Do Impaired Older Persons With Health Care Needs Occupy U.S. Assisted Living Facilities?  
An Analysis of Six National Studies  

Stephen M. Golant  
Department of Geography, University of Florida, Gainesville.

**Objectives.** The assisted living facility (ALF) is the fastest-growing noninstitutional long-term care alternative for frail older persons in the United States. This analysis assesses the extent to which older persons with physical and cognitive disabilities and health care needs occupy ALFs in the United States.

**Methods.** Information on study design and six indicators of the occupancy patterns of older persons in ALFs were abstracted from six national studies. The collected data were based on reports by the administrators of ALFs.

**Results.** The six reviewed studies had several methodologic weaknesses, resulting in different statistical populations of ALFs, samples with very different numerical and attribute properties, and findings based on disparate indicators. The older residents in ALFs were less physically and cognitively impaired than those in nursing homes. ALF facilities were more likely to admit or retain frail older persons when they had relatively minor or less serious physical or cognitive impairment or health care needs.

**Discussion.** ALFs are currently serving older residents who require less nursing care and who are less functionally and cognitively impaired than those found in nursing homes. The more restrictive admitting and discharge criteria of a substantial share of ALFs guarantee their less frail occupant profile. This is, however, an extraordinarily diverse shelter and care alternative, and very frail older persons with serious chronic health problems can be found in ALFs. Average duration of stays may be as long as 3 years. Researchers must conduct more carefully executed studies with replicable methodologies that produce unbiased and generalized findings.

The nursing home persists as the most institutionalized, long-term care setting in the United States with the highest prevalence of older persons who are chronically ill and who have difficulty functioning because of their cognitive and physical disabilities (American Health Care Association, 2001; Hawes, 2001; Sahyoun, Pratt, Lentzner, Dey, & Robinson, 2001; Zimmerman et al., 2003). Most long-term care, however, is now provided outside the nursing home in conventional dwellings and increasingly in group residential care settings (Bishop, 1999; Quadagno & Stahl, 2003). The assisted living facility (ALF) has emerged as the most important of these shelter and care alternatives (Mollica, 2002; Mollica & Jenkens, 2001). About 32 states and the District of Columbia have an “assisted living” licensing category or statute. Over 40 states have Medicaid programs that subsidize the services that low-income seniors receive in ALFs (Mollica, 2002).

The ALF is often compared with the nursing home, and its identity as a shelter and care setting often rests on these distinctions. Two sets of attributes are usually the basis for the comparison. First, the ALF is viewed as a more residential-like and less institutionalized setting than the nursing home that can provide personal care and supportive services and sometimes health-related and skilled nursing services to meet the scheduled and unscheduled needs of frail older persons. This is accomplished in a setting that “promotes the resident’s dignity, autonomy, independence, and quality of life” (Assisted Living Workgroup Steering Committee, 2003, p. 12) and, unlike the nursing home, does not have an overly regulated, inflexible environment and medical-like qualities. Thus, in this first sense, the emergence of ALFs is construed as a reaction to a host of negative features attributed to the nursing home. Second, the types of services, the amount of care offered by an ALF, and its tolerated resident frailty thresholds are often expressed in relative terms, that is, by their similarity to the nursing home. Thus, in this second sense, the ALF care mission is defined in reference to a nursing home standard. This is illustrated by the oft-made observation that ALFs can now accommodate those less impaired older persons who once would have had to inappropriately occupy a skilled nursing home (Bishop, 1999). It is also embodied in the conclusions of a highly respected group of researchers who argued that the ALF “may be best considered a discrete node that services residents similar to those in [nursing homes] and in a similar fashion” (Zimmerman et al., 2003, p. 108). Yet another example is offered by a consortium of assisted living stakeholders who recently emphasized that assisted living “does not generally provide ongoing, 24-hour skilled nursing care” like the nursing home and questioned the desirability of such a mission in the absence of more highly regulated ALFs (Assisted Living Workgroup Steering Committee, 2003, p. 12).

In practice, the identity of the ALF is often ambiguous because it is not a uniform and clearly formulated product. Its physical infrastructure, operating features, standards and levels of care, and tolerated frailty thresholds can differ substantially. Indeed, consensus on how to define the ALF is now more elusive than ever (Assisted Living Workgroup Steering Committee, 2003).

This is because absent federal guidelines, ALFs largely reflect the philosophies of individual state governments. Their regulatory environments largely determine the extent to which
ALFs can accept and retain physically and cognitively frail older persons with health care needs (Mollica, 2002). Regulations in some states, for example, allow for a high degree of resident impairment, whereas others have more restrictive and inflexible tenant frailty policies (Kane & Wilson, 2001; Mollica, 2002; Mollica & Jenkens, 2001). Even within the same state, however, providers may impose more restrictive admitting and discharge policies that result in their ALFs having tenants who are less frail than state regulations would tolerate (Mollica & Jenkens, 2001). Another source of variation arises when Medicaid funding makes the services found in private-pay ALFs affordable to low-income residents. Depending on state Medicaid policies, the residents in these facilities may have the same impairment levels as those in nursing homes (Mollica, 2002).

A number of stakeholders are concerned about the level of care offered by ALFs and the frailty profiles of their residents. Elderly consumers (and their family members) who sometimes must look outside their conventional dwellings to deal with their declines and care needs view nursing homes as an undesirable “last resort” alternative. When considering an ALF, however, they must determine if it will admit residents as frail as themselves and retain them if they decline further. Thus, they have to judge whether the ALF will be their last home or merely a temporary way station from which they will have to relocate when they have more demanding long-term care needs (Zimmerman et al., 2003). They must then decide whether even the most desirable ALF experience can justify the considerable time, energy, and psychic costs that they can experience if they have to move again (Chapin & Dobbs-Kepper, 2001; Lieberman, 1991). They must also sometimes consider if the anticipated stress linked to this moving effort might be tempered if the ALF were physically connected to a nursing home. State governments charged with planning long-term care alternatives have also looked favorably on the ALF alternative, because they view it as a more affordable long-term care solution for impaired low-income seniors that can slow their Medicaid nursing home expenditures (National Governors’ Association, 2000; Polivka, 1997). Not all experts, however, agree that states will save money in the aggregate (Manard, 1999). ALF advocates fear that if state governments use Medicaid subsidies to make this alternative affordable to the very impaired poor, this will invite clear-cut. These definitional ambiguities help explain why there is no single agreed-upon database of ALF facilities in the United States.

**Methods**

**Data Sources**

A search of the scientific literature (PUBMED and AGELINE), the research reports of the professional organizations with ALF provider membership, and interviews with experts revealed six relatively recent surveys of ALFs in the United States that had either national coverage or impact. A policy division of a federal agency funded one of the ALF studies (HAWES: Hawes, Rose, & Phillips, 1999), whereas professional organizations representing ALF providers funded four studies (ASHA: American Seniors Housing Association, 2001; ALFA: Assisted Living Federation of America, 2001; NCAL: National Center for Assisted Living, 2001; NIC: National Investment Conference, 1998). A federal oversight agency (GAO: U.S. General Accounting Office, 1999) funded the sixth study. The GAO study focused on only four states (California, Florida, Ohio, and Oregon), but its findings were based on a relatively large sample of ALFs in four distinct regions, and its results were widely disseminated, covered by the national press, and reviewed in government hearings and in the scientific and professional literature because they raised concerns about the quality of ALFs (Frytak, Kane, Finch, & Maude-Griffin, 2001; Kane & Wilson, 2001; U.S. Senate, Special Committee on Aging, 1999). The review excluded two other ALF studies because they focused on facilities in only a few selected states and did not examine comparable occupancy indicators (Bernard, Zimmerman, & Eckert, 2001; Chapin & Dobbs-Kepper, 2001).

**The Statistical Population of ALFs**

Whereas most states now use the ALF terminology, others use labels such as residential care homes, personal care homes, shelter care facilities, adult foster care, and boarding homes (Mollica, 2002). Some states have multiple designations to distinguish ALFs regulated under different licensure categories because they are intended for older persons with different levels of impairment (Mollica, 2002). The ALF designation is also sometimes reserved for properties with a minimum number of beds or operated by professional staff (Hawes et al., 1999; Morgan, Eckert, & Lyons, 1995; National Investment Conference, 1998; Zimmerman et al., 2003). ALFs are also distinguished by whether they are freestanding or physically attached to another building or wing that houses a nursing facility and/or an adult congregate care facility (all three shelter and care levels are usually available in continuing care retirement communities [CCRCs]). This latter distinction is important because this analysis will reveal that freestanding and multilevel facilities have different admitting and retention policies (Hawes et al., 1999).

Altogether, the variation in labeling conventions makes the identification of the statistical population of ALFs far from clear-cut. These definitional ambiguities help explain why there is no single agreed-upon database of ALF facilities in the United States. Only one professional trade group (Promatura Group, 2000) has published a statistical enumeration of ALFs that both
ALF Older Occupants

The Impairments and Health Care Needs of
Procedures of the Six Studies

Statistical Population Selection and Sampling
Procedures of the Six Studies

The validity of the generalizations drawn from the findings of the six studies will depend on the extent to which they were conducted at roughly the same time, used the same types of data collection, defined the same statistical population of ALFs, and employed comparable and reliable statistical sampling procedures. The state coverage by these studies will also be important, given that the different ALF regulatory environments of states help explain the variation in the impairment profiles of their residents (Mollica, 2002). To measure these sources of validity, this analysis examined the following study-specific information: survey date and data collection method; sources of ALF listings, criteria for inclusion, and size of provider statistical population; sampling methodology; sample size of eligible ALFs; returned number (surveys) of sampled ALF properties; sample response rate; number of ALF beds in surveyed sample and average property size; percentage of facilities that are freestanding in surveyed sample; and number of states covered by surveyed sample.

The Impairments and Health Care Needs of
ALF Older Occupants

Based on ALF industry and scientific conventions (Hawes et al., 1999; Kane & Wilson, 2001; National Investment Conference, 1998), the analysis defines six indicators that reveal whether older residents with physical and cognitive disabilities and health care problems are likely to occupy ALFs: (a) percentage of ALF residents requiring assistance with “activities of daily living” (ADLs) or who had cognitive impairments; (b) average length of stay at ALFs; (c) reasons for leaving ALFs; (d) percentage of ALFs admitting residents with specific care and impairment needs; (e) percentage of ALFs retaining residents with specific care and impairment needs; and (f) percentage of freestanding and multilevel ALFs with different admitting and care patterns.

The resident impairment (ADL or cognitive) profile of ALFs is one indicator of whether vulnerable older residents have entered and remained in facilities for whatever reasons (e.g., individual care preferences, prospects of adequate care, facilitative state regulations, or flexible facility care policies). Four of the six studies (ALFA, NCAL, NIC, and GAO) measured the extent to which their residents required assistance performing at least five of the following six ADLs: bathing, dressing, toileting, mobility or locomotion, transferring, and eating. Three studies (ALFA, NCAL, and NIC) measured the mean number of ADLs for which residents required assistance. All but one study (ASHA) inquired about the cognitive impairments of the residents. Provider estimates and not resident self-assessments were the source of the ADL and cognitive assessments. Some response variability will reflect small variations in question wording (Guralnik & Simonsick, 1993). None of the cognitive impairment questions inquired about whether the residents suffered from depression or ascertained if they were mentally retarded or developmentally disabled. As a standard basis for comparison, the analysis reports on the ADL impairments of elderly nursing home residents (American Health Care Association, 2001). These data are based on reports by nursing facilities during their standard surveys for Medicare and Medicaid certification.

Average length of stay by residents in ALFs is the simplest indicator of whether residents have occupied ALFs over a sustained period, even as they are possibly afflicted with physical impairments, cognitive deficits, and health care problems. Four of the six studies (ASHA, ALFA, NCAL, and NIC) reported this information.

Reasons for leaving ALFs reveal whether the ALF older residents have relocated to a potentially more supportive setting. These allow some inferences about whether their current ALFs are unwilling or unable to retain occupants who have higher levels of frailty or more serious health conditions.

Providers’ reports of their resident admission and discharge (retention) policies and their differences reveal the maximum seriousness of the disabilities and chronic health problems that will be tolerated in ALF facilities, irrespective of whether these frailty thresholds reflect state regulations or how facilities comply with them (Mollica & Jenkens, 2001). A comparison of admitting and discharge policies specifically reveals whether ALFs are likely to tolerate residents when their conditions worsen. Only three of the six national studies (HAWES, NIC, and GAO) reported on these policies, although they did not consistently define or measure the same resident conditions. The analysis calculates and then ranks the weighted average percentage of facilities admitting residents with specific conditions. Admitting and retention patterns are compared. Only one study provided standard errors of its reported percentages (HAWES).

A final analysis distinguishes the admission and care policies of freestanding and multilevel facilities. This distinction is investigated because of arguments that the physical and
organizational linkages of an ALF may influence whether it accepts or retains frail residents. ALFs in multilevel facilities often are connected physically and organizationally with a nursing home, and thus they may be less inclined to accept or retain frail residents but rather transfer them to the higher-care facility (National Investment Conference, 1998). Alternatively, ALFs in multilevel facilities are more likely than freestanding facilities to have access to the physical plant, assistive devices, and staffing that may give them the capabilities to accept frail seniors as occupants (Hawes et al., 1999).

RESULTS

Estimating the Statistical Population: Number and Types of ALFs

Estimates of the number of ALF properties or their number of beds especially depend on whether studies include smaller ALF properties and those in complexes offering multiple levels of care (see Table 1). The exclusion of small (1–29 units) freestanding facilities, for example, reduces the statistical population of ALF properties from 27,277 to 7,944 and the number of beds from 777,801 to 529,517. There are over 4,100 freestanding facilities, for example, reduces the statistical population of ALF properties from 27,277 to 7,944 and the number of beds from 777,801 to 529,517. There are over 4,100

Table 1. Number and Types of Assisted Living Facilities in the United States, 1999

<table>
<thead>
<tr>
<th>Shelter and Care Arrangement</th>
<th>No. of Properties</th>
<th>No. of Beds</th>
<th>% Distribution of All Properties</th>
<th>% Distribution of Beds in All Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>All freestanding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>assisted living</td>
<td>23,114</td>
<td>528,073</td>
<td>84.7</td>
<td>67.9</td>
</tr>
<tr>
<td>Freestanding assisted living (30+ units)</td>
<td>3,781</td>
<td>279,789</td>
<td>13.9</td>
<td>36.0</td>
</tr>
<tr>
<td>Freestanding assisted living (1 to 29 units)</td>
<td>19,333</td>
<td>248,284</td>
<td>70.9</td>
<td>31.9</td>
</tr>
<tr>
<td>Assisted living with congregate care</td>
<td>850</td>
<td>65,899</td>
<td>3.1</td>
<td>8.5</td>
</tr>
<tr>
<td>Assisted living in CCRCs</td>
<td>1,900</td>
<td>108,183</td>
<td>7.0</td>
<td>13.9</td>
</tr>
<tr>
<td>Assisted living with skilled nursing</td>
<td>1,413</td>
<td>75,646</td>
<td>5.2</td>
<td>9.7</td>
</tr>
<tr>
<td>Total</td>
<td>27,277</td>
<td>777,801</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes: CCRCs = continuing care retirement communities. Source: Adapted from Promatura Group (2000).

Variations in ALF Statistical Populations and Samples

The six studies also used very different sampling methodologies (see Table 2), and two did not collect a statistical sample (ASHA and ALFA). Two studies relied on simple random samples to select their facilities (NCAL and NIC). Two relied on a hierarchical sampling design: one initially stratifying by the county concentrations of ALFs in 34 states (HAWES), the other stratifying states by the relative size of their age 65-and-over populations (NIC).

The sample sizes of eligible ALFs ranged from a low of 328 (NIC) to a high of 2,893 (NCAL), with two studies not reporting this information (ASHA and ALFA). The returned number of sampled ALF properties (completed surveys) ranged from a low of 39 (ASHA) to a high of 1,251 (HAWES). The sample response rates ranged from a low of 10.5% (NCAL) to a high of 81.0% (HAWES), with two studies not reporting (ASHA and ALFA). The number of the ALF beds in the surveyed (completed) samples ranged from a low of 3,753 beds (ASHA) to a high of 66,678 (HAWES), with one study not reporting (NCAL). The average number of beds per facility ranged from 96.2 beds (ASHA) to 53.3 beds (HAWES; see Table 2).

The percentages of the surveyed ALF properties that were freestanding as opposed to multilevel facilities ranged from a low of 15.3% (ALFA) to a high of 100.0% (ASHA). Among the five studies claiming a national focus, the geographic coverage ranged from a low of 34 (HAWES) to a high of 48 (NIC) states.

After reviewing the procedures for population selection and sampling used in the six studies, the advisability of employing standard tests of statistical significance appeared questionable. Only three of the six studies reported their statistical populations, and these varied greatly in size. The ALF property inclusion standards and the geographic coverage (states) used to select the statistical population also varied greatly among the six studies, thereby increasing the likelihood of systematic selection bias and other nonrandom errors. Two studies did not conduct a sample (ASHA and ALFA), four others had wide-ranging sampling response rates (HAWES, NCAL, NIC, and GAO), and only one (HAWES) reported standard errors of some (but not all) of its reported percentages. In several instances, studies defined and measured different and difficult-to-compare indicators or attributes. This methodologic environment is clearly unsatisfactory but is the state of the art for these national assessments.

The six studies used different criteria to identify the eligible statistical population of ALFs. Two studies included all ALF facilities that were on their provider lists (ASHA and ALFA). The other four studies (HAWES, NCAL, NIC, and GAO) excluded providers from their lists that did not offer some designated set of services or level of personal or health care (see Table 2). Two studies (HAWES and NIC) further required that their facilities have a minimum number of beds: in one instance >10 beds, in the other >7 units. Only three of the six studies (HAWES, NCAL, and GAO) reported their estimated statistical populations (of properties) from which they drew their samples, and these ranged in size from 2,652 to 12,000. These reported estimates, based, as they were, on different resident eligibility criteria, varied substantially from the published estimates (see Table 1).
<table>
<thead>
<tr>
<th>Study</th>
<th>Survey Date and Data Collection Method</th>
<th>Sources of ALF Listings, Criteria for Inclusion, and Size of Provider Statistical Population: No. of Facilities (P)</th>
<th>Sampling Methodology</th>
<th>Returned No. (Surveys) of Sampled ALF Properties</th>
<th>Sample Response Rate (%)</th>
<th>No. of ALF Beds in Surveyed Sample and Average Property Size (Units/Beds)</th>
<th>% of Facilities That Are Freestanding in Surveyed Sample</th>
<th>No. of States Covered by Surveyed Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASHA: American Seniors Housing Association (2001)</td>
<td>1999 mail survey</td>
<td>Senior housing residences in U.S. based on listings of NCAL, ALFA, and NIC. P: unspecified</td>
<td>Not specified</td>
<td>—</td>
<td>39</td>
<td>3,753 beds; mean: 96.2 beds</td>
<td>100.0</td>
<td>36</td>
</tr>
<tr>
<td>ALFA: Assisted Living Federation of America (2001)</td>
<td>2000 mail survey</td>
<td>Provider members of ALFA throughout U.S. P: unspecified</td>
<td>Not intended to be statistical sample</td>
<td>—</td>
<td>293</td>
<td>19,455 units; mean: 66.4 units (bed information not available)</td>
<td>15.3</td>
<td>39</td>
</tr>
<tr>
<td>HAWES: Hawes, Rose, &amp; Phillips (1999)</td>
<td>1999 telephone survey</td>
<td>ALF provider members of multiple professional organizations (ALFA, NCAL, AHSA, HCIA directory), state government, &amp; advertisement listings throughout U.S.; facility has to serve mainly older persons, has &gt;10 beds and either be self-described as ALF or provide 24-hr staff, housekeeping, 2+ meals/day, provide help with two of following: medications, bathing, or dressing. P: 10,720</td>
<td>Stratified (county concentrations of ALFs), multistage national probability sample, initially based on random selection of first-stage geographic sampling units (3,141 counties); final geographic sampling frame consisted of 1,086 counties in 34 states; stratified, random sample of 2,945 facilities selected for telephone interview to determine eligibility; 47% of sample subsequently found to be ineligible</td>
<td>1,547</td>
<td>1,251</td>
<td>81.0</td>
<td>66,678 beds; mean: 53.3 beds</td>
<td>55.0</td>
</tr>
<tr>
<td>NCAL: National Center for Assisted Living (2001)</td>
<td>2000 mail survey</td>
<td>Provider lists from 43 state agencies; provider members of NCAL and nonmembers; facilities all provided help with activities of daily living, offered 24-hr supervision and assistance with scheduled and unscheduled needs, provided social and recreational services, and provided health-related services. P: 12,000</td>
<td>Random sample of 3,000 assisted living providers throughout U.S. to obtain resident characteristics; 107 facilities found to be ineligible</td>
<td>2,893</td>
<td>305</td>
<td>10.5</td>
<td>—</td>
<td>66.0</td>
</tr>
</tbody>
</table>
Table 2. Methodologies Used by Six Studies to Survey ALFs in the United States (Continued)

<table>
<thead>
<tr>
<th>Study</th>
<th>Survey Date and Data Collection Method</th>
<th>Sources of ALF Listings, Criteria for Inclusion, and Size of Provider Statistical Population: No. of Facilities (P)</th>
<th>Sampling Methodology</th>
<th>Returned No. of ALF Properties</th>
<th>Sample of ALFs</th>
<th>Sample Response Rate (%)</th>
<th>No. of ALF Beds in Surveyed Sample and Average Property Size (Units/Beds)</th>
<th>% of Facilities That Are Freestanding in Surveyed Sample</th>
<th>No. of States Covered by Surveyed Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIC: National Investment Conference survey (1998)</td>
<td>1998 mail survey</td>
<td>American Business Information Directory; HCIA Directory of Retirement Communities; state-licensed facilities; facilities must have eight or more units, occupied by primarily older residents (70%), built or renovated since 1982, provide minimum of two meals, include assistance with personal care, provide protective 24-hr protective oversight, and be freestanding or have separate staff in separate building structures. P: unspecified</td>
<td>Cluster, multistage random facility selection process, initially based on relative size of age 65+ persons in state; 1,064 communities randomly selected from ALF lists and screened for eligibility; 30.8% (328) met criteria of selection</td>
<td>328</td>
<td>178</td>
<td>54.3</td>
<td>11,285 beds; mean: 63.4 beds</td>
<td>61.2</td>
<td>48</td>
</tr>
<tr>
<td>GAO: U.S. General Accounting Office (1999)</td>
<td>1977–1999 mail survey</td>
<td>Provider membership of trade associations representing assisted living facilities (AAHSA, NCAL, ALFA); facilities range in size from 2 to 600 beds; licensed facilities included from states with licensing category; only facilities in California, Florida, Ohio, and Oregon; facilities had to provide or arrange assisted living services and be licensed by respective states. P: unspecified</td>
<td>Random sample of 955 facilities in four states; 99 facilities declared ineligible</td>
<td>856</td>
<td>622</td>
<td>72.7</td>
<td>39,186 beds; mean: 63.0 beds</td>
<td>43.2</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: ALF = assisted living facility; AAHSA = American Association of Homes and Services for the Aging. HCIA is now Solucient. Dashes indicate data were not reported.
Variation in the Impairment Profiles of Elderly Residents

Four studies (see Table 3) reported on both the physical and the cognitive impairments of their older residents (ALFA, NCAL, NIC, and GAO) and one only on cognitive impairments (HAWES). The percentage difference between the highest and lowest estimates of ADL limitations was >20% for bathing, dressing, and transferring, 16–17% for toileting and eating, and 18% for cognitive impairments. All studies agreed, however, that their ALF residents were most likely to require assistance with their bathing and dressing and to a much lesser extent with their toileting and locomotion. The residents were least likely to require assistance with their eating and transferring (e.g., getting in and out of a chair or bed). Overall, the ALF residents in all four studies were less likely to be physically and cognitively impaired than nursing home residents. The ALF study with the most impaired residents (ALFA) reported that they needed assistance with an average of 2.8 ADLs, but this was still lower than the comparable 3.75 ADLs reported for nursing home residents (American Health Care Association, 2001). The study with the least impaired residents (NIC) reported their residents needed assistance with an average of only 1.3 ADLs. The mean number of residents with three or more ADL impairments would better reveal the level of frailty tolerated by ALFs relative to nursing homes, but this measure was not available. The highest average proportion of ALF residents with cognitive impairments was just over 52% (ALFA), but this was still less than the comparable nursing home estimate of just over 56%. Two studies (HAWES and GAO) reported relatively small proportions of their residents (34.0% and 35.3%) with cognitive impairments.

Variations in Length of Stay and Reasons for Leaving

Five studies reported on the average lengths of stay of their residents (see Table 4). The longest stay was an average of 3 years (NCAL); the shortest stay just over 1.5 years (ALFA). Interpreting this indicator is difficult for two reasons. First, it is difficult to draw any inferences about how the care regimens of the ALF or its tolerance of frail residents influenced duration patterns. It is more likely that average length of stay is a proxy indicator of the vulnerability status of admitted older residents. Thus, ALFs that initially admitted less impaired and healthier occupants would record longer lengths of stay. Second, all the length-of-stay estimates are derived from cross-sectional (point-in-time) analyses. This research design produces results biased toward long-stay residents and thus will generate longer average length-of-stay estimates (Phillips, Hawes, Spry, & Rose, 2000).

Only two studies (ALFA and NCAL) analyzed the destinations of residents who left their facilities (see Table 4). We can draw only limited inferences from these patterns because we do not know how long these “departing” residents had lived in their ALFs. Both studies reported that about 28% of their older residents died in their ALFs. To the extent that ALFs are occupied by more impaired seniors with serious health problems, then death should be a more important reason for “leaving.” Similar shares of residents, from 33% (NCAL) to 36% (ALFA), moved to a nursing home, and from 11% (NCAL) to 18% (ALFA) of the residents left because of a hospital stay. These substantial percentages of residents moving to hospitals or nursing homes may indicate that ALF residents (whatever their duration of time in ALF) have now become especially frail and are experiencing more serious health problems, demanding a higher level of care. One interpretation is more judgmental. Hawes and colleagues (1999, p. 40) reported that their focus group interviews with ALF residents revealed that many “were dissatisfied with being discharged to a hospital or nursing home whenever they needed any daily nursing care or monitoring.” Thus, these researchers interpreted these depar-
from studies that do not document the turnover rates of their home. It is evident that generalizations are difficult to make. In the first study, 12% of the original ALF residents entered a nursing home, whereas in the second study, 18 residents (.360) will have left for a nursing home. Thus, even as both studies for a nursing home, but in the second study, 60% of the ALF residents have an at-risk population of 100 residents, in the first, 12% of the original ALF residents entered a nursing home. (This is the type of finding presented in Table 4.)

<table>
<thead>
<tr>
<th>Average length of stay (months)</th>
<th>ASHA</th>
<th>ALFA</th>
<th>NCAL</th>
<th>NIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration-of-Stay Indicators</td>
<td>20.5</td>
<td>19.9</td>
<td>36.0</td>
<td>30.8</td>
</tr>
<tr>
<td>Destinations of leaving residents (% distributions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Death</td>
<td>—</td>
<td>28.1</td>
<td>28.0</td>
<td>—</td>
</tr>
<tr>
<td>Require a hospital stay</td>
<td>—</td>
<td>18.0</td>
<td>11.0</td>
<td>—</td>
</tr>
<tr>
<td>Move to nursing home (any reason)</td>
<td>—</td>
<td>36.0</td>
<td>33.0</td>
<td>—</td>
</tr>
<tr>
<td>Move to nursing home due to health</td>
<td>—</td>
<td>33.3</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Move to nursing home due to asset reduction</td>
<td>—</td>
<td>2.7</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Move to retirement home</td>
<td>—</td>
<td>2.5</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(congregate living)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Move to another assisted living residence</td>
<td>—</td>
<td>4.0</td>
<td>14.0</td>
<td>—</td>
</tr>
<tr>
<td>Move to children’s or other relative’s home</td>
<td>—</td>
<td>4.1</td>
<td>12.0</td>
<td>—</td>
</tr>
<tr>
<td>Move because of financial reasons</td>
<td>—</td>
<td>3.9</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other</td>
<td>—</td>
<td>3.4</td>
<td>2.0</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Notes: National Center for Assisted Living (NCAL): The average length of stay in months is based on a 1998 survey by this organization, and this indicator is not reported in the year 2000 study. ASHA = American Seniors Housing Association; ALFA = Assisted Living Federation of America; NIC = National Investment Conference. Dashes indicate data were not reported.

These findings are difficult to interpret for another reason. Studies compute departure distributions for facilities with possibly very different resident turnover rates, that is, the relative size of the pool of residents that leave ALFs for any reason in any given period. Thus, the departure distributions of two studies may not be comparable. Assume, for example, that two studies, each reporting on a facility with 100 residents, both report that 30% of their annually “leaving” residents depart to a nursing home. (This is the type of finding presented in Table 4.) In the first study, 40% of the ALF residents have left their facility for any reason (the turnover rate) in a given year, whereas in the second study, 60% of the ALF residents have left their facility for any reason over the same period. The 30% “leaving” departure measures are obviously not equivalent because they are being applied to very different-sized pools of residents. In the first study, 12 residents (.3 × 40) will have left for a nursing home, but in the second study, 18 residents (.3 × 60) will have left for a nursing home. Thus, even as both studies had an at-risk population of 100 residents, in the first, 12% of the original ALF residents entered a nursing home, whereas in the second, 18% of the original ALF residents entered a nursing home. It is evident that generalizations are difficult to make from studies that do not document the turnover rates of their ALFs. Comparing the departure patterns of comparable longitudinal samples or panels of at-risk ALF residents eliminates this ambiguity. The destination patterns are also difficult to interpret because the studies do not report on the length of their recording period. Resident turnover rates will obviously depend on the length of time that residents are at risk of leaving their facilities.

Resident Admitting and Retaining Policies

Three of the ALF studies (HAWES, NIC, and GAO) reported on their resident admitting and retaining (discharge) policies, but generalizations are difficult because they measured different impairment or care indicators (see Table 5). One study (HAWES), for example, asked about admitting policies for residents with urinary incontinence (mean admitting rate, 61.4%), whereas the other two studies (NIC and GAO) asked about residents who could self-manage their urinary incontinence (weighted mean admitting rate, 93.0%) as opposed to those who required assistance with their urinary incontinence (weighted mean admitting rate, 71.3%). Only one of the three studies (GAO) inquired about admitting and retaining policies for residents requiring intravenous medication, tube feeding, use of an indwelling urinary catheter, and colostomy care.

When the ALF studies measured the same indicators, they often reported substantially different admitting (or retaining) policies. Almost 71% of one study’s (HAWES) facilities in contrast to 88% of the other (NIC) admitted someone who used a wheelchair. Similarly, only 44% of one study’s (HAWES) facilities compared with 58% of the other (GAO) admitted older persons who needed help to transfer. Only 36% of the facilities in one study (NIC), but 59% in the other (GAO), admitted older persons who needed assistance with their bowel incontinence. Although almost 85% of one study’s (GAO) facilities retained residents who required assistance with their bladder incontinence, this was true for only 74% of the facilities in the other (NIC). Similarly, 46% of the facilities in one study (HAWES), but 59% of the facilities in the second (NIC) and 75% in the third (GAO), retained older residents when they needed help transferring.

Interpretations must be made with care for another reason. The unit of analysis in all three studies is the “facility,” but one study (HAWES) reports a lower average number of facility beds (53) than the other two (63). Thus, its admitting rate policy will generally impact fewer older residents. Furthermore, none of the studies reports whether their smaller and larger bed facilities have the same admitting and retaining rates. Thus, the more lenient admitting rates of only a few facilities with a disproportionately large number of beds may get “lost” in the statistics, if a relatively large number of facilities with a relatively few beds report more stringent admitting rates.

A related deficiency is that the studies do not survey the facilities on how frequently they actually apply these retaining or admitting policies. For example, both the NIC and the GAO studies report that similar average percentages of their facilities will retain older residents who use a wheelchair (92.3% versus 90.2%). Assume (without any empirical evidence) that in the NIC study, facilities have to apply this retaining rule an average of once a month, whereas in the GAO study, facilities have to apply this rule an average of twice a month. Facilities in the GAO study are obviously having a greater impact on the ALF...
occupancy behavior of older persons in wheelchairs. None of the reviewed studies reports information on these policy practices.

These methodologic qualifications aside, generalizations are possible. ALF facilities were more likely to admit frail older persons when they had relatively minor or less serious physical or cognitive impairments or health care needs. These included residents who were less likely to demand hands-on care by unskilled aides (e.g., were not bedfast, moved around the facility without assistance, did not need help transferring or assistance with their locomotion); when they had care needs that did not demand skilled nursing procedures (e.g., the use of a catheter, intravenous medication, tube feeding, or ventilator, or did not need colostomy or ileostomy care, or could self-manage urinary or bowel incontinence); and when they did not require ongoing supervision or monitoring (e.g., suffered only from mild or moderate confusion, did not wander, or did not have memory, judgment, or behavioral problems).

Less than 50% (weighted average) of the ALF facilities would admit older persons if they were afflicted with any of 14 health conditions (see Table 5): colostomy or ileostomy care required, transfer help needed or required, indwelling urinary catheter required or used, moderate to severe cognitive impairment, behavioral problems, wandering, severe memory or judgment problems, ongoing need for nursing care or monitoring by licensed nurse, nursing care needed, behavioral symptoms (wanders, inappropriate behavior), ventilator used or required, tube feeding on an ongoing basis, or bedfast. Between one half and two thirds of the ALFs would admit residents with the following health conditions: electric cart or scooter used, locomotion help received, urinary incontinence, catheter or ostomies, and bowel incontinence assistance needed. Very similar generalizations can be made about the resident-retaining policies of ALFs. Less than 50% (weighted average) of the ALF facilities would retain older persons if they were afflicted with any of 10 health conditions.

In two of the three reporting studies (NIC and GAO), most of the resident discharge or retaining policies were substantially more lenient than the admitting policies.
It is impossible to reconcile these opposite findings. Whatever the correct direction of the relationship, however, the findings emphasize that the admitting and retaining patterns attributed to ALFs overall will be significantly influenced by the mix of freestanding and multilevel facilities in their study’s sample. It was earlier shown that 85% of all ALF properties are freestanding (see Table 1). If the smallest (under 30 units) freestanding ALF properties are excluded, then 48% of ALFs are freestanding. In comparison, the percentage of freestanding ALFs in the six studies ranged on average from 15% to 100% (see Table 2). Thus, some variation in the findings reported by the six studies will be systematically biased by their sample allocations of freestanding and multilevel facilities.

The statistical differences found in the admitting and characteristics of freestanding and multilevel facilities may also be spurious; that is, they may merely reflect a bed size differential. Freestanding ALF facilities are generally smaller and thus are more likely to have full and part-time staffing and the same range of services they offer. Freestanding ALF facilities are also significantly more likely to have full- or part-time nursing staff and to offer nursing services.

Another investigation (NIC) reached just the opposite conclusion. It found that when multilevel ALFs were linked with nursing homes or were part of a CCRC, they were less likely than freestanding ALFs to admit residents with incontinence of bladder or bowel, who needed help to transfer, who were mildly or moderately confused, who used a ventilator, or who had behavior problems (National Investment Conference, 1998). The implication is this: When nursing homes (both alone or part of a CCRC) are proximate to an ALF facility, high-care residents are more likely to be admitted to the nursing homes than to the ALFs.

**Table 6. Statistically Significant Differences Between Freestanding and Multilevel Facilities**

<table>
<thead>
<tr>
<th>Admitting and Care Characteristics</th>
<th>% of Freestanding ALF Facilities</th>
<th>% of Multilevel Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will admit residents using wheelchair</td>
<td>63.9</td>
<td>78.8</td>
</tr>
<tr>
<td>Will admit residents needing nursing care</td>
<td>25.7</td>
<td>38.6</td>
</tr>
<tr>
<td>Will retain residents using wheelchair</td>
<td>62.7</td>
<td>77.0</td>
</tr>
<tr>
<td>Will retain residents needing nursing care</td>
<td>26.1</td>
<td>39.7</td>
</tr>
<tr>
<td>With any licensed nurse on staff full or part time</td>
<td>59.7</td>
<td>84.9</td>
</tr>
<tr>
<td>With registered nurse (RN) on staff at least 40 hr/week</td>
<td>28.7</td>
<td>53.2</td>
</tr>
<tr>
<td>With licensed practitioner nurse on staff full or part time</td>
<td>40.3</td>
<td>68.0</td>
</tr>
<tr>
<td>With “high service” (RN on staff at least 40 hr/week and nursing care with own staff)</td>
<td>19.9</td>
<td>43.5</td>
</tr>
</tbody>
</table>

_Notes: All comparisons significant at p < .001. ALF = assisted living facility. Source: Adapted from Hawes, Rose, & Phillips (1999)._
groups have different admitting and discharge policies. Other research, however, will have to clarify the reasons for this relationship and if it persists after controlling for other ALF differences such as facility size.

The cross-sectional or point-in-time research methodologies of all six studies also produced resident length-of-occupancy and departure pattern findings that were difficult to interpret. Future national studies of ALFs would benefit greatly (despite the implementation expense) if they incorporated a longitudinal or panel methodologic design whereupon a national sample of ALF residents in different facilities could be followed through time not only to assess the trajectories of their impairment changes and adjustments, but also to track how facilities differently respond to their changing needs. Only very small ALF studies have employed such methodologies (Frytak et al., 2001; Pruchno & Rose, 2000).

The absence of such longitudinal research designs also explains why it is difficult for these six studies to assess whether older persons have aged in place in their ALFs. “Aging in place” refers to more than just older persons remaining in the same place for a sustained duration, a criterion used to define long-term care settings (Kane, Kane, & Ladd, 1998). Rather, aging in place also involves a proactive response from the older person’s residential setting (whether initiated by the older person, significant others, other occupants, or providers) that in some way introduces solutions that respond to or compensate for an individual’s functional or physical health declines. In the instance of ALFs, providers would have to adjust their “service provision and level of care criteria to meet residents’ changing needs and to avoid having to discharge individuals to a higher level care prematurely” (Chapin & Dobbs-Kepper, 2001, p. 43). The six reviewed studies do not offer insights about these types of changes. The finding that ALF retention/discharge policies are more tolerant of higher levels of frailty than their admitting policies is the only evidence of aging-in-place practices in ALFs.

What is established is that more physically and vulnerable older persons are less likely to occupy ALFs than nursing homes, a conclusion also reached by studies focused on smaller ALF samples (Kane & Wilson, 2001; Pruchno & Rose, 2000; Zimmerman et al., 2003). Comparisons distinguishing severely impaired older persons (e.g., limitations in three or more ADLs) would help strengthen this generalization. ALF facilities were also more likely to admit or retain frail older persons when they had relatively minor or less serious physical or cognitive impairments or health care needs. Less than half of the ALF facilities would admit older persons who suffered from any of 14 health or disability problems or would retain older persons if they were afflicted with any of 10 health conditions.

Overall, these findings distinguish ALFs from nursing homes with their “more encompassing admission policies” (Zimmerman et al., 2003, p. 114). They are also consistent with the conclusion reported by Phillips and colleagues (2000) that the main reason why residents leave an ALF is because they need more care. On the other hand, older residents who are admitted to ALFs may enjoy relatively long stays, on average as much as 3 years, according to one of the six reviewed studies. The ability of older residents to delay their relocation to a nursing home for this length of time may be justification enough for them to enter an ALF, even though it will not be their last home.

The ALF alternative is here to stay. Intermediate projections estimate a 41% growth rate of this shelter and care option over the next 20 years (National Investment Conference, 2001). Over the last 5 to 10 years, state governments have tended to amend their ALF regulatory environments to make it more possible for this alternative to accommodate the physically and cognitively vulnerable old (Mollica, 2002). Many stakeholders have a strong vested interest in making the ALF a viable alternative to the nursing home, specifically for low-income seniors. Given the importance of the ALF as a long-term care alternative, stakeholders require more methodologically sound investigations to document its ever-changing potential.

ACKNOWLEDGMENT

Address correspondence to Stephen M. Golant, Department of Geography, University of Florida, 3117 Turlington Hall, PO Box 117315, Gainesville, FL 32611. E-mail: golant@geog.ufl.edu

REFERENCES


Received March 24, 2003
Accepted October 1, 2003
Decision Editor: Charles F. Longino, Jr., PhD