Effects of Facility Characteristics on Departures From Assisted Living: Results From a National Study

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Purpose: Assisted living is an increasingly important residential setting for the frail elderly person. How often and why residents leave such facilities are important issues for consumers, for clinicians advising frail patients on their options for living arrangements, and for policymakers. This research investigated the impact of facility and individual characteristics on residents’ departures from assisted living. Design and Methods: This research is based on data on 1,483 residents in a nationally representative sample of 278 assisted living facilities (ALFs). Analyses of these data from 1998 and 1999 especially focused on those residents who left a study ALF between baseline and follow-up data collection. Multinomial logit models were estimated to investigate the impact of facility and individual factors on residents’ status at follow-up. Results: Over three quarters of those leaving their baseline ALF did so because they needed more care. The multivariate analyses indicated that poorer functional status and being married affected residents’ relative odds of death before follow-up. Moving to another setting, other than a nursing home, was more likely for residents in for-profit ALFs. Functional status, cognitive status, and the presence of a full-time RN affected residents’ odds of moving from an ALF to a nursing home. Implications: Both facility-level and individual-level factors affected residents’ relative odds of leaving an ALF. The findings with the most potentially interesting policy implications are those concerning the factors that affected residents’ relative likelihoods of entering a nursing home.

Key Words: Nursing homes, Nursing home placement, Assisted living, Housing with supportive services

Institutions where groups of frail elderly people reside usually fall somewhere under the heterogeneous rubric of “housing with supportive services.” In the United States in recent years, the fastest growing segment of this diverse service sector has been the assisted living industry (American Seniors Housing Association, 1998). Though reaching a common definition of assisted living has been difficult, according to the Assisted Living Quality Coalition (1998), a coalition representing both consumer and provider groups, assisted living is the following:

A congregate residential setting that provides or coordinates personal services, 24-hour supervision, and assistance (scheduled and unscheduled), activities, and health related services; designed to minimize the need to move; designed to accommodate residents’ changing needs and preferences; designed to maximize residents’ dignity, autonomy, privacy, independence, and safety; and designed to
encourage family and community involvement.

Assisted living is an industry that largely serves elderly individuals who can pay for their care with private resources, but states are becoming increasingly willing to pay for personal care services provided in these facilities through their Medicaid programs (Mollica, 1998; Mollica & Snow, 1996). The appeal of assisted living to public payors is quite clear. They have great hopes that increased use of these facilities may decrease nursing home use and reduce their outlays for long-term care for the elderly population. In fact, some recent research suggests that states might reap considerable savings in their Medicaid budgets by increasing the length of stay for individuals with cognitive impairment residing in assisted living (Leon, Cheng, & Neumann, 1998). For consumers, assisted living facilities (ALFs) meet important preferences for privacy and autonomy (Jenkins, 1997; Kane, Baker, & Veazie, 1998).

However, the hopes of neither policymakers nor consumers will be met if frail elderly people cannot “age in place” in these facilities. In its early phases, the assisted living industry was philosophically committed to individuals’ aging in place (see Appendix, Note 1). In addition, ALFs are filled with individuals who believe that they will be able to age in place. Recent results from a national survey indicate that just over 98% of the residents in ALFs in 1998 expected to live in those facilities as long as they wished (Phillips, Rose, & Hawes, 2000).

The reality, of course, is that many individuals will leave ALFs for some setting that provides more care. Most frequently, that setting will be a nursing home. Previous research indicates that somewhere between 20% and 43% of assisted living residents leave their facility because they need the higher level of care provided in a nursing home (Gulyas, 1997; Hodlewsky, 1998).

However, a variety of questions about aging in place and the assisted living industry’s ability to substitute for nursing home care remain unanswered at this time. The most basic information about discharges is quite fragmentary. For example, we currently lack information on why residents exit these facilities. We also have little information on those individual or facility characteristics that affect exit from an ALF. In addition, none of the information currently available provides data that are national in scope.

This research addresses these issues with data from a national sample of ALFs. It first provides descriptive data on where individuals went when they left assisted living and their reasons for departure. It then investigates the characteristics of facilities and residents that affected a resident’s odds of dying, going to another facility, or entering a nursing home. What is more important, from the perspective of policymakers interested in shaping the development of this industry, this research examines which facility characteristics affected the odds that an individual would go from an ALF to a nursing facility.

Design and Methods
Defining Assisted Living

We considered an ALF to be a residential setting that had 11 or more beds and served mainly an elderly population. To be included in our study, a facility must have advertised itself as an ALF or provided 24-hr supervision, at least two meals a day, and help in at least two of the following areas of personal needs: bathing, medications, or dressing.

These criteria generated the initial sample used for telephone interviews with the facility administrators. The results of the telephone survey and a more detailed discussion of survey and sampling methods appear in the paragraphs that follow and elsewhere (Hawes, Rose, & Phillips, 1999; Iannacchione, Byron, Lux, Wrage, & Hawes, 1999). On the basis of the initial telephone survey results, additional exclusion criteria were applied to determine which facilities would be included in the more elaborate on-site data collection that involved staff, families, and residents. Three types of facilities were excluded from the on-site data collection:

- those that had any rooms or apartments housing three or more unrelated persons (offered minimal privacy),
- those that did not offer assistance with at least two of three activities—medications, bathing, and dressing (offered minimal services), and
- those facilities that offered both low services (i.e., no RN on staff and no willingness to provide even temporary nursing care) and low privacy (i.e., fewer than 80% of the resident accommodations were private).

The rationale for the exclusion of these facilities was that they resembled traditional “board and care” homes more than ALFs. In addition, the lack of services or privacy indicated that these facilities did not really operate within the parameters of what most consumers and industry representatives recognize as the “philosophy of assisted living” in terms of the levels of privacy and services provided (Assisted Living Quality Coalition, 1998). Thus, only approximately 40% of the 1,517 facilities included in the original telephone survey of all potential ALFs were eligible for inclusion in the on-site data collection.

Sampling and Data Collection

These analyses were based on data from The National Study of Assisted Living for the Frail Elderly, which provided a nationally representative sample of residents in ALFs. All analyses were
performed at the individual level, using individual-level and facility-level data from the national study. Baseline on-site data collection in the study ALFs took place during the fall of 1998 and involved interviews with 1,581 residents residing in 293 ALFs. The study was done with a stratified, three-stage sampling design.

In the first stage of sampling, candidate ALFs were obtained from an unduplicated listing of four national associations with members that advertise themselves as ALFs, and the 1995 Directory of Retirement Facilities. In the second stage, ALFs were selected by using stratified random sampling. On-site data collection occurred in 40 primary sampling units, which were counties or geographic clusters of counties; 293 facilities were selected in this stage. In the third stage, 1,581 residents were selected by using simple random sampling. On average, six residents were selected in each facility. All data were weighted so that they would reflect the characteristics of the national population of facilities and residents.

These same facilities were contacted again approximately 7 months later. Information concerning the discharge status of 1,483 (94%) of the 1,581 original sample members was obtained. Two hundred eighty-one of these residents had exited the baseline ALF. Information concerning 248 (88%) of these residents who had resided in 278 facilities was obtained, largely through telephone interviews with contact persons identified by the resident at the baseline interview (see Appendix, Note 2). Resident weights were adjusted for nonresponse within facility strata (Hawes et al., 1999; Iannacchione et al., 1999).

**Analysis Variables**

The dependent variable of interest was the resident’s living arrangement at the time of the follow-up. This variable represented a resident’s living arrangement at follow-up as a nominal variable with four categories: the resident died, the resident moved to a nursing home, the resident moved to some other care setting, or the resident stayed at the same ALF. Follow-up contacts occurred, on average, 7 months after baseline. A variable reflecting the length of time between baseline and follow-up data collection was tested during the multivariate analysis to determine if the results were affected by this factor. The parameter for this variable was not statistically significant.

Two groups of independent variables were used in the analysis: facility-level variables that may have influenced a resident’s decision to stay or move, and resident characteristics that might have affected the likelihood that a resident would leave an ALF. These latter characteristics were largely identified in the literature on nursing home admissions. The individual characteristics that this literature leads one to expect might affect departure from an ALF are largely those associated with cognitive status, functional dependency, and a variety of health conditions (Black, Rabins, & German, 1999; Coward, Horne, & Peek, 1995; Fortinsky, Covinsky, Palmer, & Landefeld, 1999; Rudberg, Sager, & Zhang, 1996).

The impact of the following individual-level variables was tested: resident’s age, gender, and marital status; in the past 12 months, occurrence of stroke, heart attack, hip fracture, hospitalization, or emergency room (ER) use; occurrence of pain in the past 30 days; use of incontinence products, a walking aid, or a hearing aid; never leaving the building; the total number of medications taken by the resident; and resident income, satisfaction, cognitive status, and functional status.

Three of these indicators involved multiple-item scales. Residents’ scores on cognitive status were based on a combination of two well-validated scales of cognitive function. Approximately 85% of the residents received a score on the Short Blessed Test (Katzman et al., 1983), while the remaining residents, who could not respond to the Blessed, were classified on the basis of a slightly modified version of the Cognitive Performance Scale (CPS) (Hartmaier et al., 1995; Morris et al., 1994) from the Minimum Data Set (MDS) for Nursing Home Resident Assessment and Care Screening (Hawes et al., 1993; Morris et al., 1990). Analyses were performed so that these two different ratings could be collapsed into a single scale for all residents. These “crossover” analyses were based on the ratings for those individuals in the sample who received a score for both the Short Blessed and the CPS. In our final analyses, because the full scale was positively skewed, cognitive impairment was included in the model as a dichotomous variable. The dichotomy differentiated between those who were severely cognitively impaired and all others.

Functional status was based on the resident’s performance of activities of daily living (ADLs). This indicated whether the resident was independent or needed either assistance or supervision with bathing, dressing, locomotion, eating, transferring, or toileting. The ADL items used to construct a cumulative scale were derived from the ADL items on the MDS (Hawes et al., 1995; Morris et al., 1990). Because the cumulative index was positively skewed, it was entered into the final analyses as a dichotomous variable. The variable differentiated between those residents who needed any assistance or supervision with ADLs and those who needed none. The third scale focused on resident satisfaction. Resident satisfaction was measured with an additive scale composed of six items gauging respondents’ satisfaction with treatment and services ($\alpha = .77$).

A number of facility characteristics were also included in the preliminary analyses. These factors reflected aspects of facility operation that might affect the likelihood that a resident would leave an ALF. They included prohibition against wheelchair use in the facility, facility discharge policy, size of the
ALF, occupancy rate, whether the ALF was freestanding or on a multilevel campus, whether the facility provided or arranged any RN or LPN assistance, staff turnover, facility case-mix intensity, the ownership arrangement under which the facility operated, whether the facility employed a part-time RN, whether the facility employed an LPN or LVN full or part time, and whether the facility had any licensed nurses on staff.

Statistical Analysis

A multinomial logit model for nominal outcomes was used to investigate the effects of facility and individual characteristics on residents’ living arrangements at follow-up. This model is used when the nominal response variable has more than two categories, and it is assumed that the response counts at each combination of explanatory variables follow a multinomial distribution.

Because these data were collected by using a multistage sample, the analysis was conducted by using statistical software especially developed to ensure the computation of correct or accurate variance and standard error estimates (Shah, Barnwell, & Bieler, 1996). Initially, we evaluated the predictor variables in our models independently by including them in our analysis one at a time. First, we considered the individual-level variables and determined which were significant; we then evaluated the facility-level variables in the presence of the significant individual-level variables. Variables were retained in the model when the Wald F statistic for the variable as a whole had a probability value less than .05.

Results

The initial analyses involved examining information about the rates and rationales for residents leaving assisted living. Descriptive statistics for that subset of residents who were discharged were examined. These data provided insight into the rates and dynamics of departure from those ALFs providing the levels of privacy or service commonly identified as part of the ALF model.

In the period between the baseline interviews and the follow-up contacts, 19.0% (SE = 1.2%) of the sample died (2.2%, SE = 0.6% in the ALF; 4.3%, SE = 0.6% after leaving the ALF) or changed location, whereas 81.0% (SE = 1.2%) remained in the same facility in which they resided at baseline. The median length of stay in the ALF for those who, for any reason, left their baseline ALF was 19.6 months.

As Table 1 indicates, most surviving residents who left an ALF resided in a nursing facility at follow-up. The next most common site was another ALF or some other residential care setting. Almost 7% of the residents who left a sampled ALF moved to a relative’s home or apartment, but only 1.2% returned to their own home.

The majority of residents leaving an ALF went to a setting that clearly provided more care services (i.e., hospital, nursing home, rehabilitation or subacute setting). In this sample, three out of five (63.8%) residents who left their baseline ALF and did not die were found in these obviously more service-rich environments. This constitutes a minimum estimate of those moving to a setting offering more services, as some residents going to another ALF could also have moved into an ALF that offered more services than their previous residence.

By far, the most commonly given reason (78.0%) for leaving the facility was the resident’s need for more care (see Table 2). The next most common set of responses involved some type of dissatisfaction—with the quality of care, price, or some other aspect of the facility. When the three categories that reflect dissatisfaction of some type are added together, almost 31% of the respondents indicated that dissatisfaction was part of the reason for their departure. Another stated reason for leaving was the desire to move to a location closer to friends or relatives. However, it is important to remember that these responses came almost exclusively from family members.

As to the decision making surrounding departures

Table 1. Living Arrangement at Follow-Up After Departure From an ALF

<table>
<thead>
<tr>
<th>Resident at Follow-Up</th>
<th>Prevalence % (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>1.27 (0.87)</td>
</tr>
<tr>
<td>Rehab or subacute</td>
<td>3.39 (1.35)</td>
</tr>
<tr>
<td>Nursing home</td>
<td>59.16 (5.42)</td>
</tr>
<tr>
<td>Other res. care or ALF</td>
<td>27.80 (4.53)</td>
</tr>
<tr>
<td>Own home</td>
<td>1.15 (0.74)</td>
</tr>
<tr>
<td>Relative’s home</td>
<td>6.53 (2.53)</td>
</tr>
<tr>
<td>Other</td>
<td>0.71 (0.46)</td>
</tr>
</tbody>
</table>

Notes: N = population size, 19,532; n = sample size, 158; table concerns those residents alive at follow-up. ALF = assisted living facility.

Table 2. Reasons for Leaving the ALF: All That Applied

<table>
<thead>
<tr>
<th>Resident Status</th>
<th>Prevalence % (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needed more care</td>
<td>78.03 (4.32)</td>
</tr>
<tr>
<td>Location closer to loved ones</td>
<td>14.05 (3.23)</td>
</tr>
<tr>
<td>Ran out of money</td>
<td>8.78 (2.17)</td>
</tr>
<tr>
<td>Dissatisfied with care</td>
<td>12.03 (3.42)</td>
</tr>
<tr>
<td>Dissatisfied with price</td>
<td>7.99 (2.54)</td>
</tr>
<tr>
<td>Other dissatisfaction</td>
<td>10.96 (2.61)</td>
</tr>
<tr>
<td>Facility’s request or unknown reason</td>
<td>5.39 (3.02)</td>
</tr>
<tr>
<td>Other</td>
<td>3.09 (1.38)</td>
</tr>
</tbody>
</table>

Notes: N = 19,532; n = 158. The results total more than 100% because respondents could give more than one answer. Table is restricted to residents alive at follow-up. ALF = assisted living facility.
from assisted living, the respondents indicated that the decision for the resident to leave the facility was most often a mutual decision involving the facility and the family (45.5%; SE = 5.3%). In just over 3 out of 10 departures (30.3%; SE = 5.1%), the respondent reported that the decision to leave was largely a resident or family decision. However, in almost a quarter of the cases (24.2%; SE = 5.3%), the decision for the resident to leave the facility was described as mainly the facility’s decision.

Table 3 compares the characteristics of persons who remained in the baseline facility with those who moved out or died. These bivariate analyses revealed a number of significant differences between those who remained in the facility and those who left their baseline ALF. A number of the observed differences were differences in individual characteristics. Those residents who died between baseline and follow-up were significantly older than those who remained in their baseline ALF, were significantly more likely to have been receiving ADL assistance at baseline, and were also less likely to have resided at baseline in a facility affiliated with a nursing home. The residents who had moved to another setting (usually another ALF) had been in the facility a significantly shorter time at baseline, were significantly more likely to have resided in a for-profit facility, and were significantly less likely to have resided in a facility with a full-time RN on staff. Those residents who resided in a nursing home at follow-up were significantly older than those remaining in their baseline ALF, were significantly more likely to have been receiving ADL assistance, were more likely to have severe cognitive impairment, and were more likely, inexplicably, to have resided in a facility with lower staff turnover.

As interesting as the basic differences observed in Table 3 may be, the real test of these relationships came in the development of a set of multivariate models. These models identified facility characteristics that, while controlling for important resident characteristics, had a significant effect on where residents went after leaving their baseline ALF.

As indicated earlier, the multivariate analyses tested the effects of a number of indicators that were hypothesized to have an effect on individuals’ status after they left their baseline ALF. The majority of these variables were not statistically significant. Table 4 presents the statistically significant relative odds ratios estimated by means of a multinomial logit model. As that table indicates, three individual-level and two facility-level factors had a statistically significant impact on changes in residents’ living arrangements.

Individuals who were severely cognitively impaired had odds of entering a nursing home that were over twice those for residents who were either cognitively intact or only mildly cognitively im-

### Table 3. Descriptive Statistics for Residents With Known Discharge Status

<table>
<thead>
<tr>
<th>Illustrative Baseline Characteristic</th>
<th>In the Same ALF&lt;sup&gt;a&lt;/sup&gt;</th>
<th>In NH&lt;sup&gt;b&lt;/sup&gt;</th>
<th>In Other&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Deceased&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average age</td>
<td>84.08 (0.40)</td>
<td>86.31 (0.69)**</td>
<td>82.97 (1.74)</td>
<td>87.91 (0.63)**</td>
</tr>
<tr>
<td>% female</td>
<td>78.93 (1.49)</td>
<td>80.50 (4.42)</td>
<td>76.45 (6.00)</td>
<td>73.78 (6.01)</td>
</tr>
<tr>
<td>% married</td>
<td>11.09 (1.24)</td>
<td>7.55 (2.99)</td>
<td>17.20 (6.63)</td>
<td>21.95 (6.45)</td>
</tr>
<tr>
<td>Avg. length of stay</td>
<td>41.53 (2.08)</td>
<td>32.80 (4.79)</td>
<td>22.18 (2.30)****</td>
<td>35.68 (6.12)</td>
</tr>
<tr>
<td>% need some ADL help</td>
<td>49.10 (2.70)</td>
<td>67.36 (5.80)**</td>
<td>57.80 (7.42)</td>
<td>72.64 (6.87)**</td>
</tr>
<tr>
<td>% severe cog. impairment</td>
<td>12.48 (2.26)</td>
<td>24.52 (4.97)*</td>
<td>23.84 (5.24)</td>
<td>18.40 (7.12)</td>
</tr>
<tr>
<td>Satisfaction scale</td>
<td>32.46 (0.36)</td>
<td>31.49 (1.00)</td>
<td>30.89 (0.98)</td>
<td>32.54 (0.63)</td>
</tr>
<tr>
<td>% hospitalized in past year</td>
<td>32.64 (2.31)</td>
<td>29.14 (5.36)</td>
<td>38.22 (8.03)</td>
<td>37.03 (6.23)</td>
</tr>
<tr>
<td>% used ER in past year</td>
<td>23.44 (2.04)</td>
<td>24.62 (7.81)</td>
<td>25.55 (5.33)</td>
<td>36.26 (7.53)</td>
</tr>
<tr>
<td>Res. income (categories)</td>
<td>4.48 (0.13)</td>
<td>4.32 (0.19)</td>
<td>4.63 (0.26)</td>
<td>4.10 (0.32)</td>
</tr>
<tr>
<td><strong>Facility level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% for profit</td>
<td>48.88 (5.26)</td>
<td>42.74 (9.50)</td>
<td>75.68 (8.53)****</td>
<td>51.20 (10.05)</td>
</tr>
<tr>
<td>% affiliated with NH</td>
<td>47.96 (3.83)</td>
<td>54.80 (6.93)</td>
<td>44.37 (9.20)</td>
<td>33.89 (6.23)*</td>
</tr>
<tr>
<td>% chain</td>
<td>47.17 (4.19)</td>
<td>44.88 (9.38)</td>
<td>48.69 (7.60)</td>
<td>42.79 (7.57)</td>
</tr>
<tr>
<td>Discharge policy scale</td>
<td>5.77 (0.20)</td>
<td>5.82 (0.36)</td>
<td>5.89 (0.33)</td>
<td>5.97 (0.39)</td>
</tr>
<tr>
<td>% staff turnover</td>
<td>25.76 (2.03)</td>
<td>20.39 (2.79)*</td>
<td>28.22 (3.31)</td>
<td>27.34 (3.77)</td>
</tr>
<tr>
<td>Facility case-mix intensity</td>
<td>1.27 (0.12)</td>
<td>1.09 (0.25)</td>
<td>1.74 (0.34)</td>
<td>1.57 (0.36)</td>
</tr>
<tr>
<td>Full-time RN on staff</td>
<td>66.78 (3.29)</td>
<td>53.88 (8.02)</td>
<td>54.63 (5.87)*</td>
<td>71.18 (6.53)</td>
</tr>
</tbody>
</table>

Notes: Standard errors are in parentheses. ALF = assisted living facility; NH = nursing home; ADL = activity of daily living; ER = emergency room. The sample size n varies within each cell as a result of missing values, and all statistical comparisons are comparisons with those remaining in the same ALF. N = 187,628; n = 1,447.

<sup>a</sup>N = 155,540, n = 1,202.
<sup>b</sup>N = 11,533, n = 92.
<sup>c</sup>N = 7,999, n = 66.
<sup>d</sup>N = 12,556, n = 87.

*p < .05; **p < .01; ***p < .001.
Table 4. Living Arrangement at Follow-Up: Multinomial Logit Model

<table>
<thead>
<tr>
<th>Significant Independent Variable</th>
<th>Location at Follow-Up</th>
<th>NH</th>
<th>Other</th>
<th>Died</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td></td>
<td>0.65</td>
<td>1.84</td>
<td>2.32*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.27, 1.59)</td>
<td>(0.72, 4.68)</td>
<td>(1.14, 4.73)</td>
</tr>
<tr>
<td>Severe cognitive impairment</td>
<td></td>
<td>2.12**</td>
<td>1.94</td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.25, 3.61)</td>
<td>(0.92, 4.08)</td>
<td>(0.44, 3.06)</td>
</tr>
<tr>
<td>Any ADL help</td>
<td></td>
<td>1.97**</td>
<td>1.23</td>
<td>2.87**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.24, 3.12)</td>
<td>(0.62, 2.44)</td>
<td>(1.53, 5.38)</td>
</tr>
<tr>
<td>For-profit ALF</td>
<td></td>
<td>0.65</td>
<td>3.16**</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.37, 1.15)</td>
<td>(1.43, 6.97)</td>
<td>(0.52, 1.88)</td>
</tr>
<tr>
<td>Full-time RN on staff</td>
<td></td>
<td>0.48*</td>
<td>0.63</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.28, 0.84)</td>
<td>(0.39, 1.03)</td>
<td>(0.60, 1.94)</td>
</tr>
</tbody>
</table>

Notes: Standard errors are in parentheses. For this analysis, dummy variables were used for each variable with more than 10% missing data to represent those residents with missing data. The coefficients for these variables were not significant and are not displayed. N = 184,768; n = 1,417. ADL = activity of daily living; ALF = assisted living facility; NH = nursing home.

*p < .05; **p < .01.

paired. Those who received assistance or supervision with their ADLs were significantly more likely to enter a nursing home or to die than those residents who needed no ADL assistance at baseline. The odds of dying versus staying in the same ALF for those residents who were married were more than twice that of unmarried residents.

As indicated earlier, from the array of facility-level indicators tested, only two proved significant. First, those residents in for-profit facilities had over three times the odds of moving to some other setting compared with residents living in not-for-profit ALFs. Second, residents in an ALF employing a full-time RN had less than half the odds of moving to a nursing home compared with residents in facilities that were staffing differently.

Conclusions

The findings concerning a full-time RN are those with the greatest potential policy implications. For residents in such settings, the odds of going to a nursing home were roughly one half of those for residents in ALFs not offering this level of staffing. This finding is relevant to the current debate over whether ALFs can substitute for, or delay movement to, nursing homes. It seems that ALFs can affect the odds that a resident will go to a nursing home, but only if they provide some of the nursing services that one would expect at a nursing home (see Appendix, Note 3).

For policymakers interested in developing an assisted living industry that can reduce nursing home costs, this research implies that creating incentives for facilities to provide a higher level of service (e.g., with greater involvement of nursing professionals) could be productive. However, such a policy stance would mean encouraging the development of higher cost ALFs, at the same time that developing ALFs for individuals with more limited income is becoming a major policy concern.

For consumers intent on avoiding or delaying nursing home placement, seeking out ALFs that have full-time RNs may constitute a good choice in an ALF. For clinicians advising their patients and their families about housing choices, it may be important to emphasize the importance of evaluating the level of nursing services offered by the different facilities they are considering.

The only other facility characteristic that had an impact on residents’ care transitions was the ownership arrangement of the ALF. Residence in a for-profit ALF was highly associated with movement into a setting other than a nursing home. The most common reason for leaving a facility was the need for more care. Possibly, the for-profit sector of the assisted living industry may be less capable of meeting residents’ increasing care needs over time or less committed to the philosophy of aging in place. The lesson here for clinicians and consumers may be the necessity of sensitivity to not only a facility’s ability to meet a potential resident’s current needs but also its ability and willingness to provide care to the resident when the resident experiences a decline in status.

This research also provided new information on the characteristics of residents that affected their movement out of assisted living. The need for any ADL assistance at baseline increased a resident’s relative odds of moving into a nursing home. The only other individual-level variable affecting an individual’s odds of entering a nursing home was cognitive status. Individuals with relatively severe cognitive impairment had higher odds of moving to a nursing home.

Given the increasing role of assisted living in caring for individuals with cognitive impairment, the impact of cognitive impairment on a resident’s likelihood of going to a nursing home from an ALF also has potential policy implications. We often think of assisted living as a setting appropriate to the needs of those with cognitive impairment. However, a majority of the facilities in the nation have policies in place that call for the discharge of residents when they become moderately to severely cognitively impaired or when they exhibit problem behaviors (Phillips, Rose & Hawes, 2000).

The results presented in Table 4 imply that it is only to the degree that the assisted living industry is encouraged to care for those with more severe cognitive impairment that nursing home use among those with cognitive impairment may be reduced. However, the industry’s ability to provide adequate and appropriate care for such residents is unproven. Encouraging the industry to provide care to this population, which often presents serious challenges to caregivers, without specifying what appropriate
care is or ensuring the quality of its provision might place a very vulnerable population at risk of inappropriate or poor care.

ADL needs and marital status affected the likelihood of death of an individual in assisted living. Married couples are much less likely than single individuals to enter an ALF. Those few frail elderly people who are married and go into an ALF may have taken this unusual step because one spouse had a serious health problem that was not captured in our model.

As interesting as the implications of this research may be, it is important to remember its limitations. This study was an observational study, with all the caveats that statement implies. It is also the first study of a nationally representative sample of ALFs that most closely approximate the core philosophy of assisted living, offering relatively high levels of service or privacy. Although its scope is one of this study’s strengths, it remains a single study of an industry in the throes of growth and change. As the discussion herein indicates, the policy issues are complex, and our current knowledge base is, for the purposes of policymaking, necessarily limited.

However, this research should, at a minimum, stimulate debate over some of the core issues facing the assisted living industry, consumers, clinicians, and policymakers. As always, such fundamental questions are best addressed while this industry is still being developed, rather than after it is fully formed and its contours hardened. These core issues revolve around the following question: What is the appropriate definition for, and the desired effect of, the term “assisted” in the phrase “assisted living”? Hodlowski, R. T. (1998). Facts and trends: 1998—The assisted living sourcebook. Washington, DC: National Center for Assisted Living, American Health Care Association.

References


Appendix

Notes

1. Generally, the philosophy promulgated by the early proponents of assisted living emphasized services and oversight available 24 hr a day, services to meet scheduled and unscheduled needs, aging in place, the promotion of independence, privacy, a homelike environment, and an emphasis on consumer dignity, autonomy and choice (Assisted Living Quality Coalition, 1998).

2. Facilities identified residents who were no longer in the facility. Contact information obtained from the residents at the baseline interview was then used to ascertain the residents’ status. Over 95% of the time, the respondent was the contact person rather than the resident. The resident was often either deceased or in a setting (e.g., hospital or nursing home) that made telephone contact difficult.

3. One might be concerned that the results related to the presence of an RN might be affected by selection bias. However, it would seem likely that more impaired individuals would select the ALFs with the most services. This would imply that these ALFs should then have higher rates of transfer to nursing homes, rather than the lower rates observed.