no heat source is a potential fire hazard. One obvious rule of thumb is to never use products with any exposed heating elements anywhere, especially in a bathing room. Calkins cautions that all heating elements should be mounted permanently to a wall or ceiling and wired into the facility electrical system to avoid any possibility of coming in contact with water (Calkins et al, 2001).

Ambient Room Temperatures

Ask anyone working in a nursing home and they will tell you that older people prefer warmer temperatures. Older people tend to also be more sensitive to drafts. Calkins therefore recommends that forced air systems be designed so vents do not blow air across the room, particularly to areas where residents are likely to be sitting or lying for extended periods of time. Again, although staff members who are physically working hard may perceive it to be uncomfortably warm, “efforts should be made to keep the ambient temperature to the residents’ liking” (Calkins, 2005). Staff putting the needs of residents above theirs such as this, is a good example of resident-centered care.

Nursing Home Noise

Daily life in a nursing home often includes a cacophony of noises: overhead paging, call lights beeping, carts rolling down the halls, medication cart drawers opening and closing, pills crushing, wheelchairs and walkers, staff beckoning for each other, ice machines churning out ice, buffers buffing floors, vacuums, carpet extractors, door alarms sounding when some residents try to exit a unit or the facility, personal alarms sounding when some residents rise from their beds or chairs, televisions blaring, piped in music and more “With the alarms going off and bells and whistles ... I could barely hear others talk,” said Grant Warner, architect who experienced the nursing home environment for himself (Shaeffer, 2005).

The Occupational Safety and Health Administration (OSHA) has guidelines to protect workers from noise. OSHA requires protection and only short durations of exposure when the average noise level is greater than 85 decibels (dB). According to Ulrich and Zimring, daytime noise levels in many healthcare settings can range from 65 to 95 dB or higher, sometimes up to 85 dB in the evening. Both the Environmental Protection Agency (EPA) and the World Health Organization suggest that an evening decibel level be approximately 35 dB (2004). Brawley reports that ice machines and even machines that distribute juices and soft drinks “rattle and roll” at pitches of 85-90 dB. She also points out that as the number of people in any setting increases, so does the noise (Brawley, 2006). People will speak 15 decibels or 150 percent louder than the background noise to be understood (Mazer, 2002). Brawley says, “It’s interesting that the workplace environment is protected, but the healthcare settings for residents and patients we refer to as healing environments are not. What’s wrong with this picture?” (Brawley, 2006).

Noise is disorienting to older adults, especially those who are hearing impaired. Hearing loss is the third most prevalent chronic condition in older Americans according to Cruickshanks

et al (1998) affecting more than 80 percent of persons 80 and older, according to the U.S. Census Bureau. And if the diminished ability to hear and communicate wasn't frustrating enough, it also correlates strongly with depression according to Yueh et al (2003).

Brawley indicates that when background noises merge with human voices life gets louder and fainter, and especially more confusing, all at the same time (2006). "When it [noise] deprives them [persons who are hearing impaired] of hearing and impairs what little ability they retain to understand language, it is both abusive and a safety hazard. Until we improve the acoustic environment and eliminate disruptive noise that intrudes on the everyday life of frail and elderly adults, we will never be able to describe healthcare settings as healing environments" (Brawley, 2006).

The surfaces in the long term care environment namely floors, walls and ceilings are usually hard and sound-reflecting versus sound-absorbing. There are numerous ways to absorb sound and minimize sound all together.

According to various environmental researchers, carpet offers many advantages. Carpeted floors help temper sound whereas hard-surface floors allow sound to bounce from one hard surface to another. According to the Carpet and Rug Institute, carpet is ten times more efficient in reducing and absorbing noise than hard surfaces (Maddox, 2006). Background noise can be reduced by 70% when carpet is added to a room according to Baucom (1996). According to Taylor, it has been shown that carpet has no greater bacterial or fungal growth than hard-surface floors and moisture-barrier backing and permanently welded seams resist moisture and prevent mold (2001). Impervious backing keeps spills on the surface preventing them from passing through to the sub floor and contaminating it as in the case of urine. Carpet also provides comfort for residents, visitors and staff who spend many hours on their feet (Brawley, 2006). Wall carpet (a special acoustical wall covering, not regular carpet put on the wall) is successful in areas with noisy equipment. Sound-absorbing ceiling tiles deflect sound that travels through ductwork, under doors and through cracks in rooms. A study by the Karolinska Institute of Medicine in Sweden found that sound-absorbing ceiling tiles diminished both overall average and peak noise levels. Results found were improved sleep and patient satisfaction with care. Under the noisier conditions, staff reported more stress and fatigue and considered their work more demanding (Dubbs, 2004). In addition, use of drapes and acoustic panels on walls help to absorb noise.

Many practices within the nursing home create noise. However, for every cause of noise there are creative ways to successfully minimize it. Instead of loud call bells or beeping to alert staff of a resident's whereabouts, technology has provided us with silent alerts and direct communication to staff pagers or cell phones. However, some state licensure regulations will not allow for this attempt to reduce noise as they continue to require auditory call bell systems. This is an area where States could make a difference in quality of life by making allowances for various methods of contacting staff (Calkins, 2005). In fact, not only do these sorts of systems reduce noise levels, they also create more efficient communication. Residents contact staff immediately when they use their call bell that is connected to portable pagers carried by staff instead of being dependent on staff to see a blinking light or hear a beeping bell from the nurses' station only.

Brawley gives the idea to install separate switches for the bathroom light and bathroom fan which can greatly reduce the sometimes constant noise from bathroom exhaust fans (2006). Believe or not, there is such a thing as “quiet vacuums” - vacuums rated at decibel levels below the sound level of normal conversation (Calkins et al, 2001). However, Brawley cautions that they do not always live up to their name. She goes on to suggest that sound ratings should be considered when purchasing new equipment and nursing homes should hold vendors and manufacturers accountable for the auditory impact of their equipment in the same way that other safety and efficiency factors are rated. Facility staff can also do their part to coordinate cleaning schedules to the best times for minimizing the noise impact on residents (2006).

Homes that have undergone deep systems change have affected the noise level for the good. When Beth Baker visited Meadowlark Hills in Manhattan, Kansas she noted “I heard nothing but the sounds of home: the splash of juice being poured, the clink of silverware, conversation, soft laughter. As Steve Shields said, what was perhaps most striking was what was absent: no beepers, no disembodied voices over paging systems, no clatter of carts rumbling through halls” (Baker, 2007). What if we made this our goal? To create as a new definition of noise in a nursing home the pure sounds of home.

Carts = Institution, Ways to Get Rid of Them

Pioneers ridding themselves of all hallmarks of the institution have found simple ways to eliminate the over usage of carts. Fairport Baptist built cabinets for incontinence products and linens, eliminating the need for linen carts. Fairport also built locked medication storage cabinets in their renovated rooms. Even before any renovation, Perham Memorial Home in Perham, Minnesota bought kitchen cabinets from a home improvement store. In each resident room, they turned one on its side mounted it to a wall in an alcove above a dresser, put in a lock and created a space where two resident’s medications could be kept locked in their room. Both homes are proud they no longer use medication carts.

Calkins and Mardsen advocate using enclosed laundry hampers in each resident’s room and emptying them frequently. This, they say, is a much better substitute for “large soiled [linen] carts kept in the hallways all morning” (Calkins and Mardsen, 2003). Another idea is to create similar cabinet space, perhaps in resident bathrooms or toilet

“Rolling laundry bins, medicine and food carts... ‘Everything looks like it is coming very close and it is very scary...I felt someone was going to run over me with this huge equipment’ said Emi Kiyota, who lived as resident for a month as part of her master’s thesis (Schaeffer, 2005).

rooms, where toilet paper and paper towels could be kept along with housekeeping supplies in a locked area. In my experience as a culture change consultant, even housekeepers have offered to keep housekeeping supplies in such a built-in locked cabinet in a resident room or bathroom in order to eliminate the housekeeping carts too. Many nursing home room designs have a sink in the bedroom, creating a small room with only the toilet or a “toilet room” which is also institutional and unfamiliar to most of us.

Closets

Closets in nursing homes typically represent three problems: lighting, accessibility, and space. Many of us have ended up with one black shoe and one brown shoe after getting dressed in the dark. But, as Calkins wisely points out, we don't end up worrying we may have dementia. This begs the question, what behaviors do we blame on dementia and which behaviors might be due to something as simple as not being able to see in the dark? Calkins encourages staff to wear a pair of dark sunglasses smeared with petroleum jelly and then try to select matching clothing from a nursing home room closet. If more light is needed, there are a variety of options. A light can be installed that turns on automatically when the door is opened. Battery-powered lights with built in motion detectors cost about \$20.00 and if nothing else, a wall-mounted light or table lamp near the closet can provide extra light (Calkins et al, 2001). Many residents cannot reach the hanging clothes in their closet, especially those residents who are dependent upon wheelchairs to get around. Only 6.7% of the homes in the CMS Quality of Life study had closet rods 3-4 feet from the floor (Kane et al, 2004). And it almost goes without saying that a small closet about 3 feet wide cannot hold the majority of most people's clothes.

Spaces

In the CMS Quality of Life study, only 12% of the 83 dining rooms that were studied were dedicated solely for dining, which means 88% were dining rooms that were shared for other purposes, namely activities (Cutler et al, 2006). This means in many cases there is no separate activity area for residents. And even when there is, activity spaces are rarely designed intentionally for activity programming. Often there is no running water, limiting many activities like painting, cooking and even cleaning up. Storage space is rarely adequate, and shelving is generic, not accommodating supplies of varying sizes such as large balls and other sports equipment (Brawley, 2007).

Long Corridors

As a result of her nursing home experience, Emi Kiyota shares, "Daily activities were scattered around the building and I had to wheel down long corridors to go anywhere. I began to stay more and more in my room because I was tired of wheeling to places" (Schaeffer, 2005). This happened to a young woman. Imagine how older people feel. The Green House® Research study that also proved this point in that the smaller setting is actually helping people get out of wheelchairs and walk again (Kane et al, 2007).

Technology

Technology continues to enhance our lives daily. It begs the question, however, are we using technology at its optimal level to enhance the lives of people living and working in long term care? The use of the latest technology does not seem to be very prevalent in nursing homes. However, one assisted living facility is taking the lead in this area. Oatfield Estates, an innovative assisted-living community outside Portland, Oregon is highlighted in Beth Baker's book for its high technology. Oatfield combines large two-story houses with ten

private bedrooms and baths, organic gardens, and spectacular mountain views with the latest technology to keep residents safe. Through electronic sensors, staff can tell when a person at risk of falling gets out of bed. The system can be programmed to automatically turn on low lights at night to show the way to the bathroom, or to automatically turn off a stove if a person with memory loss comes near it. There are no locks or fences; giving residents freedom to go wherever they want whenever they want thanks to badges that discreetly signal when one leaves the property (Baker, 2007).

Not only is Oatfield known for its use of technology but also for integrating it deeply into its routines. Wall Street Journal reporter Sue Shellenbarger spent time as a resident at Oatfield. She found that security cameras mark campus boundaries, residents wear transponders around their necks that triple as alarms, room keys, and location monitors, and beds are wired to detect occupants' movements. She points out that Oatfield's warm social environment makes up for any sense of high-tech dehumanization one might feel from being monitored in a Big Brother fashion. She calls it Oatfield's biggest tradeoff: putting up with the annoyance of technology in return for freedom of movement. "To me," she says, "it's no contest. Keeping the right to take a stroll far outweighs the aggravation of being monitored. Several residents, I soon learn, see it the same way, having moved from nursing homes with locked wards to the relative freedom of this high-tech world" (Shellenbarger, 2007).

Decor: Resident-chosen or "Decorator-designed?"

"Decor is usually described as being more homelike, though in truth many facilities resemble decorator-designed hotels more than the casual and cluttered look of most homes" (Calkins, 2003). However, Calkins goes on to say "... most peoples' homes are not decorator designed. Rather they reflect the accumulation of a lifetime. Being surrounded by familiar possessions, particularly ones that have important sentimental value, is an important part of feeling comfortable and 'at home'" (Calkins, 2002).

"How can it be your living room if there is none of your furniture or artwork or decorations in it? Rooms that are decorated by others, down to the artwork, will never feel like home. Being able to sit in your own favorite, familiar chair in the lounge can make a place feel more like home. Seeing your own china cupboard makes it even more like home. Drinking tea out of your favorite tea cup may make all the difference in the world" (Calkins, 2002).

Such wise words from Maggie Calkins. Calkins serves as a teacher in this quest to create home that reflects the people living in it and advises:

The first step to giving a feeling of home is to provide as little furniture as possible. Encourage people to bring their own furniture, and only supply what they are unwilling or unable to bring. Second, be sure there are places to display items, ideally places that are somewhat out of the way or are secured. Many facilities are adding plate shelves 5 ½ to 7 feet up the wall – still visible without being too accessible. Others are providing display cases behind glass (Calkins, 2003).

Calkins encourages providers to consider what furniture and display items residents can provide in shared living spaces:

The decor may be somewhat eclectic, but it can also promote the sense that this is their space. Some facilities have had great success letting residents bring in their favorite chair for the living room, while others have found this caused problems when someone other than the “owner” sat in it. This may need to be tried out on an individual basis. And there will be problems with some chairs and fire regulations (which vary from State to State). It is sometimes possible to have cushions treated sufficiently to make them flame retardant and suitable for bringing into the facility (Calkins and Mardsen, 2003).

Emi Kiyota who lived as a resident for a month discovered that common areas decorated primarily by staff were rarely used by residents and had little impact on their lives. She found that residents preferred their own rooms with their personal things, where they had more control and emotional attachment. As a result, common areas contained nothing familiar or meaningful to residents or were unaccommodating. For example, many birdcages and plants were placed higher than residents with wheelchairs could see and touch. Creating common spaces to appeal to everyone’s tastes and that include residents’ personal decorative items is no doubt challenging. Emi suggests as a starting place to at least be flexible in how areas are designed and with facility policies, not just saying it is “against policy” (*Culture Change Now*, 2005).

Uniformity, often seen in most nursing homes is considered a mark of the institution. As Calkins and Mardsen indicate, this is not reflective of home:

In most homes, different rooms serve different purposes, and are designed to look very different. Seldom does a person have the same chair in the dining room as in their bedroom and their living room. Institutions, on the other hand, are marked by a uniformity of both furniture and design. All wall treatment is the same, or so coordinated that it’s hard to tell one space from the next. When a well designed chair is found, it is used everywhere: in the bedroom, in the dining room, in the activity room. But this approach to interior design will not make a place feel like home. Making rooms feel very different – light and airy versus warm, rich earth tones – also gives residents a sense that the spaces available to them are different. If there are three or four different shared spaces, but they all look and feel alike, and are about the same size, what does it matter if you are in one versus another? When the rooms vary not only in size, but in overall decor, they add to the feeling of choice” (Calkins and Mardsen, 2003).

Roger Hamilton, administrator at Littleton Manor in Littleton, Colorado was interviewed by the Colorado National Public Radio September of 2006 and said it so simply yet eloquently when he in essence said, “Why should I pick the paint? I don’t live here and if I pick a color my residents don’t like, I’ll hear about it anyway. So, why should I pick the paint?”

It is normal for people to pick the paint in their own home yet this normalcy is so often not afforded to residents living in nursing homes. There are many other traditions in nursing homes regarding decor that are also not reflective of normal living in a home. Linda Case, activity director at Littleton Manor said at a Colorado Eden registered homes meeting June 2007, “We don’t have bulletin boards in our homes. What do we have? Pictures in picture frames. So, we have been replacing the bulletin boards with what is more normal.” Similarly, most of us do not decorate our own homes for the holiday season with paper decorations or crepe paper. In our homes, we decorate with seasonal decorations – candles, picture frames, and decorative items specific to the season (Nolta, 2007). Perhaps the facility van or bus could be considered part of the environment. Our personal cars are certainly important to most of us. The current custom of having the nursing home’s name emblazoned across the van is institutional and favors the chance to advertise the home over normalcy. Karen Schoeneman points out it is not common practice to have our names emblazoned on our cars, making this another practice unnatural to home (2007). Part of home is having an address. Some homes around the country have honored home by identifying each resident’s room or portion of room with a unique address giving back the normal custom of receiving mail at a personal address.

At Pueblo Extended Care Facility in Pueblo, Colorado, decor consists of pictures of Pueblo during the various seasons, original artwork depicting Pueblo by local artists and other decor that goes along with the resident-chosen neighborhood names and themes: Walking Stick Lane, River Walk Drive, and Steel City Boulevard. Even a blast furnace used in the steel mills serves as the base for a low nurses’ station. Residents have said, “I feel so much like I’m in Pueblo when I’m here.” Perham Memorial Home invited the Perham community through the local newspaper to donate items unique to their small town in northern Minnesota. Donated were items such as hand-made winter skis, antiques and black and white pictures of Perham’s early days. In fact, the staff had fun replicating one such old black and white picture of two women. Two current female staff members were photographed in the exact same stance leaning against the same light pole in their small town. Perham Memorial reminds us not to forget to have a little fun!

Maggie Calkins encourages nursing home leaders to take an honest look at what their building is saying:

“What is your environment saying to the people who use it? Take a critical look – don’t do this simply from memory while sitting at your desk. Get out there and really look at it to see if you can read what it is saying to you – and to your residents and family members. Start out in the parking lot with the exterior of the building. If you were driving up for the first time – maybe considering a move here for yourself or a family member – what impression does the building give you? Does it look like a multi-story institution, or maybe a hospital? Is there a place (or are there enough places) near the entrance for visitors to park, or are the choice spots reserved for the administrator and doctors? What does this tell you about who the facility values and wants to please? Does the landscaping look like it belongs in front of an office building or in front of a home? (Calkins, 2003).

Although all residents and family members are told they are welcome to personalize the resident's room, many do not. Perhaps they forget or get busy. In my experience, staff relay to me over and over again that they did invite residents and families to personalize the room. Charter schools apparently place an expectation on parents, and even have them commit to volunteer so many hours in their child's class per school year. What if we were to borrow from the charter school movement and place some sort of expectation on residents and/or their family/responsible parties to help us know this person almost as well as they know them? It would be impressive and honoring to tell residents and/or family members that we want to know them/their relative as well as they do but we need their help. Help us get to know this person who is new to us by filling their room with artifacts, with special items to them, with created works, with pictures. When we are caring for this new person, give us as many clues to who this person is as you possibly can so we can interact meaningfully and not just give care. Norton and Shields say, "We recommend you emphasize to residents and families the importance of bringing residents' personal belongings. Often, family members consider dispersing the loved one's belongings before moving the elder to a nursing home. Encourage them instead to bring meaningful artifacts to help complete the elder's new home" (Norton and Shields, 2007). And Calkins adds, "Policies should not only 'allow' residents and family members to personalize spaces but also should strongly encourage them to do so" (Calkins, 1995). This, however, may not apply to the person who is only at the nursing home for a short-stay with no desire to personalize a room since they are working hard to return to their home.

"Privacy Curtains"

Calkins calls it "the ubiquitous but misnamed 'privacy curtain'" because it does little to provide true privacy between people. She also points out that in the SAGE Postoccupancy Evaluation, if all there is between two roommates' space in a shared room is the typical privacy curtain it is actually rated as a negative feature. Alternatives are recommended such as solid partitions some of which are used for display of personal possessions (Calkins, 2005). Professor Schwarz puts it this way, "After 80+ years of living in their own homes, people are put in "semi-private" rooms - truly an oxymoron - and expected to be enthused about the prospect of spending the rest of their lives with a stranger, separated only by a partition that provides minimal visual privacy and seriously compromises all other forms of privacy" (1996). "A privacy curtain just does not afford either person acoustic, olfactory or thermal privacy" (Calkins et al, 2001). A "privacy curtain" is indeed required but that is all that is required. This requirement at 42 CFR §483.70 (d)(1)(iv), Tag F460 only requires visual privacy. It seems that a flimsy cloth curtain is really no privacy at all and totally incongruent with providing the most optimal quality of life or highest practicable level of well-being possible and thus an area in great need of discussion.

Unlived and Inhospitable Spaces

Carboni identified unlived space as a mark of homelessness. Unlived - meaning not used and not mine. We don't very often see residents sitting on the nursing home furniture or sleeping on the nursing home couches, which seems to be coming to be known as somewhat of a litmus test for achieving home. Why don't residents use common spaces? Is it the design of

the institution? Is it the facility rules? Is it the furniture itself? Is it that there is nothing to do? Or is it that residents feel they are not invited to make that space their home?

At the Village Health Center in Indianola, Iowa, residents frequently listed the opportunity to entertain family and friends as part of their concept of 'home' during training sessions with culture change expert LaVrene Norton. She describes a party that was held to redecorate and redesign:

Residents took control, giving instructions as tables and chairs were pulled from the little-used lounges at the ends of the halls. Throw-pillows and afghans were strewn about. A piano ... was wheeled into the new 'family room.' Refreshments and jigsaw puzzles were placed on tables. Eventually, the space liberated from the nurses' station will serve as living room and kitchen areas for two wings of the building that will be remodeled into households. For now, the area remains a favorite gathering site. Nursing home residents leave their rooms to mingle here with independent living residents and family members, play the piano and sing, assemble jigsaw puzzles, and participate in learning circles. Workers who previously were hidden behind the nurses' station now work among the residents, often stopping to visit with elders and play cards. 'It's a really casual thing that a family would do in a home, says Ruehle. It's a whole new level of interaction.' Instead of that old nurses' station, there are now staff offices for more private conversations regarding resident needs and conditions, for charting, staff now sit at tables in the living rooms (*Culture Change Now*, 2005).

Involving residents and care givers in determining use of space, that is so often the missing link in my experience. They each know how and have specific ideas to create lived space. We must simply ask them and include them.

Several culture changing nursing homes have recognized the value of creating meaningful gathering spaces such as coffee shops and general stores where coffee and food is sold to visitors and available to residents at no charge. Besides a sit-down restaurant style dining room, Teresian House in Albany, NY has a cocktail lounge where residents can "treat" their guests to restaurant foods as well as alcoholic beverages. The General Store at Fairacres in Greeley, Colorado has hot dogs and popcorn for sale in a country store setting where residents and visitors can dine and shop much like the Cracker Barrel restaurants. Providence Mt. St. Vincent in Seattle, Washington has an espresso bar in the gift shop, plus a cafeteria, plus a morning room with continental breakfast. In fact, the Mount, which is an older, large home with a traditional layout, was redesigned from the typical long narrow halls into a lively Main Street with lots of gathering spaces also including a thrift shop, pharmacy, beauty parlor and child day care. In-house architect Dyke Turner points out that prior to the remodel all there was for gathering space was the large dining room and some activity space. "You need common space for people to interact. If you don't, then you don't really have private space either – you have places of isolation instead" (Baker, 2007)

In Practical Strategies to Transform Nursing Home Environments: Towards Better Quality of Life, created for the Rhode Island Quality Improvement Organization by Cutler and Kane,

nursing homes are encouraged to create just such a gathering space that might function like a neighborhood coffee shop. In our communities, this is a place away from your home you have to travel to for the purpose of enjoying a treat, the company of others or just a change of scenery. Such a space could be fun to create with bistro style furniture and table umbrellas. Other meaningful, hospitable or lived spaces to consider might be a game room/area, post office area, bank, or vending area with tables and chairs (2005).

Miguette Kaup points out that most nursing homes have one large room where a majority of activities occur, including the three meals a day. “Staff is often reluctant to exchange these spaces for several smaller ones because the multipurpose room is a major component of the long-standing history of life in the nursing home.” She points out that we often think we need that large room for large events “. . . but do we design spaces around one or two days of the year or the other 363?” Kaup states that the residential pattern of life includes small groups of family and friends and meaningful one-on-one connections and that gerontological research shows people with vision or hearing loss can function better when information is closer to them. A large room brings in lots of extraneous auditory and visual stimulation. She states it seems we assume these functional needs disappear when the children’s choir comes at Christmas or when a large group of residents eats a meal in a big space at one time. “When we have a party in the house, it’s crowded, but it’s only for a short time and if the party is too big for the house, then we go to another location” (2005). A facility could ask itself, what is more important, the large room only used on occasion or smaller areas where people can interact on a daily basis?

Home is for Hosting

“Home is hosting a special meal for the extended family. . . friends just dropping in. . . the son stopping by on a Sunday afternoon, grabbing a beer from the refrigerator and watching the football game with Mom,” says Action Pact’s LaVrene Norton. A household model that provides residents with a private room and kitchenette may be the optimum hosting environment for these types of activities. But, every stage of culture change presents opportunities to create smaller, cozier spaces where families and friends may socialize. For example, says Norton, try making the personal laundry room a little friendlier with wall hangings, a table, chairs and cabinet full of toys and games so residents may visit with family members while washing clothes. It not only creates a friendly hosting place but also combines social interaction with familiar tasks for residents to accomplish” (Schaeffer, 2005). Norton also teaches that if a person has been known all her life for baking cinnamon rolls, we should be enabling her to continue this part of who she is. Access to a kitchen is necessary to accomplish this.

When Norton asked a group of residents what home means to them, one resident stated “. . . in your home, visitors don’t have to sit on the bed” (Baker, 2007). And Steve McAllilly, administrator of the first Green Houses, connected how the environment either supports living or takes away from it when he told Beth Baker, “The environment creates opportunities and space for life, for living. What is it like to struggle across a room rather than be plopped in a wheelchair? Struggle is important for life” (Baker, 2007). By struggle, McAllilly means its better in a small home for one to be able to walk from a couch to a chair

to a table and “struggle” to get across the room independently rather than be “put” in a wheelchair making it easier for staff to get someone somewhere faster. From these examples it seems that a chair for a guest in a resident’s room, or to be able to walk instead of be pushed are simple requests for living.

Resident Rights Regarding Their Home

The term “resident” is used in the OBRA language instead of “patient” on purpose. Patient implies short term - I’m receiving care in a medical institution for an acute reason, and perhaps I have given up some rights willingly due to my need to medical treatment, but I will be returning home hopefully sooner than later. “Resident” was chosen purposefully and was actually one of the major themes of the OBRA ’87 law as indicated in the Federal Register February 2, 1989, General Comments on the Resident Rights Requirements as a Whole: “Our use of the term ‘resident’ is based upon the IoM’s recommendation to emphasize the concept of a nursing home as a place of residence for its clients.” As referred to earlier in this paper, the Institute of Medicine convened an expert panel to look at quality of life and care in nursing homes which became the basis for OBRA ’87 and gave this important recommendation.

“Resident” means you have the same rights as any person has in their own home. LaVrene Norton often refers to “refrigerator rights.” A person living in a nursing home has the right to help themselves to whatever is in the refrigerator just as in their own home. Having refrigerator rights is often not possible in the traditional, institutional design, but as homes remodel into households, a key part of the design change is to provide access to the household’s refrigerator for residents. Resident rights go even deeper than to imply “I should be able to cook or bake whenever I choose.” Keith Schaeffer identifies in an article about design, “Access to my home – so much of it is taken away from the people who live in a nursing home. The kitchen is off limits; only staff is allowed” (Schaeffer, 2005). In my experience as a surveyor, I have even seen signs in dining rooms stating: “No staff may eat in the dining room with residents.” We trust staff to bathe residents and help them in the bathroom, why wouldn’t we trust them to eat beside them? Around the country thoughtful staff are making it work for people living in nursing homes to peel potatoes in the kitchen just as they spent a good portion of their lives doing if they so choose. It goes without saying that safety and infection control considerations always apply but that they do not prohibit these very normal home activities.

Although the right to personalize my room is written into the CMS regulations, is often not made possible by the facility. Policies or space issues deny many this important right. So much is given up prior to moving into a nursing home, we need to uphold this right in every possible way. “Nursing homes need to recognize the importance of these belongings, not treating them as objects we “allow” residents to bring with them, but as part of their right to continue to create an environment that they find suitable and worth living in” (Calkins, 1997). There is typically a rule in most nursing homes that you can’t even put a nail in the wall – “it’s policy” you will be told. Of course, in some apartments, this is also true.

Instead, most homes give each resident a small bulletin board for their personal effects. In a video about resident rights from Canada that is now out of circulation, there is a maintenance director talking to a family member in the presence of a new resident. He is telling them that they were allowed only to place pictures on a 12 by 12 square inch bulletin board. The family member cried, as there would not be enough room on this small board for pictures of the resident's three daughters. I would too. Some people are moving in for life and all we give them is a bulletin board? This is an example of facility-made rules, not regulations, typical of institutionalized culture. Karen Schoeneman of CMS historically has told surveyors in the CMS Basic Surveyor training, "You'll know a lot about a place if they have the rule, 'no nails in the wall.'" Residents of some homes transforming their cultures have voted to call the Resident Council the Home Owner's Association instead. Now that starts to get at it - residents own that half a room and have the right to do with it what they want. It is not difficult to spackle and touch up the small holes left by nails after a resident leaves. And who knows, Karen points out, maybe it would be a good idea to leave the nails there, in case the next owner of the room wants to use them. In fact, this issue is such a marker of the old institutional way of thinking that it was even identified as an item on the CMS Artifacts of Culture Change tool (more about the Artifacts tool can be found toward the end of this paper):

#25. Home has no rule prohibiting, and residents are welcome, to decorate their rooms any way they wish including using nails, tape, screws, etc.

SAGE has created a useful evaluation to determine livability of a setting after residents live there for a while. In the SAGE Post-occupancy Evaluation, personalization is given great importance:

Part of what differentiates a house from a home is the presence of personal belongings, collected over a lifetime, imbued with meaning and memories – an expression of self. For long-stay residents, many of whom have given up their homes in the community, the ability to continue to be surrounded by their own possessions is key to maintaining their identity and sense of self. Consider the organization's policies about what can be brought in, and where it can be placed. Can residents hang as many pictures on the walls of their rooms as they like? Will the facility store its furniture so that residents can have their own furniture in their room? Does the facility encourage residents to place their possessions in the shared living areas, such as a wall cupboard or piano or larger artwork that might not fit within the bedroom/apartment? (Calkins, 2005).

A research study called Environmental Design Lexicon for Dementia Care was conducted in six nursing homes to collect design solutions for dementia care. In several homes, it was "policy" that the facility's furniture could not be removed. One home in particular actually secured the furniture to the wall.

According to the administrator, preserving the life of the furniture and eliminating the need for facility furniture storage took precedence over resident autonomy. Some facilities were diligent in installing electric outlets throughout the room, which encouraged room rearrangement. On the other hand, traditional nurse-call bells were

usually fixed to the wall, limiting rearrangement.... Alternatively, several facilities used institutional bulletin boards as a substitute for allowing objects to be hung on the walls, thereby eliminating maintenance costs for wall repair (Calkins et al, 2004).

Being able to bring personal belongings is required by nursing home regulation Environment, at 42 CFR §483.15 (h), Tag F252 which states *The facility must provide a safe, clean, comfortable and homelike environment allowing the resident to use his/her personal belongings to the extent possible.* “To the extent possible” seems so often to trump really being able to have personal belongings to the extent one would like, again due to either facility policy or lack of space.

The Short-stay Experience

On the other hand, when someone is admitted to a nursing home as a patient for rehabilitation, they typically don't want to move in and make it home. So how should the environment accommodate their different needs and desires? The Rhode Island *Practical Strategies to Transform Nursing Home Environments* suggests thinking of providing amenities as in a hotel while creating an experience where residents can continue their normal routines. Ideas are information books like a hotel book (which lists local resources within and near to the hotel), small calendars for appointments, clocks, a desk area with postcards and stamps, a snack center (that can be locked if it must be depending upon the person and their abilities/patterns) with coffee maker, coffee and teas, a toaster and small refrigerator, a small erasable board for telephone numbers, attractive clothes hangers and perhaps a terry cloth bathrobe if desired (Rhode Island QIO, 2005). These are excellent examples of how to think of the short-stay experience differently than moving in for the rest of one's life. And it seems to go without saying that anyone living in a nursing home for any length of time would welcome “lovely versus institutional” and “warm and inviting versus cold and sterile” whether they move in any personal belongings or not.

Language

Once again, Calkins raises another excellent issue: language and the environment.

It is also important to consider what rooms are called. At the simplest level, having a living room or family room is more familiar than having a day room or an activity room (which sounds more institutional or like a senior center). Language is also important at the larger scale of the [what is usually now called the] “unit.” Many facilities are moving away from the term “unit” to calling these groupings of residents' clusters or pods. However, one could question how residential these terms are. As one administrator put it, “Whales and peas live in pods, and grapes come in clusters. People live in households.” Language affects our thinking at a fundamental level and should be considered carefully. This may be why some facilities are giving their units names, such as “Hill House” or “Beacon Place.” As architect Witold Rybczynski writes, “Words are important. Language is not just a medium, like a water pipe, it is a reflection of how we think (Calkins, 2003).

Karen Schoeneman of CMS is known for being an advocate of continually improving language used in long-term care. She has written several articles, one is posted on the Pioneer Network website entitled “Mayday” and can be found at <http://www.pioneernetwork.net/stories-from-the-field/LanguageofCultureChange.php> In this thought-provoking piece, she states,

I’ve worked 30 years in long-term care. Over that time, I’ve come to realize that much of the language we use is in need of replacement because it unintentionally demeans people, contributing to a hierarchical sense of “us and them” or a dehumanizing institutional culture instead of a nurturing community with respect for its members.

Having had the privilege to work with Karen in many capacities and learn from her, a sociological concept she teaches is that, “Language drives practice” and “if we change our language, practice will follow.” We have a lot of practice to change so let’s at least take advantage of changing language which can be done right now by each of us.

Chapter 8: **CMS Long-term Care Regulations Regarding the Environment**

There is support from the OBRA '87 regulations themselves and from the current administration of CMS for creating home, but for the most part, we still have very institutional nursing homes. What follows are the current CMS nursing home regulations in relation to the environment, other pertinent CMS information such as answers to culture change questions, and areas identified as needing further discussion.

42 CFR §483.15(h) Environment

Safe, Clean, Comfortable and Homelike 42 CFR §483.15(h), Tag F252

The facility must provide a safe, clean, comfortable and homelike environment allowing the resident to use his/her personal belongings to the extent possible.

From the Interpretive Guidance: “A ‘homelike environment’ is one that de-emphasizes the institutional character of the setting, to the extent possible, and allows the resident to use those personal belongings that support a homelike environment.”

“Homelike” was another great forward step of OBRA '87, much like the advent of the term “resident.” Now the culture change movement is taking another step forward in creating something much more than homelike which is “home.” Miguette Kaup said it best when she said, “‘Homelike’ implies ‘Pretend this is your home.’ ‘Home’ means ‘This is where you live.’ (2005). Although the culture change movement is moving away from the term “homelike,” CMS is to be commended. The attempt on CMS’ part to require nursing homes to create a “homelike” environment that “de-emphasizes the institutional character of the setting” is exemplary and certainly in accord with both OBRA’s and the culture change movement’s intent to help a person live out their highest quality of life possible. Within this regulation, CMS recognizes the importance of home, of diminishing the institutional character as much as possible and for supporting persons in using their “personal belongings” in order to create true home as has been well depicted by so many referred to in this paper.

Although inspections became resident outcome-based with OBRA '87 and include this requirement for homelike environment in both the regulations and survey process, nursing homes continue to look the same as they did decades ago. Many in the culture change movement are wondering why. As a former surveyor, I wonder if part of this dilemma is that surveyors too have become immune to the institutional environment. They are used to seeing it week in and week out, expect it, and aren’t bothered by it because it has become normal. It seems that most people working and living in long term care have come to see the institutional model as the norm. However, the momentum of the culture change movement, led by early pioneers who “bucked” the status quo, desiring and demanding better, combined with researchers and designers making the case for how and why it can be better, is picking up speed. So, how this requirement can be met even better than ever before, through creating home, is another area for discussion.

Housekeeping and maintenance services necessary to maintain a sanitary, orderly and comfortable interior, 42 CFR §483.15(h)(2), Tag F253

A sanitary, orderly and comfortable interior are indeed important, no doubt about it, but somehow cleanliness has been placed above the needs of people. For instance, by building nursing homes with predominantly tile floors, we then created the need for them to be cleaned, waxed and buffed. We accepted this as important, somehow bypassing the fact that for some older individuals the glare makes it hard to see, or for those with dementia, the shiny glare of the floor looks like a hole into which they might fall. Thankfully some pioneers in the culture change movement have realized that those glaring, bright tile floors are not what most of us have in our homes and have replaced them with carpeting or hardwood (and even linoleum that looks like hardwood) floors that have created a warmth of home. Inspecting the cleanliness and maintenance of a building is much easier and more black and white for surveyors to assess than delving into whether residents' quality of life has been achieved. Perhaps this should be discussed further.

Clean bed/bath linens in good condition, 42 CFR §483.15(h)(3), Tag F254

Again, clean bed and bath linens are indeed important, a must really. However, there is nothing that mandates that linens be hospital-white, although that is what is customarily seen. Many culture changing homes have made a switch to colored linens and towels to enhance the "homeyness" of the environment.

Private closet space in each resident room, 42 CFR §483.15(h)(4), Tag F255

From the Interpretive Guidance: "The facility must provide each resident with individualized closet space in his/her bedroom with clothes racks and shelves accessible to the resident."

Every closet has a closet rod. Kudos to CMS for requiring they should be "accessible to the resident." This regulation is not adhered to, however, in most nursing homes across the country. And it could probably be written as a deficient practice every week if surveyors looked at it and inquired about it with residents. Many residents cannot reach their closet rods/clothes racks but somehow we have all accepted this.

Adequate and comfortable lighting levels in all areas, 42 CFR §483.15(h)(5), Tag F256

From the Interpretive Guidance: "'Adequate lighting' is defined as levels of illumination suitable to tasks the resident chooses to perform or the facility staff must perform. For some residents (e.g., those with glaucoma), lower levels of lighting would be more suitable. 'Comfortable' lighting is defined as lighting which minimizes glare and provides maximum resident control, where feasible, over the intensity, location, and direction of illumination so that visually impaired residents can maintain or enhance independent functioning."

CMS is to be commended for focusing on the fact that lighting should be very individualized. It is individual to each person and not something that a staff member or surveyor can decide for someone else. The new CMS interpretive guidance and investigative protocol effective

8/6/07, for Accidents and Supervision includes lighting at 42 CFR §483.25 (h)(1), Tag F323. It identifies “lighting that is either inadequate or so intense as to create glare” as a potential hazard: “The risk of an accident increases when there is insufficient light or too much light, which often results in glare. Vision among older persons varies widely; therefore, no single level of illumination can ensure safety for all residents. The proper amount of light depends on the resident’s visual needs and the task he/she is performing.”

Questions regarding lighting are included in the CMS survey Resident, Family and Group Interviews. However, it stands to question whether surveyors are delving into light issues as much as they could since research is illuminating the fact that lighting is often not bright enough for older eyes, and glare is a glaring problem in most nursing homes. Lighting (Tag F256) is not cited even at one half of 1 percent of homes, and according to Karen Schoeneman of CMS, deficiencies that are cited are typically for problems with specific areas of the home such as shower stalls and closets being too dark rather than cited based on the whole home being too dark, which was a key finding of the CMS Quality of Life study (Volume 1, Chapter 12, pp. 12.28-12.29). Thus, here is an area in need of further discussions.

Comfortable and safe temperature levels (71-81 degrees F), 42 CFR §483.15(h)(6), Tag F257

Wouldn’t it be great if it were a requirement that residents be able to adjust the temperature of their own room to their liking? The typical design does not include any resident control over heating and cooling in their bedrooms. Self-determination and participation at 42 CFR §483.15(b), Tag F242, requires residents be able to make choices about matters of significance to them.

For the maintenance of comfortable sound levels, 42 CFR §483.15(h)(7), Tag F258

The Interpretive Guidance guides surveyors to: “Consider whether residents have difficulty hearing or making themselves heard because of background sounds (e.g., overuse or excessive volume of intercom, shouting, loud TV, cleaning equipment). Consider if it is difficult for residents to concentrate because of distractions or background noises such as traffic, music, equipment, or staff behavior.”

This regulation and its corresponding guidance are excellent. Research is showing noise to be a large problem in nursing homes so it begs the question, is it being observed and inquired about during surveys? The new CMS interpretive guidance for Accidents and Supervision at 42 CFR §483.25(h)(1), Tag F323 recognizes “monitoring environmental influences such as temperatures, lighting and noise levels” as an intervention to address potential or actual negative interactions by residents. Thus, investigation of noise as it relates to quality of life is an area where there could be more discussion.

Other LTC Environmental Regulations

Accommodation of Needs, 42 CFR §483.15(e), Tag F246

The resident has the right to –

Reside and receive services in the facility with reasonable accommodations of individual needs and preferences, except when the health or safety of the individual or other residents would be endangered.

From the Interpretive Guidance: “Reasonable accommodations of individual needs and preferences,” is defined as the facility’s efforts to individualize the resident’s environment. The facility’s physical environment and staff behaviors should be directed toward assisting the resident in maintaining and/or achieving independent functioning, dignity, and well-being to the extent possible in accordance with the resident’s own preferences, assessment and care plans. The facility should attempt to adapt such things as schedules, call systems, and room arrangements to accommodate residents’ preferences, desires, and unique needs.

This regulation is “right on” in the sense that it truly recognizes that each person’s environment must be individualized and personalized to him or her. Additionally, CMS included several such accommodating items in the Artifacts of Culture Change tool:

- Resident bathroom mirrors are wheelchair accessible and/or adjustable in order to be visible to a seated or standing resident,
- Sinks in resident bathrooms are wheelchair accessible with clearance below sink for wheelchair,
- Sinks used by residents have adaptive/easy-to-use lever or paddle handles, and
- Adaptive handles, enhanced for easy use, for doors used by residents (rooms, bathrooms and public areas).

One accommodation of need that really seems to assist residents’ independence but also is often found lacking is automatic door openers. Not only do they increase independence but at the same time they diminish the need for staff assistance. Residents would definitely tell you automatic doors would improve their quality of life by assisting them to get outside more and help meet their highest practicable level of functioning, all of which is required by the CMS regulations.

Kitchen Sanitation including Dishwasher Temperatures, 42 CFR §483.35(h)(2), Tag F371

Dishwasher temperature requirements come under Kitchen Sanitation. The guidance at this requirement for the temperature of the water in dishwashers comes from the 1993 Food Code and likely was developed for commercial establishments. Households or residential homes serving 20 or less residents desire to install kitchen appliances similar to those in our own personal homes, both for their familiarity to residents in order to use them, and for their lower cost.

According to the interpretive guidance at this requirement, if a hot water method is used to sanitize dishes, the wash must be 140 and the rinse 180 degrees Fahrenheit (F). If there are other temperature requirements they may fall under state requirements. David Green is an early culture change pioneer and former CEO of Evergreen Retirement Center which was the first nursing home to design households. David shared that the state dietician in Wisconsin told them there was no scientific evidence to justify the need for 180 degrees F. The health department allowed Evergreen to use a household dishwasher that typically achieves 160 degrees F and required them to conduct swab tests for 30 days. Results showed no issue with bacteria. David points out that there are many more problems with commercial dishwashers than household ones such as becoming too hot to touch, being very noisy, producing too much steam, mechanical problems, and the cost. The high cost of roughly \$4000.00 deters a home from having more than one. In comparison, a household dishwasher that costs \$700.00 each allowed Evergreen to have two on each household (Greene, 2007). It seems the issue of dishwasher temperature in small households is one that needs some further research.

Bedrooms must accommodate no more than four residents, 42 CFR §483.70(d)(1)(i), Tag F457

Four people living in one room. How many of us would accept that? “It is outdated and institutional to allow facilities to ‘house’ four people in one room – what was once called a ‘ward’” (Calkins, 2003). Although the generations we have thus far served in nursing homes have not complained, we all know and research shows people don’t even want one roommate. Apparently this is common in other countries where private rooms are the norm (Jenkins, 2007). In Vermont, proposals for new construction, expansion, renovation or substantial rehabilitation of a facility requiring Certificate of Need approval are not approved by the licensing agency unless the construction proposal includes a plan for elimination or conversion of all three- and four-bed rooms to rooms which accommodate no more than two persons (Cutler, 2007). Perhaps this regulation could be discussed further by those participating in the symposium or the invitational workshop that follows it.

Bedrooms measure at least 80 square feet per resident in multiple resident bedrooms, and at least 100 square feet in single resident rooms, 42 CFR §483.70(d)(1)(iii), Tag F458.

The reason that nursing home rooms have such little space, only 80 square feet per resident in a shared room and only 100 in a private room, stems from this CMS regulation. Current shared rooms do not allow sufficient space for residents to bring furniture such as double beds, desks, computers or easy chairs. The federal government has provided this as the minimum requirement. Unfortunately so many nursing homes were built to be compliant with the minimum and not with what people might actually need or want. Perhaps this requirement could be discussed further. And, culture change advocates might choose to lobby their state legislatures to mandate rooms that are more accommodating of privacy and sufficient space, at the very least in new construction.

Bedrooms must be designed or equipped to assure full visual privacy for each resident, 42 CFR §483.70(d)(1)(iv), Tag F460

In facilities initially certified after March 31, 1992, except in private rooms, each bed must have ceiling suspended curtains, which extend around the bed to provide total visual privacy in combination with adjacent walls and curtains. Additional guidance is available in the NFPA LSC 101 31-1.4.1, 31-4.5, which is Tag K74 of the LSC.

Here is another regulation that may be up for discussion. Maybe a degree of visual privacy is afforded, but to be able to hear almost every sound resulting from care and bodily functions and conversations with anyone is problematic. And in addition, if you want to talk with a family member in private, both of you have to be on the bed with the curtain around you – a suffocating, tentlike experience. If your loved one was dying and you wanted to be with them and hold their hand, would you want to be surrounded by this tent? This is a mark of “the institution” to provide only this amount of privacy and space for residents and their families. We see this in hospitals. Do we want it in nursing homes? We can do better. People deserve better. This matter of needing privacy because of a roommate may just be more reason to focus on a private room requirement. Due to poor design, even when Migette Kaup went to use her privacy curtain for visual privacy, she felt she couldn’t. Since her bed was next to the window and the heating/cooling vent, she could not pull the curtain without blocking her roommate’s view of the outside and access to air from the temperature controls (Schaeffer, 2005).

Resident call system, 42 CFR §483.70(f), Tag F463

The nurses’ station must be equipped to receive resident calls through a communication system from resident rooms; and toilet and bathing facilities.

From the Interpretive Guidance: “The intent of this requirement is that residents, when in their rooms and toilet and bathing areas, have a means of directly contacting staff at the nurses’ station. This communication may be through audible or visual signals and may include ‘wireless systems.’” Wow. Since 1995 CMS has recognized wireless systems and that they are a good thing.

Wireless call systems are gaining ground in the culture change movement as a tool promoting better services and a more calming environment for residents without the ringing and flashing of call lights. Imagine immediately locating and calling a co-worker on your wireless phone instead of having to physically go find help. Or imagine, as a resident, the comfort of knowing you can call your caregiver directly wherever he or she is. It sure beats having to hope your caregiver sees the blinking call light above your door or hears ringing at the nurses’ station and goes to see who needs help (Bowman, 2005).

Tweaking the wording of this regulation has already been asked of CMS in the 12/21/06 S&C letter to State Survey Agencies entitled Nursing Home Culture Change Regulatory Compliance Questions and Answers (Appendix B):

Question to CMS: Could the resident call system (F463) regulation that requires calls to be able to be received at the nurses’ station be changed to include nurses’ work

areas and direct care workers, as well as the nurses' stations? Many homes moving away from the institutional model are replacing nurses' stations with normal kitchen, living room and dining room areas and using systems whereby resident calls connect directly to care givers' radio/pagers. Because it is harder to change the text of regulation, could the phrase "at the nurses' station" be removed from the following sentence in the Interpretive Guidelines: "The intent of this requirement is that residents, when in their rooms and toilet and bathing areas, have a means of directly contacting staff at the nurses station."

Answer 7 from CMS: We agree that it is desirable for residents and/or their caregivers or visitors to be able to quickly contact nursing staff when they need help. To meet the intent of the requirement at F463, it is acceptable to use a modern pager/telephone system which routes resident calls to caregivers in a specified order in an organized communication system that fulfills the intent and communication functions of a nurses' station. We will make a change in the Interpretive Guideline to reflect this position.

This official Survey and Certification letter serves as CMS' official policy on the matter, even though the actual change of language in the interpretive guidance has not been done as of yet.

Dining and Resident Activities, 42 CFR §483.70(g)(2), Tag F464

The facility must provide one or more rooms designated for resident dining and activities.

These rooms must –

Be well lighted

Be well ventilated, with nonsmoking areas identified

Be adequately furnished and

Have sufficient space to accommodate all activities.

The regulatory language is not specific or measurable. There are no definitions to "well lighted" or "adequately furnished." Even though this requirement sounds like adequate space must be provided, it often is not, and with no specificity it may be hard for surveyors to make a case for citing it. This particular requirement makes it "okay" for there to be no specific room designated for group activities, causing them to only take place in between meals in a main dining room. The problem becomes not only that meals take place three times per day in a dining room, but that there is an enormous amount of time taken up for preparation and clean up before and after each meal, leaving very little time for resident activities. So what suffers most are residents and their quality of life, something else actually required by the regulations. In addition, the lack of a variety of different sized activity spaces makes it difficult to arrange for small group activities.

Handrails, 42 CFR §483.70(h)(3), Tag F468

Equip corridors with firmly secured handrails on each side.

Handrails are certainly needed. Unfortunately they present the dilemma that they cannot be blocked. Something often said by culture changing providers is that residents want places to rest somewhere near the middle of the hallways in order to be able to walk independently, but due to the regulations, they are not allowed to have a chair in the hallway. The issue of furniture and decorations not allowed in the halls comes under the Life Safety Code and is brought up in the next section of this paper. A similar but different question to this effect was asked of and answered by CMS.

One aspect of this handrail issue was addressed by CMS in the 12/21/06 Survey & Certification letter to State Survey Agencies titled Nursing Home Culture Change Regulatory Compliance Questions and Answers (Appendix B):

Question 6 Handrails: Could the interpretive guidelines explain that handrails are not necessary at the very ends of hallways on the very small sides of the door? This would allow for filling these unused areas with live plants, for instance, without obstructing egress and handrails would still be available up to the end of each hallway.

Answer 6 From CMS: The purpose of the handrail requirements at Tag F468 is to assist residents with ambulation and /or wheelchair navigation. They are a safety device as well as a mobility enhancer for those residents who need assistance. The survey team onsite would need to observe the responses of residents to the placement of objects that block the portion of the handrails that is at the end of a hallway. They would also interview residents to gain their opinion as to whether the objects in question are interfering with their independence in navigating to the places they wish to go.

This reply by CMS is helpful to facilities trying to create home in every inch of the building possible. CMS identifies that depending on residents' opinions, homey and helpful furniture could possibly be used at the very ends of hallways. This, however, would not alleviate the problem of residents navigating long hallways and needing a place to rest midway down the hall.

Chapter 9: Life Safety Code (LSC) and the National Fire Protection Association (NFPA)

The NFPA came into being in 1896 after a great number of meetings held by dedicated individuals to create one national code. The mission of the NFPA is to reduce the burden of fire and related hazards on quality of life by advocating scientifically-based consensus codes and standards, research, and education for fire and related safety issues. NFPA is a nonprofit membership organization with more than 81,000 members. NFPA's National Fire Codes are developed by code and standard development committees staffed by over 6,000 volunteers, and are adopted and enforced throughout the world (www.nfpa.org).

There are many categories of codes such as the Health Care Codes, Means of Egress Codes, Fundamentals Code and Sprinkler Systems codes. Each set of codes also goes by a chapter number to the LSC. For example, NFPA 70 is the National Electric Code. The Life Safety Code is known as NFPA 101. A CMS representative currently serves on three LSC committees: the Technical Committee on Health Care Occupancies, NFPA 101; the Technical Correlating Committee on Health Care Facilities, NFPA 99 and as an alternate on the Technical Committee on Board and Care Facilities, NFPA 101. Committees are comprised of 10 – 25 voting members.

The Life Safety Code Connection to CMS

From the Code of Federal Regulations (CFR) at 42 CFR 483.70 Life Safety from Fire:
The facility must meet the applicable provisions of the 2000 edition of the Life Safety Code of the National Fire Protection Association. The director of the Office of the Federal Register has approved the NFPA 101 2000 edition of the Life Safety Code, issued January 14, 2000 for incorporation by reference in accordance with 5 U.S.C. 552 (a) and 1 CFR part 51.

The Medicare program started in 1965. CMS adopted the 1967 version of the NFPA 101 Life Safety Code in the late 1960s/early 1970s, according to James Merrill, CMS lead for LSC for nursing homes. Currently CMS requires nursing homes to conform to the 2000 edition of the code, although there are newer versions of the Life Safety Code NFPA 101 which have new sprinkler mandates for existing nursing homes as well as rules regarding the allowance of alcohol-based hand-rub solution dispensers in corridors of health care occupancies (www.nfpa.org).

According to the CMS Physical environment requirement at 42 CFR §483.70(a)(2), Tag F454, CMS does have the right to grant waivers to the LSC: *After consideration of State survey agency findings, CMS may waive specific provisions of the Life Safety Code which, if rigidly applied, would result in unreasonable hardship upon the facility, but only if the waiver does not adversely affect the health and safety of the patients.*

Waivers typically granted are for instance, when the LSC requires an exit every 100 feet and one is 120 feet, or in other words, 20 feet too long. Instead of requiring the building to put in another exit 20 feet closer or blocking 20 feet of the end of a hallway, it is typically waived.

Facilities make the request for a waiver to the state agency. The state agency then makes a recommendation to their Regional Office of CMS which then makes decisions on a case-by-case basis. Although waivers may be granted, architect and professor Benjamin Schwarz points out in his 1996 *Nursing Homes* interview that “when we do want to provide a better environment, we're forced to venture into the world of waivers” and that the “system is nothing short of ridiculous: we create regulations in order to get waivers in order to create the environments we'd like to have to begin with.” So the notion of waivers is an interesting one. The point is taken that perhaps there is room for making certain codes more user-friendly and yet the possibility of waivers perhaps make room for other options.

In addition, 483.70(a)(3) states: “The provisions of the Life Safety Code do not apply in a State where CMS finds, in accordance with applicable provisions of sections 1819(d)(2)(B)(ii) and 1919(d)(2)(B)(ii) of the [Social Security] Act, that a fire and safety code imposed by State law adequately protects patients, residents and personnel in long term care facilities.” Perhaps it is possible in States where state law is adequate that action could be taken to show that the LSC does not apply, using this provision.

Innovators, designers, architects and builders are working to eliminate the traditional design of the nursing home as unacceptable for resident quality of life. In their attempts to create home, they have encountered and report that the following Life Safety Code regulations are considered barriers to desired changes:

8 foot width corridors

LSC K39 2000 NEW Width of aisles or corridors (clear or unobstructed) serving as exit access in hospitals and nursing homes shall be at least 8 feet. In limited care facility and psychiatric hospitals, width of aisles or corridors shall be at least 6 feet. 18.2.3.3, 18.2.3.4

An issue regarding hallways was addressed in the 12/21/06 Survey & Certification letter to State Survey Agencies entitled Nursing Home Culture Change Regulatory Compliance Questions and Answers (Appendix B):

Question 9 (Hallway Width): Does the 8 feet requirement (at LSC Tag K39) continue to be necessary since evacuations are no longer done via wheeling a person out of the building in a bed? Could 6 feet meet the requirement? If 6 feet sufficed, this would again refer back to our question regarding the requirement for handrails when something else such as a bench might take up the other 2 feet.

Answer 9 from CMS: The 8 foot corridor width is a requirement of the Life Safety Code (LSC). Corridors remain a route to use in internal movement of residents in an emergency situation to areas of safety in different parts of the facility. This movement may be by beds, gurney or other methods which may require the full width of the corridor. We do not believe it would be in the best interests of the residents to reduce the level of safety in a facility.

James Merrill, the CMS lead for this topic in the Division of Nursing Homes explained it like this. Beds are about 3.5 – 4 feet wide plus one or two people on each side making two beds going beside each other requiring about 7 – 8 feet (2007). This issue of hallway width perhaps could be discussed.

Nothing obstructing egress

K72 Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency. No furnishings, decorations, or other objects shall obstruct exits, access thereto, egress there from, or visibility thereof shall be in accordance with 7.1.10.

Can a chair be placed in the middle of a long hallway as a place for a resident to rest? As mentioned above, knowing there is a place to rest along the way may enable residents to continue walking independently. Brawley advocates for it too, “someone will be more likely to walk if they know a seat is available” (2007). But the answer according to the LSC is no. Merrill explains that this requirement is common to the LSC for many types of buildings such as apartment buildings and schools. Some culture changing homes are asking, couldn’t a chair be moved out of the hallway during an evacuation? The other side of the issue is does one chair become two, does a loveseat get defined as a chair, etc (Merrill, 2007). We do know that long corridors are forcing many people living in nursing homes prematurely into wheelchairs when mobility needs could be met instead with design solutions. Alcoves seem to be one answer as they do not obstruct the egress and are out of the way. However, alcoves are only usable if they already exist, and only useful if they also allow residents who need handrails or some other sort of mobility assistive device to still navigate down the hallway. Many older nursing homes don’t have alcoves, and it is virtually impossible to build them in. So, the question remains - can both safety and quality of life be met somehow in the design and use of the hallways?

Regarding this desire of residents to sit in hallways, Sister Pauline Brecanier, administrator of pioneering home Teresian House in Albany, New York, and an original member of the Pioneer Network explains, “We try to keep residents walking and active as long as possible. The double loaded corridor is very long and too far for residents to walk to the end. They like to sit and rest, they need to sit and rest. A chair would serve a functional purpose and is needed to keep them independent and not put in wheelchairs. What I call a ‘floating chair’ would be perfect, a chair in the hall that can easily be pulled out of the hall if the fire alarm sounds” (2007).

The other question then becomes would such a chair in the middle of a long hallway be a problem for other residents who use the handrails to steady themselves? Can those residents use the benches or chairs as part of their steadying system? The real problem is there is no research on this issue, since no home is permitted to try, even on an experimental basis, having chairs in the hallway. This is an issue in which residents’ desires are in conflict with the mandates of the regulations. Experimental research is needed on the issue, both on determining how residents with limited mobility could navigate if chairs were in front of handrails, and the effect on evacuation procedures. We do not know at present what the

majority of nursing homes do in the case of needing to evacuate rapidly. In my experience consulting and speaking at conferences, I have never heard any home say they push residents in their beds, let alone two residents in beds across a hallway at the same time. Research could tell us what is reasonable on both points - navigation and evacuation.

Access to Stove and Safety

Nursing homes that are designed as households or small houses have in some cases been faced with the survey agency telling them they need to implement the expensive fire suppression hood system common to a commercial establishment. However, small homes and households only do limited cooking and only for a relatively small group of residents. This issue of commercial systems versus non-commercial is an issue that may need to be explored more closely.

Currently, according to CMS, if a kitchen and stove are used for nursing home or Health Care Occupancy, the stove must then be under a fire suppression hood per Life Safety Codes 9.2.3, 18.3.2.6, 19.3.2.6, and NFPA 96. This is not required of stoves only used for food warming or limited cooking, such as kitchens used for rehabilitation therapy or preparing food as an activity. NFPA 96 requires a shut-off switch or valve be connected to the stove that disconnects the power or fuel supply when the range hood extinguishing system is activated. The National Electric Code also requires there to be some type of main switch for electric stoves, both commercial as well as residential used in a commercial situation. The conventional means to preventing someone from using a stove in a traditional nursing home has been to have a main kitchen and keep it locked or at least supervised. In more untraditional settings such as fully operational households where stoves are accessible at all times, a shut-off switch that is not accessible to residents becomes necessary. Although there is no requirement under LSC for a stove shut-off switch, it would fall under the CMS requirement 42 CFR §483.25(h)(1), Tag F323, to prevent accident hazards. And apparently, shut off switches are fairly easy to have an electrician design (Merrill, 2007).

Grease laden vapors under standard exhaust and fire suppression system

NFPA 96 requires that any food cooked that produces grease laden vapors must be cooked under a fire suppression hood system. Exactly what this includes seems to be unclear. Cooking bacon and sausage produces grease laden vapors for sure but what about eggs cooked in grease or oil and pancakes cooked in butter on grills? There seems to be inconsistency across the country in the interpretation of which foods fall under this provision. Some officials and some states seem to allow cooking on grills if cooking spray is used and some allow the cooking of eggs, some don't. When bacon is being fried for only a few persons or maybe even only one person in the household or small house setting, is the fire danger low enough to permit the use of household-style hoods instead of commercial ones? This is another important issue that needs to be discussed.

Fire safety and the use of personal furnishings

K73 No furnishings or decorations of highly flammable character shall be used. 18.7.5.2, 18.7.5.3, 18.7.5.4, 19.7.5.2, 19.7.5.3, 19.7.5.4

K74 Draperies, curtains, including cubicle curtains, and other loosely hanging fabrics and films serving as furnishings or decorations in health care occupancies shall be in accordance with provisions of 10.3.1 and NFPA 13 Standard for the Installation of Sprinkler Systems. Except shower curtains shall be in accordance with NFPA 701.

- *Newly introduced upholstered furniture (purchased since March 2003) shall meet with criteria specified when tested in accordance with the methods cited in 10.3.2 (2) and 10.3.1, 18.3.5.3 and NFPA 13*
- *Newly introduced mattresses (purchased since March 2003) shall meet the criteria specified with tested in accordance with the method cited in 10.3.2 (3) and 10.3.4 18.7.5.3, 19.7.5.3.*

Regarding personal furnishings, there are options. If a resident wants to want to bring their own drapes, “no” does not need to be the answer. The specifications can be checked and if they are indeed non-flammable, they might be just fine. If they do not meet flammability requirements, there are also options to dip or spray them to comply. The instructions for dipping or spraying must be followed, but it is possible. Additionally, if products are treated, there should be some sort of documentation that it was done at the required level and frequency. According to James Merrill, an upholstered easy chair probably meets flammability requirements all on its own. 10.3.1 and 10.3.3 also are worded in such a way to say that if upholstered furniture or mattresses are located where they are protected by sprinklers, they can be used. Even in non-sprinklered facilities, if there are smoke detectors, this covers their use as well (Merrill, 2007).

Required NO SMOKING signage

K66 and K141 require “No Smoking” signs or the international symbol for no smoking be posted on oxygen storage rooms and where oxygen is in use in facilities that allow smoking. Facilities that have decided to be non-smoking are wishing they did not have to have these institutional signs. The good news is if the facility was totally non-smoking, then the signs would only be required at storage locations and at major entrances to the facility, and not on room doors of residents who use oxygen according to CMS (2007). This is great news on the journey to become less institutional.

Issues and Ideas regarding Fire Safety Codes

After conducting the CMS Quality of Life study over 5 years, the authors identify that the weakness of many regulatory codes, even as guarantors of safety, is that they are seldom research-based nor do they consider multiple goals. They tend to take into account specific disabilities such as cognitive impairment, vision or mobility problems but do not consider “interaction effects.” For example, life safety codes typically require heavy fire doors that are difficult for residents to maneuver, but they do not require an automatic door opener. Requiring both would enhance both safety and overall functioning (Cutler et al, 2006). It would be good to identify any other codes requiring something that makes life more difficult for people living in a nursing home.

Norton and Shields identify that often local, State, and Federal fire marshal offices don't always use the same code. Approval of building plans may be granted, but when the fire inspector does the "walk through" after the building is complete, it can be as if plan approvals never took place. This is a costly issue for providers. In addition, annual inspections may bring up new issues with long-standing situations never before identified as problems (2007).

Christa Hojlo, Director of the Veterans Administration Nursing Home Care, notes that strict fire regulations also get in the way of making places feel more like home, "I've had facilities where residents helped fix up the hallways, just to have facilities management take it all down, she said" (Baker, 2007).

"Another fire code reality is that nobody outside its bureaucracy seems to know how to interact with, influence or penetrate it" (Norton and Shields, 2007). Although there seems to be some truth to this, at least from the perspective of long term care providers, a goal of the *Creating Home* symposium is to build a relationship with the NFPA, to learn more about it, how its codes are developed and how input can be offered. We would like to thank the NFPA for agreeing to take part in the 2008 *Creating Home* symposium and welcome any ideas and questions from the long term care community that might advance person-centered care while not compromising safety.

Chapter 10: Other Environmental Standards and Associations

Other Environmental Standards

There are several other environmental standards that are not that well known by the long term care community, such as the American National Standards Institute, Illuminating Engineering Society of North America, the International Building Code and the Guidelines for Design and Construction of Health Care Facilities (below). The designers and architects involved in the April 3rd, 2008 *Creating Home* symposium are more familiar with these lesser known standards and have been asked to teach us about them.

Again, although not familiar to many, the Guidelines for Design & Construction of Health Care Facilities have existed since 1947. The Guidelines are developed jointly by the Facility Guidelines Institute and the American Institute of Architects Academy of Architecture for Health with assistance from the U.S. Department of Health and Human Services and set minimum standards for health care facility design. Developed as performance-oriented requirements, the Guidelines give health care providers and design professionals guidance on good practice and emerging trends. The Joint Commission, many Federal agencies, and authorities in 42 States use the Guidelines either as a code or a reference standard when reviewing, approving, and financing plans; surveying, licensing, certifying, or accrediting completed facilities; or developing their own codes. To keep current, a new edition of the Guidelines is published every four to five years. Most recently, public comment was collected until September 30, 2007 for an upcoming 2010 edition. Topics close to long term care that are currently under revision for the 2010 edition are: use of lift devices, sound design, environment of care, infection control and health care facility engineering. A revised chapter regarding nursing facilities was included in the 2006 edition.

Environmental Associations

There are several organizations that are focused on the environment and the older adult that may be of interest to persons involved in creating changes in the nursing home environment.

The American Institute of Architects (AIA) has existed since 1857. It represents the commitment of 80,000 licensed architects to excellence in design and livability of our nation's buildings and communities. Members adhere to a code of ethics that assures the client, the public, and colleagues of an AIA-member architect's dedication to the highest standards in professional practice. The AIA mission statement reads: The AIA is the voice of the architectural profession and the resource for its members in service to society. The AIA also has a Revision Task Force for the Guidelines for the Design and construction of Hospitals and Health Care Facilities mentioned above (www.aia.org).

The Center of Health Design is dedicated to improving the built environment to maximize the abilities of older adults. The Pebble Research Project, hoping to turn ripples into waves, collects and compares documented examples of real post-occupancy data. The Center has learned that best results come from an unbiased, third-party evaluation and the sharing of

information is vital for buildings serving older adults to learn and improve (www.centerofdesign.org).

SAGE is the Society on the Advancement of Gerontological Environments.

Support education about the impact of the environment on older adults and how to design better buildings, their interiors, and surrounding landscapes.

Advocate collaboration among all disciplines involved in the development, operation and regulation of settings for elders.

Generate research to improve environments by testing ideas and evaluating results.

Encourage regulatory change for more effective environments.

SAGE is a culture change focused organization that promotes networking and collaboration among relevant stakeholders to create better environments for older adults. SAGE Federation is incorporated as a not-for-profit 501 (c) (3) and governed by an all volunteer board and active national steering committee. SAGE Federation's primary activities include:

- Overseeing and guiding the creation of state units. Currently there are six.
- Providing strategic planning to expand the impact of SAGE as a national organization.
- Sponsoring national and regional conferences focusing on the relationship between quality of life and the built environment.
- Collaborating with *Nursing Homes - Long-Term Care Management* magazine to produce an annual DESIGN review that recognizes “state of the art” senior environments.
- Conducting an annual postoccupancy evaluation of a senior living environment and presenting the results at the American Association of Homes Services for the Aging annual meeting.
- Disseminating insightful information by publishing a newsletter and hosting the website <http://www.sagefederation.org>.

Benjamin Schwarz, PhD, assistant professor of Environmental Design at the University of Missouri-Columbia and a member of SAGE, explained to Laura Beck of Nursing Homes

magazine, “Chapters of SAGE are slowly forming around the country and dialogues are beginning between LTC executives, program administrators, regulators and academicians. It's my hope that through these discussions, we can push for change, not only in regulations but in our approach to environments for the elderly, especially the frail elderly. Despite the view that we need ‘more mothers of Congressmen in nursing homes’ before anything will change, I think this has to be a grassroots process. I believe this kind of dialogue between providers and governing entities can truly advance our efforts in the right direction” (1996).

A simple way for each nursing home to conduct research has been developed by SAGE:

There is much we do not know. There is more evidence about what does not work than what does. Every design project is a hypothesis – designers and providers believe configuring the space in a certain way will lead to a certain set of outcomes. What is often missing, however, is any systematic evaluation of how well the setting actually achieves the hypotheses. For many, the thought of conducting “research” is daunting. And while some research projects are complex and require sophisticated knowledge of protocol and statistics, it is also possible to evaluate buildings in a simpler way. SAGE has created a Postoccupancy Evaluation or POE that can be easily done by people who are not “researchers” (Calkins, 2005).

SAGE’s POE is based on the principles of OBRA ’87 by focusing on a holistic view of the individual and how quality of life can be maximized and highest practicable level of well-being achieved (Calkins, 2005).

SAGE recommends a POE team include a designer, staff members, residents and resident-representatives - family members and/or ombudsmen. Each group of persons is likely to see the setting from a slightly different perspective. The team should review the goals of the POE which may vary from a large scale evaluation to one that focuses only on one care area or certain area of renovation such as bathrooms. The POE then takes a very detailed tour stopping regularly to discuss the various design elements. The team talks with staff and residents, individually and in groups, about their feelings about the environment, what they do or do not like, and what makes it easy or hard for them to do the things they want or need to do. Daily routines are observed, such as medications being passed, activities and meals. Residents are asked if the team can look at their rooms and talk to them about their everyday living in the environment being evaluated.

The purpose of a POE is not just to rate or judge the project, but to increase understanding of the ways in which the built environment can support both residents and staff in daily life and work. Any feature rated low can then be examined together to problem solve what can be done better. “Theory and design hypotheses serve their purposes, but they are not a substitute for experiencing and learning from the actual setting in use” (Calkins, 2005).

Research May Provide the Answers We Need

“One way to quickly change poorly written existing code language and get approval of building officials is by supporting claims with published research on the topic.

Unfortunately, there continues to be a lack of good qualitative, scientific research that directly ties specific qualities of the environment to resident outcomes” (Keane and Shoesmith, 2005).

Betsy Brawley has a lot to say in agreement:

Too often design decisions are made on the basis of anecdotal, unsubstantiated information, which does not necessarily lead to the most predictable or most desirable results (2005).

Volume, good intention, and great taste are not necessarily indicators of good quality of design for aging adults. Design professionals must rely more strongly on evidence-based design, critical research findings, and postoccupancy evaluation as essential elements of the design process. There is still too little research on the effects of the environment on older users and too few rigorous independent postoccupancy evaluations” (2007).

A greater effort should be made to share valuable information from evaluation with colleagues, as well as with regulators, to promote building codes that put residents first. We can collectively improve state of the art of healthcare design by making postoccupancy evaluations more widely available. Some ideas work, some work differently than what we anticipated and can be adapted or used for another purpose, and some, sadly, just don’t work. Too often we have been guilty of promoting ideas without testing or research to determine whether and how successfully they are working for the desired goals. Sometimes we hang on to ideas too long without evidence of success instead of continuing to search for better and more productive solutions (2006).

Increased funding should be considered as another valid means to enhance and improve the physical environment to create dignified living for persons living in a nursing home. Limited funding hampers research in the field of design and the environment which also diminishes the public’s knowledge of the usefulness of environmental interventions and any demand they may make for them (Brawley, 2006).

Brawley advises her fellow design professionals to, “Learn all you can about the culture change movement, be a part of the growing national grassroots movement to create meaningful and accommodating environments that contribute to quality of life rather than take away from it. She uses as an example that acoustics are critical in long term care settings yet remains an area of design least understood by architects and designers. Architect Roger Holland worked daily at the Life Enrichment Center in Kings Mountain, North Carolina hands-on with staff and residents for more than two weeks (Brawley, 2006). We have seen other architects role model by actually living as residents in nursing homes for varying lengths of time. From what I’ve learned through the culture change movement, forward-thinking providers like Steve Shields required their designer to live as a resident. Perhaps this could become the new norm.

Chapter 11: State Regulation Issues

Regulations exist at many levels: federal, state, and local municipalities. The bulk of this paper has focused on federal CMS nursing home regulations as well as CMS' adoption of the National Fire Protection Association's Life Safety Code which brings it to the federal level as well. State regulations are usually in the form of nursing home licensure regulations unique to each state, and some states then refer to additional state regulations such as food codes. The federal government has nothing to do with state regulations. It has no authority or direct influence over them.

Stories of Culture Change and State Regulations

New York

The New York State regulations written in the 1960s stated that a nursing home could have no more than one dog or one cat. In fact, according to Dr. Bill Thomas, the regulation referred to having a "mascot," inferring you only needed one (Thomas, 2007). Here is the story in Dr. Thomas' own words from his book about the Eden Alternative, *Life Worth Living*:

Here at the Eden Alternative we have reviewed the public health laws of nearly all fifty states. They all share basic regulations prohibiting the introduction of animals into food service areas, but none have rules as restrictive as New York State's. This is ironic because New York State is where the Eden Alternative got its start. The start-up costs for our project were underwritten by a grant from the New York State Department of Health. Meanwhile, the regional health department office granted us a waiver from the regulation that limited New York nursing homes to one dog or one cat and prohibited birds altogether. Little did we know, but as we were filling our nursing home with plants, animals and children, the State health department was belatedly discovering that the law did not permit a waiver in this area. The date of our annual survey was coming up, and, boy, were we very out of compliance. According to the rule book, we had 137 animals too many. Fortunately, the regional office had been keeping tabs on us, and they could see the impact the project was having on the quality of life the facility afforded to residents. They figured that if the surveyors didn't notice the animals (ones that had been purchased with Department of Health dollars) then we couldn't be penalized. I will always remember the sight of a surveyor grimly struggling not to notice Sanborne the cat as she sashayed across the pages of the chart he was reviewing. The point is that the regulators could see and feel our passion for making the nursing home more natural and homelike (Thomas, 1996).

Want to hear the other side of the story? From Norman Andrewjeski, who was the Area Administrator for the New York State Health Department at the time:

Chase Memorial Home invited me to a board meeting to request a renewal of the waiver they received from the New York Health department to have more than one

animal. I asked my supervisor about it, who discovered it was not a regulation, but a statute, and statutes cannot be waived. So, here was a nursing home with 100 birds - we can't take them out, and we can't just screw this nursing home. So, I renewed the waiver for three more years, took the issue to legislative affairs and then the state assembly and was passed into law in 1995.

I had to ask Norm how he felt when he learned that the animals were not permitted per New York law and that a waiver was also not really permitted and he shared:

I felt surprised and wondered why did that statute pass in the first place? I felt frustrated and angry and “resolved” – in the sense that even though something has been put in my way, I was going to overcome it somehow. When I took the job, I vowed to visit every facility. In 10 years I had gotten to about 90%, and it was very frustrating, what I was seeing. So then I was told by a staff person about Chase and sought to visit it. That experience was just amazing. I knew I was seeing something I had never seen before. Amazing, unique, we've got to bottle it. I told Dr. Thomas that if there was ever anything I could do, to let me know. It had the potential to revolutionize the system, and here I was presented with a law that no one even knew about, and I was supposed to stop them? I got so ticked off I decided this isn't going to stop me. I could lose my job, but so what? Not on this one, I'm on the side of the angels with this one. I thought, what the heck, let's go! (Andrewjeski, 2007).

Kudos to Norman and the involved New Yorkers! Although they had a limiting regulation, they waived it, and even though later discovered they couldn't, they didn't stop the good changes happening, even though they rightfully could have. And, they proceeded to get the “statute of animal limitations” changed!

Florida

Up until July 1, 2005, an outdated Florida state life safety code had required nursing home beds, like hospital beds, to stick out perpendicularly from the wall to ensure, again like in a hospital, that staff had space on both sides to give care. But residents began to desire, loudly, that this was ridiculous and set out to get it changed. Residents wanted to be able to place their bed wherever they wanted in their room, in most cases against the wall in order to create more space. Here is a part of the story as written by Florida Pioneer Network director and Pioneer Network State Coalition Liaison Cathy Lieblich in a *Pioneer Networking* article:

For years, nursing home residents had ignored the regulations [that mandated that the side of a bed could not be against a wall] and state surveyors did nothing about it. Beds against the wall opened up more space for residents to make their rooms feel a little more like home. But when regulators decided to sanction homes that failed to comply with the code, it was enough to drive nursing home residents up the wall. They signed petitions and sent letters to their representatives – who listened to what they had to say. The Florida Agency for Health Care Administration (AHCA) set out to create a new protocol, and although several stakeholder groups along with the Florida Pioneer Network attempted to propose a much less bureaucratic system,

AHCA unfortunately still required facilities to request approval from AHCA any time a resident wanted to have his or her bed against the wall. As a result, sponsors were found for an amendment that would allow the resident, through the care planning process, to have his or her bed placed against the wall. The amendment was put in three bills, all of which passed, and on July 1, 2005 Governor Jeb Bush signed into law a bill that allows nursing home residents to arrange their room furniture in whatever way they please, provided roommates don't object and they don't interfere with safety or care (Lieblich, 2005).

This is an example of the strength of grassroots. State regulations that just don't make sense can be changed. The more local a regulation is the better.

Ohio – A Story Without a Happy Ending

As of June 2006, the Ohio Person Centered Care Coalition (PCCC) [a State-level culture change organization] has encountered what they are referring to as “a regulatory stumbling block to PCCC initiatives.” A local health department decided that satellite kitchens in facilities that have redesigned into neighborhoods or households need to be individually licensed as food service operations.

The Ohio Department of Health supported the local health department's decision by stating:

What we are using to determine if the satellite areas are licensable is the definition of a food service operation in the Revised Code. Section 3717.01 (F) defines a food service operation as a place, location, site, or separate area where food intended to be served in individual portions is prepared or served for a charge or required donation. In this case, the nursing home is preparing the food at one location and transports the food to another location where it is held at proper temperatures and then plated for service. If this nursing home would deliver individual meals from the main kitchen to the residents at these satellite locations, then they would not be licensable. It is the act of holding and serving food that makes it licensable.

What does this mean for facilities? \$500.00 per license, per kitchen. One facility is looking at \$3000.00, another \$4000.00 per year. They must also submit plans and make whatever modifications are necessary to be brought into and operate each satellite area in compliance with the Ohio Food Code. They must submit a detailed 'as built' scaled drawing of each satellite kitchen location with lighting, plumbing, finish and equipment specifications.

Does it make sense that only because food is plated in one part of the facility - actually closer to the residents eating it - rather than in a remote kitchen, that facilities should be faced with this additional burden? Restaurants sell food, not nursing homes. Nursing homes make food for the people living there to their liking, something best done from a kitchen closest to the residents.

State Regulations, Waivers/Variations and Initiatives

When a State regulation is outdated or standing in the way of innovation, be glad. Be glad it is State and not Federal. State regulations are more local and closer to the people, meaning they can be changed easier. Sure it takes collaboration and some work, but it can be, and is being done all over this country. In addition, every State offers what is either referred to as a waiver or variance. If a facility can show substantial compliance in another way, sometimes a certain requirement can be waived. Similarly a variance is approval for complying in a different way than the norm.

A common misconception is that regulators are not open to new ideas. However, this has not been the case for Bill Keane and John Shoemith who both have experience with innovations particularly in environments serving persons with dementia. They share that they have had much success working with regulators when any change they requested:

- ♣ Stressed how the change will improve quality of life for residents,
- ♣ Addressed how it meets or exceeds the intent of pertinent codes, and
- ♣ Included regulating officials as team members early on in the process (2005).

In my experience, it is often said by many providers at conferences, that they included their regulators in new design and regulators are usually very helpful. What many forget is that State survey agencies are public entities, and the surveyors that work in them are civil servants. This means they are there to serve. Providers seem to forget or not trust this is the case. Having been a surveyor, I know this to be true and recommend that providers always call the survey agency with questions and sit down to discuss plans with them. Ask the survey agency whose job it is to know the regulations, to think through issues with you.

In a May 2007 *Provider* magazine article, Irene Fleshner of Genesis Healthcare reports similar collaboration with state and federal regulators. “Culture change is giving us something where we can find common ground,” she says, adding, “the federal regulations are not an issue for what we’re trying to do [OBRA ‘87] was written in the spirit of culture change. It’s some state regulations that are a little outdated.”

As seen in the Florida story, culture change coalitions are making a difference. What are the issues in your State? Do you have any State regulations that are outdated that need to be changed? Do you have access to your State’s CMP (civil monetary penalty) monies to support grants for innovative changes to quality of life and/or training throughout your State? Do you have a relationship with your State health department? Do you have a State culture change coalition? Do you offer training to regulators on culture change initiatives? There is so much good work that can be done on the State level.

Chapter 12: Tools and Resources

The Artifacts of Culture Change, developed by this author and Karen Schoeneman of CMS in 2006, is a tool designed to collect concrete changes homes have made to care and workplace practices, policies and schedules, increased resident autonomy, and improved environment. Its items resulted from studying what providers and researchers have deemed significant, concrete changes that culture changing homes have made compared to other homes (Bowman, 2006).

The tool is comprised of the following six domains and has a point structure that gives the following potential totals for each:

Care Practices	70
Environment	320
Family and Community	30
Leadership	25
Workplace Practice	70
Outcomes	65
Total points	580

One voiced criticism about the Artifacts tool is that the Leadership section should be scored as heavily as the Environment section. Susan Gilster points out that all the physical changes could be made but without culture change leadership, the same nursing home would still be very institutional (2007). The final report of the Artifacts development report does identify: “Because the Artifacts of Culture Change tool represents concrete changes, the tool’s leadership section is small, since much of leadership is intrinsic and hard to capture as concrete items.” The Environment section consists of 21 of the 79 total items, and carries more point value than any other section with 320 of the total possible 580. It also carries more points because of some “heavy hitter” items with larger points. In contrast to each item having a maximum of 5 points, the following items are example of the “heavy hitters” of the Artifacts Environment section and identified in this background paper as desires of residents and markers of changed cultures:

15. Percent of residents who live in households that are self-contained with full kitchen, living room and dining room.

100%=100 points

16. Percent of residents in private rooms.

100%= 50 points

17. Percent of residents in privacy enhanced shared rooms where residents can access their own space without trespassing through the other resident’s space. This does not include the traditional privacy curtain.

100%= 25 points

18. No traditional nurses’ stations or traditional nurses’ stations have been removed.

No traditional nurses' stations = 25 points
Some traditional nurses' stations removed = 15 points

Although a valid point is raised about the importance of leadership, the purpose of the Artifacts tool was to offer “a means for culture changing providers to capture the real changes they have made after making a conscious commitment to resident-directed care.” Environmental changes often do reflect a commitment by leaders to change the culture and also reflect a larger price tag to go with it. Thus the importance of the environment is reflected with higher scores in the Artifacts measurement tool.

The Stages Model is a tool developed by Leslie Grant of the University of Minnesota and LaVrene Norton of Action Pact to help a home assess the degree of culture change from an organizational development perspective. Culture change progression through the four stages: Stage I - Institutional model, Stage II - Transformational model, Stage III - Neighborhood model, and Stage IV - Household model includes Decision Making, Staff Roles, Organizational Design, Leadership Practices and Physical Environment. Its Physical Environment section shows how the environment and environmental features change on a continuum from institution to home in the household model and can be used both to assess the current status of a home and its potential.

The Hulda and Maurice Rothschild Foundation provides funding for the NHRegsPlus searchable website which contains a repository of the state nursing home regulations for each of the 50 States. It allows the user to search by State or by topic. It includes waiver processes, resources, and makes comparisons between states by topic. Environmental features and coinciding states' regulations can be looked up by topic such as nurses' stations. Links to most states' licensure regulations are given and if a state has a waiver or variance process, it can be accessed directly. The website, housed at the University of Minnesota, is a wealth of information at your fingertips and can be accessed at <http://www.hpm.umn.edu/NHRegsPlus>.

Chapter 13: Is Safety “The End All Be All?”

Is safety what ends up being what is most important to people? Do people define quality of life as safety? Maslow’s Hierarchy of Needs identifies that ideally safety is treated as “a given” so that quality of life can be achieved. The University of Minnesota’s Rosalie Kane, project lead in the creation of NHRegsPlus says, “State regulations are full of materials about how people need to be offered choice – that word is everywhere – but you see stuff that restricts resident choice.” Kane notes that this contradiction is usually related to safety which, she says, is critical in skilled nursing settings. “The trick for regulators, says Kane, is striking the right balance between ensuring safety and providing the best possible quality of life” (Smokler, 2007).

In an article about the SAGE POE, designer Maggie Calkins points out that although decisions made for people to move into a nursing home often are due to safety reasons, if you ask the residents themselves, they will generally not rank safety as a top priority in their life (Calkins, 2005). A timely article to this very subject was published on May 24, 2007 in the New York Times entitled “Rethinking Old Age.” A friend of the author, Atul Gawande, of this article, had a friend move into a nursing home a week prior to his writing it. She was 89, chose to move and also chose the nursing home.

She's glad to be in a safe place -- if there's anything a decent nursing home is built for, it is safety. But she is struggling. The trouble is -- and it's a possibility we've mostly ignored for the very old -- she expects more from life than safety. "I know I can't do what I used to," she said, "but this feels like a hospital, not a home." And that is in fact the near-universal reality. Nursing home priorities are matters like avoiding bedsores and maintaining weight -- important goals, but they are means, not ends. She left an airy apartment she furnished herself for a small beige hospital-like room with a stranger for a roommate. Her belongings were stripped down to what she could fit into the one cupboard and shelf they gave her. Basic matters, like when she goes to bed, wakes up, dresses, and eats were put under the rigid schedule of institutional life. Her main activities have become bingo, movies, and other forms of group entertainment. Is it any wonder most people dread nursing homes? The things she misses most, she told me, are her friendships, her privacy, and the purpose in her days. She's not alone.

This woman points out that life is more than just being safe. Residents interviewed in the landmark 1986 Institute of Medicine study, *Improving the Quality of Care in Nursing Homes*, did not say safety was what made up their quality of life but instead desired autonomy, choice, and to be treated with dignity. The design of the nursing home environment can do so much to afford many of these identified features of quality of life if it would provide private rooms, more control over one’s environment such as controls for temperature and lighting, an environment without the noise and beeping of a traditional institution, full support of a person’s personal belongings surrounding them and creating true home - being *at* home, not in a home.

Nursing homes are expected to prevent harm to residents while also respecting residents' rights to make choice. Pam Elrod of Genesis Healthcare brings these two ends of the spectrum together with a plea to begin reconsidering how success is measured:

This is an industry of control, since its inception. The State and Federal Government expects you to control everything – about care, about the environment, about safety. We're the most regulated industry in the world. It's all the Federal Government's fault. Now the pendulum has shifted because of public sentiment. They want more choice, and a more home-like environment, and all that is about not having control. The meteor has hit, and we're all still dinosaurs. We're still trying to do it the old way even though the world is changing around us. You say you want residents' rights, but everything you measure is the opposite. We have to find new ways to measure what success means (Baker, 2007).

In developing the household model, Steve Shields and LaVrene Norton have bumped up against many a building code or regulation which has caused frustration and a realization that many lag behind the culture change movement which is forging ahead with new environmental designs that were not envisioned when written. They sum up their experiences by identifying:

Almost every type of building must comply with a set of regulations. These are primarily safety standards that protect the occupants and emergency response personnel who come to their aid. They also address the occupants' expectations and patterns of behavior. As expectations and behaviors evolve, regulations addressing environmental issues may also need to evolve. A substantial time lag can occur between recognizing the evolution of behavioral patterns and modifying environmental regulations accordingly. Environments for frail adults provide a diversity of challenges as we strive to keep them safe without becoming so over-protective we deprive their lives of purpose and meaning. Because nursing homes are now based on a medical model, most regulations address standards of care that are clinical in nature.... Regulations or no regulations, we must replace institution with home (2006).

“Regulations or no regulations, we must replace institution with home.” This could almost be the theme to the upcoming *Creating Home* national symposium. CMS, especially, is to be commended for partnering with the Pioneer Network in a proactive move to objectively look at the issues arising from new models of nursing home living potentially including requirement changes.

Invitation to Work Together

Karen Schoeneman of CMS and Project Officer for the *Creating Home* national symposium, thoughtfully describes the turning point at hand and extends this invitation for all stakeholders to work together to smooth the path for desired change:

There are many issues involved in changing the environment in nursing homes. There is tradition – what has been acceptable is actually institutional. There are desires on the part of homes to avoid costs, even the very small cost of spackling nail holes. There are Federal regulations, the Life Safety Code, even the Food Code, and there are State and local building codes. The result is a mismatched jigsaw puzzle of often conflicting rules that has innovators stymied in making changes they want to make. There is a lack of research to inform us, and because of this, we are often left guessing what residents want, what is safe, how safe is safe enough, how comfortable and homey are enough, how much control over one's daily life is possible within the constraints of living with a group of strangers, each of whom needs some help with their daily lives. All the changes in the past, whether to culture or to regulation, have come from problems being revealed that were then mandated to be "fixed" with regulations, or from dedicated groups of people gathering together to make the case for change.

We are at a turning point in the environment part of the culture change movement. We need to talk, all of us, regulators, legislators, safety experts, researchers, innovators, designers, and most particularly residents, staff, and families. We need to make some new decisions together, and we then need to work together to make those decisions turn into changes: changes in expectations of what a nursing home is and should be; changes in what is mandated and prohibited; and changes in how we think about people who live in nursing homes and what they want, what they need, and how to keep them safe in the midst of them exercising their rights to a good quality of life in a place that provides excellent care and that can truly be called home. The answers will not be yes or no, on or off answers, but will be those of how far along on a continuum we can go, how much of resident rights can we provide, and how much safety is enough or too much when it pushes rights out of the picture (2007).

Brawley agrees and encourages us with, "It will take more than simply sharing research or basing design on evidence. A spirit of cooperation will be required: an unprecedented change in the approach of researchers, healthcare providers, and designers with open minds, willing to communicate openly and to work together to identify problems, design better solutions, and develop methods to test the effectiveness – together" (2005).

A spirit of cooperation. A turning point. Each of us has such a great opportunity to affect the future of nursing homes daily in our work as well as collectively at the *Creating Home* symposium and beyond. The symposium will be only the starting point of what many are recognizing as continued future collaborative work. Thank you Karen Schoeneman for the great idea. Thank you CMS for not only supporting the idea but giving it prominence on your annual action plan. Thank you Pioneer Network for partnering with CMS and taking the lead on organizing this great event. Thank you Commonwealth Fund for backing the work of the Pioneer Network. Thank you AAHSA, AHCA, and Rothchild Foundation for your invaluable cooperative work in making the symposium happen. Thank you anyone reading this as it shows you have at least an interest in making change and probably are already doing so. We invite you to join us, to carry the torch in your sphere of influence. It

has always been us, the people of this great country, to cause, create and carry out change that makes life better indeed ultimately for all of us.

Many issues have been presented in this background paper designed to set the stage for the 2008 jointly CMS and Pioneer Network sponsored public symposium: *Creating Home in the Nursing Home: A National Symposium on Culture Change and the Environment Regulations*. After reading it, we hope you will come prepared to hear what national experts identify as barriers and potential solutions, research findings and stories from the field, and responses from national stakeholder organizations, and to add your thoughts in the open public comment periods. What a great opportunity we all have.

The brochure and agenda for the symposium can be found at the Pioneer Network website at www.PioneerNetwork.net. Following the symposium a summary document will be accessible there as well including speaker presentations, national stakeholder organization responses and public comments made.

We invite you to come be a part of this once in a lifetime event April 3rd, 2008 in Washington, D.C. – a call to action for each of us desiring to create home in the nursing home. Let’s do what pioneer Steve Shields proposes: “There’s a long road ahead.... We’ve worn a dirt path in the grass, and we’re excited when we cross paths with others making their own paths. Maybe someday – in our lifetime, we hope – our paths, yours and ours, will come together and form an interstate” (Shields, 2004). Let’s cross paths in DC and continue to form the interstate to *Creating Home!*

Special Thanks

Thank you to James Merrill of CMS, Life Safety Code lead, for assistance in identifying parts of the code pertinent to environmental culture change issues in nursing homes. A very special thanks and debt of gratitude goes to Karen Schoeneman of CMS, Quality of Life lead, not only for her foresight in conceiving this idea but for her patient assistance every step of the way. To be a part of this historic event where the federal government, CMS, has partnered with the lead organization for culture change, the Pioneer Network, has been a joy for each of us involved.

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Resources

American Institute of Architects (AIA)

www.aia.org

The AIA represents the professional interests of over 80,000 licensed architects, emerging professionals, and allied partners who are committed to excellence in design and livability in our nation's buildings and communities. The AIA Design for Aging Center encourages collaboration among design professionals to improve environments for older adults.

Dementia Design Info

www.DementiaDesigninfo.org

This searchable database was the result of the Environmental Design Lexicon for Dementia Care that links resident and staff outcomes with physical design features. It is based on an extensive review of the literature, and organizes the information into an easily searchable compendium of practical information. Users to the site can search by space, e.g., bedroom, bathing area and toilet room and/or user need, e.g., privacy or safety. Each search result indicates whether the outcomes are validated by research, reflect expert consensus or are unverified.

The Eden Alternative

www.edenalt.com

The Eden Alternative is a small not-for-profit organization seeking to de-institutionalize the culture and environment of today's nursing homes. Over 300 homes in the U.S., Canada, Europe, and Australia are registered and dedicated to the principles of Eden. Eden home office staff, 50 Eden Educators, 60 mentors and more than 15,000 associates teach that where elders live must be habitats for human beings, not sterile medical institutions. Find local Eden Associate trainings listed on the website, how to become an Eden registered home, a listing of registered homes as well as announcements for the every other year international Eden conference.

Ideas Institute

www.ideasinstitute.org

Ideas Institute is a non-profit resource repository regarding the environment, seeking to provide solutions that improve the lives of older adults through the conduct of rigorous applied research.

National Fire Protection Association

www.nfpa.org

The NFPA has a bimonthly journal. Some articles are available over the internet for free but most are only accessible if one is a member of NFPA. Dues are \$150.00/year.

Green House Project

www.ncbcapitalimpact.org

Learn about the Green House Project Replication Initiative funded by the Robert Wood Johnson Foundation, more information about Green Houses, find informational workshops around the country and order a free GH Project Guidebook.

Lighthouse International

www.lighthouse.org

Lighthouse International is a leading non-profit organization dedicated to preserving vision and to providing critically needed vision and rehabilitation services to help people of all ages overcome the challenges of vision loss. Through clinical services, education, research, and advocacy, the Lighthouse enables people with low vision and blindness to enjoy safe, independent and productive lives.

Pioneer Network

www.pioneernetwork.net

The Pioneer Network is a not-for-profit national umbrella organization for the grassroots culture change movement which promotes household living environments where elders and direct care workers are able to express choice in meaningful ways. The Pioneer Network hosts an annual national conference and ongoing blog where anyone can ask any questions regarding culture change practices and principles.

Society of the Advancement of Gerontological Environments, SAGE Federation

www.sagefederation.org

SAGE is a culture change focused not-for-profit organization that promotes networking and collaboration among relevant stakeholders to create better environments for older adults. Learn about the creation of SAGE state units, the DESIGN review edition of *Nursing Homes - Long-Term Care Management* magazine highlighting “state of the art” senior environments and SAGE’s user-friendly post occupancy evaluation [POE].

The Center for Design for an Aging Society

www.centerofdesign.org

The Center of Design for an Aging Society is a not-for-profit entity dedicated to improving the built environment to maximize the abilities of older adults.

Regulations – How to obtain

CMS State Operations Manual (SOM) for Long Term Care Facilities

Appendix P “Survey Protocol for LTC Facilities”

Appendix PP “Guidance to Surveyors – LTC Facilities”

http://www.cms.hhs.gov/GuidanceforLawsAndRegulations/12_NHs.asp#TopOfPage

Or www.cms.hhs.gov: Regulations and Guidance; Transmittals; CMS Transmittals;

Internet-Only Manuals Table of Contents; 100-07 State Operations Manual;

Appendices Table of Contents, Appendix P and Appendix PP

NFPA 101 Life Safety Code 2006 Edition – used in nursing homes.

Available only by purchase at www.nfpa.org.

\$75.00 non-member price, \$67.50 member price.

State nursing home licensure regulations are often available through state websites.

NHRegsPlus

A searchable website repository of the state nursing home regulations for each of the 50 States. It allows the user to search by state or by topic. It includes waiver processes, resources, and makes comparisons between states by topic.

<http://www.hpm.umn.edu/NHRegsPlus>.

Carmen S. Bowman, MHS, ACC is the owner Edu-Catering: Catering Education for Compliance and Culture Change in LTC turning her former role of regulator into educator. She is a nationally-recognized expert in culture change, and is a frequently invited speaker at national long term care and culture change conferences including the Pioneer Network. Carmen was a Colorado state surveyor for nine years, surveying nursing homes, assisted living residences and adult day programs. She is a former policy analyst with CMS where she taught the national CMS Basic Surveyor Training Course. She presented the surveyor segment of the 2000 CMS satellite broadcast "Surveying the Activities Requirements in Nursing Homes" and the 2002 CMS satellite broadcast "Innovations in Quality of Life - the Pioneer Network." Carmen now serves as a contractor to CMS on culture change projects the most recent being the April 2008 CMS and Pioneer Network co-sponsored national Creating Home environmental symposium focusing on environmental regulations and culture change. With CMS, she also co-developed the Artifacts of Culture Change measurement tool. She is currently serving on an AANAC grant project regarding The MDS and Culture Change. The first certified activity professional to become a state surveyor and work at the federal level, Carmen served on the CMS Activities Panel rewriting the interpretive guidelines for Tags F248 and F249. Carmen holds a Master's degree in Healthcare Systems and Certificate in Gerontology from Denver University. Carmen is a Certified Validation Worker, Certified Eden Associate and Eden Mentor. In 2002, she co-founded the Colorado Culture Change Coalition. She has authored five culture change workbooks for Action Pact: Building Culture Change Coalitions, Living Life to the Fullest: A Match Made in OBRA '87, Quality of Life Regulations: The Difference between Deficient Practice, Common Practice and Culture Change Practice, Regulatory Support and Considerations for Culture Change and Changing the Culture of Care Planning: A Person-directed Approach.