
Differences in dementia services and settings across place types and regions

Gerald D. Weisman, PhD
Christine Kovach, PhD, RN
Susan E. Cashin, PhD

Abstract

People with dementia have complex and unique social, environmental, and communication needs arising from impaired cognition. One response to dissatisfaction with the medical model of care in nursing homes has been the creation of more homelike and social options for care in the community. These options include community-based residential facilities and a variety of more independent senior dwellings. Staying in residential settings longer may be associated with benefits, including decreased financial burden and improved quality of life.

However, with the boundaries between these place types often less than clearly drawn, it has become increasingly difficult to anticipate the specific services and environmental features provided by each. It is also difficult to effectively match facilities to the specific needs of older persons with dementia. Even social workers responsible for placements, especially in urban areas, may not be able to visit all local residential options. To better understand these new venues for dementia care, this study explored the range of services and settings available to people with dementia in three different place types in five Wisconsin counties: nursing homes, community-based residential facilities, and independent senior housing.

Key words: Alzheimer's disease, dementia, long-term care, assisted living, community services, in-house services

Gerald D. Weisman, PhD, Professor, School of Architecture & Urban Planning, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin.

Christine Kovach, PhD, RN, Associate Professor, School of Nursing Center Scientists, Center on Age and Community, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin.

Susan E. Cashin, PhD, Schools of Nursing & Human Movement Sciences, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin.

Introduction

Recent years have seen an increased interest in the role of contextual factors within environmental gerontology. For example, Baltes¹ asserts that “the environment plays a dominant role in the development and maintenance of dependency in the elderly.” More specifically, the Baltes and Carstensen² model of selective optimization with compensation states that older adults adapt to losses through the interplay of three processes: selection, compensation, and optimization. People use a process of selecting goals that need to be revised as stamina and function decline. People also use compensatory mechanisms to maintain existing goals, such as hiring someone to mow the lawn so that they can remain in their house. Finally, optimization involves minimizing losses and maximizing gains by matching resource attainment to desired outcomes. This theoretical model helps to focus attention on the importance of environmental variables, person-situation interactions, and the role of cognitive attributions in choosing housing options, as cognitive and functional ability, as well as other losses, mount in old age.

This process of optimization, or matching, is clearly reflected in the range of new place types for the elderly that have emerged in recent decades. Lawton³ succinctly traces the evolution from “homes for the aged” (what we now characterize as nursing homes), to “independent housing,” and then “congregate care” and “life span” communities. Each of these new place types filled in additional points on the independence/dependence (or community/institution) continuum, albeit at some cost. According to Lawton, “this points-on-the-continuum model of long-term care demanded the continued movement of people as their health declined.” Surprisingly, despite the substantial theoretical impact of Lawton’s concept of person-environment congruence, it has been the focus of only limited empirical

Table 1. Distribution of place types across counties

County	Nursing home (n = 13)	Community based residential facility (n = 23)	Independent/congregate dwellings (n = 9)
Urban county	2	11	6
Mixed county A	0	2	1
Mixed county B	7	3	2
Rural county A	1	4	0
Rural county B	3	3	0

inquiry.⁴

The newest addition to this continuum of residential options for the elderly—assisted living—is somewhat more problematic in terms of its nature and position on the continuum. Some view assisted living as yet one more option, falling between the nursing home and congregate housing, in terms of the services and support it offers its residents. Others view assisted living in rather more revolutionary terms. In their pioneering study of assisted living, Kane and Wilson⁵ assert:

“assisted living should not be “slotted” on the present “continuum of care” but be conceived as a way of serving people with wide ranges of disabilities, many of whom are now in nursing homes.”

This perspective is echoed by Schwarz & Brent⁶ in the introduction to their volume on assisted living; “In its essence, assisted living is a model of long-term care for people who conform to the same profile as nursing home residents . . . By unbundling services from housing, older persons do not need to move along the continuum of care to more dependent care facilities.”⁶ Even a decade ago, Kane and Wilson reported that “assisted living is now serving substantially disabled persons, and many remain in the setting as they become progressively more disabled.”⁵

There is evidence that many older adults are selecting community-based congregate facilities as an alternative to traditional nursing homes.⁷ Some reports indicate that assisted-living residences for older adults are growing at an annual rate of 15 to 20 percent.^{8,9} The National Center for Assisted Living¹⁰ reports that more than one million Americans now reside in 28,000 assisted-living facilities nationwide.

A few studies have examined the benefits of congregate community residences over remaining at home or moving to a nursing home. Moos and Lemke¹¹ compared the health and well-being of residents in 262 nursing

homes, residential care facilities, congregate apartments, and veteran’s facilities. Residents who lived in facilities with more prosthetic features, such as hall railings and shower chairs, had higher levels of independence. Fonda, Clipp, and Maddox¹² compared functional patterns of residents of low-income, assisted-living facilities with independent community dwellers. Adjusting for social-demographic factors and health, functional patterns were similar over the two-year study, but those in assisted living were significantly more likely to have stable high functioning than independent community dwellers. Grayson, Lubin, and Van Whitlock¹³ found that residents in assisted living had a higher level of depressed affect compared to older adults living independently in the community.

Sample and settings

Settings

Data were gathered in 45 dementia care facilities participating in a pilot program addressing the “redesign” of long-term care in Wisconsin. Of the 45 facilities, 19 were located in an urban county (population 900,000+), 15 in mixed urban/rural counties (mean population of roughly 100,000), and 11 in rural counties (mean population of roughly 40,000). Nonwhite population ranged from 34 percent in the urban county, to 4.8 percent in the mixed counties, and 3 percent in the rural counties.

Place types were divided into nursing homes (NHs), community-based residential facilities (CBRFs), and independent/congregate dwellings (ICDs). Following Wisconsin state statutes, NHs were defined as “a place where five or more persons who are not related to the operator or administrator reside, receive care or treatment and, because of their mental or physical condition, require access to 24-hour nursing services.” CBRFs are “places where five or more adults who are not related to the operator or administrator and who do not require care

Table 2. Differences in environmental features across place types

Feature	Nursing* home (n = 13)	Community based residential facility (n = 23)	Independent/congre- gate dwellings (n = 9)	Chi square
Locking system	100	91.3	37.5	30.05**
Wanderguard	84.6	26.1	0	101.72**
Dining area seats < 16	69.2	73.9	66.7	0.38
Wayfinding signs	69.2	43.5	37.5	11.33**
Day room specifically for people with dementia	61.5	30.4	33.3	14.14**
Day room seats < 16	92.3	78.3	66.7	4.15
Secure fenced outdoor area	69.2	52.2	33.3	12.51**
Therapeutic kitchen	76.9	60.9	55.6	3.81
TV on < 3 of 8 hours in day room	69.2	34.8	77.8	17.09**
Radio on < 3 of 8 hours in day room	92.3	34.8	77.8	26.19**
Public address and audible calling systems not used	23.1	78.3	88.9	39.35**
Wandering path	15.4	39.1	11.1	20.80**
Live plants in day room	69.2	100	55.9	13.64
Minimal fluorescent lighting	7.7	73.9	77.8	58.42

* Numbers in this column are percentages of facilities with the feature; ** Indicates statistically significant difference at the .05 level.

above intermediate level nursing care reside and receive care, treatment, or services that are above the level of room and board but that include no more than three hours of nursing care per week per resident. ICDs included residential care apartment complexes (RCAC) and adult family homes (AFH). RCACs are defined as “a place where five or more adults reside that consists of independent apartments, each of which has an individual lockable entrance and exit, a kitchen, including a stove, and individual bathroom, sleeping, and living areas and that provides the resident not more than 28 hours per week of services that are supportive, personal, and nursing services.” AFHs are private residences in which care is provided above room and board but does not include nursing services. Distribution of place types across counties is displayed in Table 1.

Methods

Questionnaire

A Dementia Facility Questionnaire (DFQ) was developed to ascertain services available in the following domains: environment, therapeutic activity, nursing care, staff training, and family care. Services included within each domain were established through a review of the literature and consultation with experts in the field. Rather than attempting to develop exhaustive lists of services, an effort was made to include items that would represent the range of needs of older adults with dementia. A total of 62 items were included (14 environment, 16 therapeutic activity, 24 nursing care, 4 staff training, and 4 family care). Presence or absence of the service or

Table 3. Differences in nursing services across place types

Service	Nursing* home (n = 13)	Community based residential facility (n = 23)	Independent/congre- gate dwellings (n = 9)	Chi square
Bathing	100	100	88.9	0.85
Grooming of teeth, hair, fingernails	100	100	77.8	3.55
Feeding	100	65.2	44.4	22.59**
Continent toileting needs	100	100	55.6	15.43**
Assistance with bladder incontinence needs	100	95.7	55.6	14.32**
Assistance with bowel incontinence needs	100	91.3	55.6	13.45**
Bladder training	100	73.9	44.4	21.27**
Bowel training	100	65.2	33.3	33.64**
One-person transfer	100	87	55.6	12.89**
Two-person transfer	92.3	43.5	11.1	68.24**
Lift transfer	92.3	8.7	22.2	98.09**
Vital signs	100	87	77.7	2.84
Weight check	100	91.3	66.7	6.94**
Blood glucose checks	100	82.6	77.8	3.14
Intake and output	100	78.3	33.3	32.82**
Nurse assessment	100	73.9	77.7	4.74
Behavior management	91.7	60.9	44.4	17.55**
Wound care	100	91.3	55.6	13.45**
Pain management	100	65.2	44.4	22.59**
Medication-taking assistance	100	95.7	88.9	0.66
Administration of oral medications	100	95.7	66.7	7.50**
Administration of intramuscular and subcutaneous medications	100	47.8	33.3	40.77**
Administration of intravenous medications	100	17.4	22.2	92.40**
Administration of intravenous fluids	100	21.7	11.1	106.52**

* Numbers in this column are percentages of facilities with the feature; ** Indicates statistically significant difference at the .05 level.

Table 4. Differences in staff training and family services across place types

Staff training in dementia care	Nursing* home (n = 13)	Community based residential facility (n = 23)	Independent/congre- gate dwellings (n = 9)	Chi square
For nurses	100	60.9	44.4	23.83**
For certified nursing assistants	100	73.9	33.3	32.71**
For social workers	100	21.7	11.1	106.52**
For activity therapists	100	39.1	22.2	62.29**
Family services				
Dementia support group on site	30.8	21.7	22.2	2.10
Information provided regarding offsite support groups	38.5	60.9	44.4	5.62
Family education regarding dementia	46.2	43.5	11.1	22.71**
Family education regarding grief, loss, end-of-life	61.5	47.8	33.3	8.37**
* Numbers in this column are percentages of facilities with the feature; ** Indicates statistically significant difference at the .05 level.				

feature was indicated, and in some sections, frequency of service data were collected. Content validity was further assessed through multiple rounds of review from professionals working in the field. The supervisor of the family care pilot program for each county completed the DFQ. Most respondents were social workers, but some of the supervisors were nurses or had another healthcare degree. Data were collected through observation, review of facility documents, and interview of staff.

Results

Environmental features

As seen in Table 2, there were significant differences in most environmental features between place types. Overall, nursing homes had the most environmental features specifically designed for people with dementia, especially those related to resident security. There were more NHs with locking systems and other wandering prevention systems ($p < .001$), navigation signs posted ($p = .003$), a main living area specifically designed for people with dementia ($p < .001$), a secure outdoor space ($p = .002$), and an environment in which the radio was on for less than three of eight hours ($p < .001$).

However, consistent with their “institutional” heritage,

nursing homes were least likely to have minimal amounts of fluorescent lighting ($p < .001$) and more likely to use public address or audible calling systems ($p < .001$). CBRFs were more likely to have live plants in the main living area than NHs or ICDs ($p = .001$). The ICDs were most likely to have minimal fluorescent lighting ($p < .001$) and not utilize audible public address systems ($p < .001$) or keep a television playing more than three of eight hours ($p < .001$). The ICDs were least likely to have a locking or wandering prevention system ($p < .001$), have navigation signs posted ($p = .003$), a secure outdoor space ($p = .002$), a wandering path ($p < .001$), or live plants in the main living area ($p = .001$).

Nursing services

Table 3 shows that there were significant differences in the nursing services available across place types. Consistent with the traditional definitions of these three place types, nursing homes were much more likely to provide services, such as administration of intravenous fluid, administration of intravenous antibiotics, and administration of intramuscular or subcutaneous medications. However, nursing homes were also significantly more likely to offer behavioral care, mobility assistance, incontinence care, feeding assistance, some

Table 5. Differences in frequency of select therapeutic programming activities across place types

Activity	Nursing* home (n = 13)	Community based residential facility* (n = 23)	Independent/congre- gate dwellings* (n = 9)	F
Music therapy	12.00 (16.29)	11.65 (11.04)	9.89 (16.29)	.100
Art therapy/crafts	11.92 (8.63)	8.65 (9.48)	4.56 (9.72)	1.610
Cooking	3.92 (1.78)	4.22 (6.78)	1.44 (1.24)	1.003
Gardening	2.42 (2.47)	13.65 (21.65)	6.33 (10.04)	1.982
Reminiscence	15.25 (10.91)	15.52 (12.35)	16.22 (20.77)	.013
Sensory stimulation	24.08 (16.23)	11.22 (12.59)	7.67 (12.78)	4.689**
Pet therapy	11.58 (17.26)	7.57 (9.66)	7.33 (12.89)	.449
Exercise—range of motion type	17.42 (11.52)	18.61 (9.91)	22.11 (24.45)	.294
Exercise—aerobic type	5.83 (9.70)	10.87 (12.14)	11.78 (20.50)	.670
Exercise—resistance type	1.42 (3.09)	4.48 (9.52)	16.56 (25.04)	3.767**
Other movement activity	12.42 (18.51)	11.04 (12.55)	8.11 (12.69)	.235
Cognitive activity	15.83 (17.51)	16.00 (12.20)	11.11 (14.21)	.415
Spiritual activity	13.83 (9.89)	8.17 (7.94)	4.89 (2.98)	3.625**
Activity off-site	2.42 (2.11)	2.91 (2.21)	5.11 (5.33)	2.249
Housework activity	6.58 (11.76)	15.43 (14.54)	13.78 (15.44)	1.602
Other activities	7.50 (16.30)	7.13 (12.77)	2.56 (3.43)	.494

* Numbers in this column are the average number of times an activity is offered per month followed by the standard deviation.

** Indicates statistically significant difference at the .05 level.

important physical assessments, wound care and pain management. For all nursing services other than basic bathing, grooming, and toileting assistance, NHs were more likely to provide the service than CBRFs. Surprisingly, more than 50 percent of the ICDs provided glucose monitoring, weight checks, nursing assessments, wound care, and some assistance with taking medications.

Staff training and family services

Table 4 highlights differences in staff training and family services among place types. All nursing homes provided training in caring for a person with dementia to

nurses, CNAs, social workers, and activity therapists. Surprisingly, few CBRFs and ICDs provided dementia-care training to social workers and activity therapists.

Fewer than 50 percent of facilities in all place types provided formal education to family members about dementia and the expected progression of the illness. Nursing homes were most likely to provide grief support, but only 61.5 percent of NHs provided grief education or support services.

Therapeutic activities

Table 5 presents differences in frequency of offering

Table 6. Relationship between various types of longterm services offered in longterm care facilities

	Environment	Nursing	Staff training	Family services
Environment		.403*	.395*	.368*
Nursing	.403*		.535*	.393*
Staff training	.395*	.535*		.421*
Family services	.368*	.393*	.421*	

*N = 45.

specific therapeutic activities across place types. While range-of-motion exercise programs are most common, the more useful aerobic and resistance exercises are offered much less frequently. There were significant differences in the amount of sensory stimulation, resistance exercise, and spiritual activities offered across place types. Nursing homes offered the most sensory stimulation and spiritual activities, and the ICDs offered the most resistance exercise sessions.

Regional differences

Analysis of variance procedures were used to examine if there were significant differences in services between facilities located in large urban communities, small rural communities, and mixed midsized communities. There were no significant differences in environmental ($F = .407, p = .668$), nursing ($F = 2.235, p = .118$), staff training ($F = 1.783, p = .179$), or family care ($F = .664, p = .520$) services offered between facilities in the various types of communities.

Relation among services and settings

There was an interest in determining if facilities that offer one type of service at a higher level also offer other services at higher levels. As seen in Table 6, there was significant positive correlation among all services.

Discussion

The results of this study were surprising in a variety of ways. Though thought of as more “institutional” in character, NHs compared favorably with the other two place types in the provision of positive features, such as smaller dining rooms and day rooms, secure outdoor areas,

therapeutic kitchens, and controlled use of radio and TV. Other institutional markers, however, such as fluorescent lighting, call systems, and radios and TVs remain more common in NHs.

It was also surprising that some CBRFs and ICDs provide administration of intravenous fluids and intravenous medication. These services seem to go beyond the scope defined by the American Health Care Association as typical of what assisted-living facilities currently provide. Residents using these services may also be expected to need a level of physical assessment care not available in many residential settings. Surprisingly, many CBRFs and ICDs did not offer behavior management services for people with dementia. There was a significant difference in the resistance exercises offered across settings, with ICDs offering these exercises most frequently.

Finally, it should be noted that this study is only one snapshot in time and there is little reason to believe that things have remained static since these data were gathered. Indeed, the entire continuum of dementia care appears to be increasingly fluid. Recent years have seen substantial innovation in long-term care facilities as they endeavor to shed their medical model origins¹⁴. There were certainly some indications of this (e.g., smaller dining rooms, therapeutic kitchens) in the physical settings of the 13 nursing homes included in our modest sample. The position of new place types, such as assisted living, appears to be shifting as well, taking on such tasks as administration of intravenous fluids and medications. Do we intend innovative places such as community-based residential facilities to simply fill in the gap between more institutional and more residential facilities, or are they meant to replace them? Current patterns suggest that our society has yet to decide.

References

1. Baltes P: *The many faces of dependency in old age*. New York: Cambridge University Press, 1996.
2. Baltes MM, Carstensen LL: Social-psychological theories and their applications to aging: From individual to collective. In Bengtson VL, Warner K, Schaie KW (eds.): *Handbook of Theories of Aging*. New York: Springer Publishing, 1999.
3. Lawton MP: Forward. In Schwarz B, Brent R (eds.): *Aging, autonomy, and architecture: Advances in assisted living*. Baltimore, MD: Johns Hopkins University Press, 1999.
4. Nahemow L: The ecological theory of aging: Powell Lawton's legacy. In Rubenstein R, Moss M, Kleban M (eds.): *The many dimensions of aging*. New York: Springer, 2000.
5. Kane R, Wilson KB: *Assisted living in the United States: A new paradigm for residential care for frail older persons*. Washington, DC: American Association of Retired Persons, 1993.
6. Schwarz B, Brent R: *Aging, autonomy and architecture: Advances in assisted living*. Baltimore: Johns Hopkins University Press, 1999.
7. Maddox GL: Housing and living arrangements, a transactional perspective. In Binstock RH, George LK (eds.): *Handbook of Aging and the Social Sciences*. San Diego, CA: Academic Press, 2001.
8. National Center for Assisted Living: *Planning ahead: A consumer's guide to assisted living facilities*. American Healthcare Association, 2003.
9. Citro J, Hermanson S: *Assisted Living in the United States*. (Publication ID: FS62R). Washington DC: American Association of Retired Persons, 1999.
10. National Center for Assisted Living: *Facts & Trends: The Assisted Living Sourcebook 1998*. Washington, DC: American Healthcare Association, 1998.
11. Moos RH, Lemke S: *Group residences for older adults*. New York: Oxford University Press, 1994.
12. Fonda SJ, Clipp EC, Maddox GL: Patterns in functioning among residents of an affordable assisted living facility. *Gerontologist*. 2002; 42(2): 178-187.
13. Grayson P, Lubin B, Van Whitlock R: Comparison of depression in the community-dwelling and assisted living elderly. *J Clinical Psychology*. 1995; 51(1): 18-21.
14. Weisman G: Creating places for people with dementia: An action research perspective. In Schaie KW, Wahl HW, Mollenkopf M, et al. (eds.) *Aging in the community: Living arrangements and mobility*. New York: Springer, 2003.

Call for Papers

American Journal of Alzheimer's Disease and Other Dementias
invites the submission of dementia-related articles in the following areas:
research, case studies, literature reviews, public policy, opinion and commentary.

Some suggested topics include:

- Evidence-based practice
- Practice-based clinical research
- Laboratory research in neurology and genetics
- Pharmacology
- Nonpharmacological therapies
- Administrative issues

For more information, contact:

Editorial Department
American Journal of Alzheimer's Disease and Other Dementias
470 Boston Post Road
Weston, Massachusetts 02493

Tel: 781-899-2702 • **Fax:** 781-899-4900

E-mail: alzheimers@pnpc.com

Web site: www.pnpc.com