Patterns of Service Use in a Continuing Care Retirement Community

John A. Krout, PhD, Jean Oggins, PhD, and Heidi H. Holmes, MA

The authors analyzed the use of 16 onsite services reported by 91 residents of a new continuing care retirement community (CCRC). The most frequently used services appear to be those of convenience to the residents, including an onsite pharmacy, insurance billing, and a bank, as well as health and fitness services. Perceived health and multiple illnesses were associated with greater use of health and auxiliary health/fitness services, whereas age and marital status were not. In addition, respondent reports of spouse service use predicted respondent service use, whereas measures of social connectedness and friendship did not. Community service use before relocation to the CCRC was predictive of total CCRC service use only in unmarried respondents, demonstrating the complex nature of the relationship between informal support and the use of formal services. The behavioral model appears to be applicable to the study of CCRCs.

Key Words: Long-term care, Senior housing, Service utilization

According to the American Association of Homes and Services for the Aging (1997), more than 2,000 continuing care retirement communities (CCRCs) house some 625,000 older adults in the United States today. Typically, a CCRC provides a continuum of housing options and health and social services for a price that is determined at the time an individual enters the facility. CCRCs do not provide acute care, and residents are responsible for physician services, although many CCRCs provide space for routine physician visits. The scope of services depends on the type of life care contract offered by the facility and selected by the resident, but the care is guaranteed and the cost is capitated up front. Thus, CCRC residents plan on “aging in place” in an environment where care is coordinated and comprehensive. CCRC residents enter at the independent living level with monthly fees based on the size of the living unit.

Research has shown that a major attraction of these relatively new housing options is their ability to provide long-term health care onsite (Krout, Moen, Oggins, & Bowen, 1998), as well as a broad array of other health and social services. Yet almost no studies have examined CCRC residents’ actual use of skilled nursing facilities, health care services, or other recreational or consumer services. Using Andersen’s (1968) behavioral model, we identify the predictors of the use of 16 onsite services for a sample of 91 CCRC residents.

Information on use of CCRC services is important for several audiences. First, researchers may wish to know if the preventive health care available at CCRCs prolongs health and life or if the use of such services contributes to resident social participation and satisfaction with a CCRC. Changes in service use with the transition from living in the community to living in a CCRC and with time while in a CCRC would also be an area of interest to gerontologists. Such research should help in understanding different health and social “pathways” for CCRC residents’ lives as they age in place. Policymakers should also be interested in CCRC service use, as CCRCs are viewed as an alternative to the traditional long-term care continuum, where services are often segmented and duplicative (Estes & Swan, 1993). Finally, developers and managers of CCRCs can benefit from understanding onsite service use because it affects the lives of residents and the work of staff. In addition, up-front buy-in fees and monthly charges are partly predicated on assumptions about the nature and volume of resident service use, and patterns of such use can assist the CCRC industry in estimating what those charges should be.

Conceptual Approach

There is no existing body of literature on CCRC service use that provided a well-developed conceptual approach to guide our analysis. Most previous research on service use by older persons in general has adopted the behavioral model (Aday & Andersen, 1974, 1975; Andersen, 1968; Andersen & Newman, 1973). Originally developed to address the question of who uses medical services, this framework has been applied to the use of a broad array of...
social and health services among older adults (Mittlell & Krout, 1998). This descriptive approach classifies independent variables as predisposing, enabling, or need characteristics. Most recently, Andersen (1995) has reaffirmed that need characteristics may include health problems or functional difficulties.

Andersen (1968, 1995) has argued that the significance of predisposing, enabling, and need factors for service use depends on the type of service and whether services are nondiscretionary or discretionary. Nondiscretionary services can be seen as those that are unavoidable due to serious health problems (such as hospitalization) or those that are regulated by service providers (such as rehabilitative care). Discretionary services are those whose use is largely based on individual preferences. The behavioral framework may be best suited to predict use of such services, including community-based services and health maintenance and prevention services (Snider, 1980a, 1980b), and other voluntarily elected services (Wolinsky, Coe, Miller, Prendergast, Creel, & Chavez, 1983). Mitchell and Krout (1998) found this to be the case in an analysis of service use by community-dwelling older adults in North Carolina. Although assisted living and skilled nursing care are core health services provided by CCRCs, the majority of CCRC services are for health maintenance (i.e., discretionary). Thus, the behavioral model would seem to have particular application to CCRC service use. This point is underscored by the fact that most residents of CCRCs need to be in relatively good health to gain admittance.

Researchers applying the behavioral framework use either measures indicating use of particular services or a summed service use score. A number of researchers (Kosloski & Montgomery, 1994; Mitchell & Krout, 1998; Snider 1980a, 1980b) have grouped services by type (e.g., health services) when applying this behavioral model. Thus, in this research we examined both the use of individual services offered by the CCRC as well as the total number of services used by residents.

Need variables used in this research include perceived health, number of illnesses, and the number of activities of daily living (ADLs) that a person is limited in performing. Predisposing characteristics are those that exist before the use of health services, such as health beliefs or biological characteristics. Predisposing variables used in this research include age, gender, and prior use of services, which may also affect the likelihood of an individual to subsequently use services. Factors that facilitate use of services—such as transportation, insurance coverage, financial resources, and relationships with others—are enabling characteristics. Because this research examined only services available onsite and looked at a residential setting for people with considerable financial resources, income and transportation were not included in our analyses. The enabling variables used here reflect social relationships—whether individuals were married and, if so, how often the spouse used CCRC services. In addition, informal relationships within the CCRC may also have dictated service use.

Therefore, the analysis included scales from the interview that measured social integration and close relationships.

Prior Studies

Few researchers have examined resident use of CCRC services. However, the limited research on why older adults move to such facilities underscores the importance of having high-quality services onsite. In a review of the extant research on reasons for moving to a CCRC, Krout and associates (1998) observed that the main reasons include a desire for health care and medical services, a desire to remain independent, and a desire not to have to maintain a home. In a number of studies, 75% to 90% of CCRC residents or those on waiting lists reported that the availability of health care and medical services was an important or very important reason for relocation to a CCRC (Cohen, Tell, Batten, & Larson, 1988; Kichen & Roche, 1990; Sheehan & Karasik, 1995; Sherwood, Ruchlin, Sherwood, & Morris, 1997; Tell, Cohen, Larson, & Batten, 1987). Krout and colleagues (1998) surveyed individuals before their relocation to a CCRC and found that almost 85% of respondents reported the availability of continuing care as a reason for moving; furthermore, almost one third of respondents cited onsite services as an important consideration in moving to this kind of housing. Similarly, Sheehan and Karasik reported that 55% of those on a CCRC waiting list considered supplemental services an important reason for moving to a CCRC. It is important to note that these studies have found that these and other reasons for moving are related to sociodemographic characteristics. For example, Sheehan and Karasik found that older individuals selected the CCRC arrangement for social activities, and younger residents and women indicated independence from family as a reason. Unmarried individuals and women valued the safety and security of the CCRC environment, and married individuals stated that guaranteed health care was a prime motivator.

Only a few studies have reported on actual use of CCRC services. Ruchlin-Hirsch, Morris, and Morris (1993) found that close to 18% of 1,552 CCRC residents used some hospital care over a 12-month period. Cohen, Tell, Bishop, Wallack, and Branch (1989) examined, retrospectively, the use of nursing home services for 3,316 residents of six CCRCs and found considerable variation between facilities and among residents (based on age and number of years lived in the CCRC). We found no studies that looked at the breadth of service use in a CCRC population.

The literature on the use of services by older persons in general is also instructive. Several researchers have found that older age, a predisposing characteristic, is positively associated with the use of community-based services such as senior centers (Kruit, 1983; Meyer, Lusky, & Wright, 1991; Miner, Logan, & Spitze, 1993; Mitchell, 1995; Sabin, 1993). Krout, Cutler, and Coward (1990), on the other hand, reported a curvilinear relationship between age and whether an
older person used a senior center. Gender, another predisposing characteristic that is included in most studies on the use of medical care (Andersen, 1995), is less frequently studied in examinations of other services (Mitchell & Krout, 1998). Krout and associates (1990) did find that a national sample of women was more likely than men to attend senior centers. The few studies that have included education as a predisposing characteristic have not reported a consistent relationship with service use (Mitchell & Krout, 1998). Finally, researchers also suggested that a willingness to use services is itself a predisposing factor (Golant, 1984). People who have used services in the past are more likely to use others when the need arises.

Of enabling characteristics, two—income and transportation—have been included in previous studies of service use but are not reviewed here as services are onsite and the CCRC population under study is homogeneous in having high income. Previous research has suggested that individuals are less likely to use services if they have social support or assistance from others—especially informal supports such as family members, friends, or neighbors. Some have argued that help from informal supports substitutes for agency services (Arling & McAuley, 1984; Coward, Cutler, & Mullens, 1990). Or, as in Cantor’s (1979) hierarchical compensatory model, formal services substitute for informal care when such care is absent. Others have argued that such assistance complements formal services (Burton et al., 1995; Chappell & Blandford, 1991) or that informal supports can provide connections to formal services (Shanas & Maddox, 1976). Living alone or with others has often been used as a proxy measure of social support, and studies have shown that those living alone are more likely to use services (Krout et al., 1990; Liu, Coughlin, & McBride, 1991; Steinbach, 1992). Although neither the theory nor the research on the relationship between informal support and the use of formal services is unequivocal (Logan & Spitze, 1994), we examine this relationship for CCRC residents.

Generally, need characteristics are the strongest predictors of service use (Mitchell & Krout, 1998). Wolinsky and colleagues (1983) reported that need measures such as perceived physical health, mental status, ADLs, and nutritional risk were much stronger correlates of health service use than predisposing or enabling variables. However, the relative importance of need variables may depend on the nature of the service.

**Hypotheses**

This article extends existing work with the behavioral model by applying it to a relatively new residential option that combines housing and services, the CCRC. Consistent with previous research, we hypothesized that need (health) variables would be the strongest predictors of CCRC service use, especially of health services (Kosloski & Montgomery, 1994). However, CCRC health services include health maintenance services, which may be less dependent on need factors. Accordingly, we predicted that individuals’ use of these services, as well as of other non-health services, would correlate positively with an enabling factor, spouse use of these services. Third, we also hypothesized that other measures of social relationships (marital status, social integration, and close relationships) would be related to service use. Fourth, we expected that CCRC service use would be positively related to prior use of community services, a predisposing variable. Finally, we tested the hypothesis that health variables would be the strongest predictors of total service use.

**Methods**

**Sample**

The CCRC studied here was a not-for-profit life care retirement community designed for people older than 65 who are in good physical and mental health. By virtue of its fees (a minimum $100,000 nonrefundable entrance fee and monthly apartment costs of approximately $1,500 per person), it is affordable only to a limited segment of the population. Located in a rural college-town community, it has mainly attracted professionals, including many who had worked at the town’s two academic institutions. The CCRC offers a choice of cottage and apartment sizes, including studio, one-bedroom, and two-bedroom combinations. In addition to providing meals, housekeeping, linen services, maintenance, groundskeeping, a library, and space for exercise and recreation, it has assisted living and an onsite health center that provides short- or long-term care, including 24-hour-a-day skilled nursing; the services of a doctor, rehabilitation therapists, and social services staff; a pharmacy; and home care.

Our sample consisted of 91 individuals who had signed contracts by June 1995 to move into a new CCRC that opened in December 1995 and who eventually moved to the facility. Before the move, the facility’s director contacted these individuals by mail and asked them to return an enclosed postcard to the researchers if they were willing to participate in the study. Individuals who did so were then contacted and were interviewed in fall 1995. Some had already sold their primary residences and were renting apartments or houses while waiting to move permanently. Of 101 individuals who initially took part in the study, 4 later died, 5 chose not to participate again, and 1 had a significant amount of missing data, such that complete data from before and after the move were available from 91 individuals.

We do not know how the individuals who chose to participate in the study differed from those who did not. Most from outside the local community did not participate, possibly because they found it relatively difficult to make moving arrangements. However, it is unlikely that they differed from participants in terms of income, age, race, and marital status. The sample was not necessarily representative of persons who had moved to other CCRCs as the populations these facilities served may have differed considerably.
(cf. Gober & Zonn, 1983). Still, the sample was similar to populations found in many CCRCs (e.g., Cohen et al., 1988; Gober & Zonn, 1983; Tell et al., 1987).

Slightly more than 60% of the sample was female, aged 75 or older, and had a graduate or professional degree; over one half indicated incomes of $75,000 a year or more; and a surprising 16.5% currently worked (typically part time). About two thirds of the sample were married, and almost 60% had three or more children. Health status was generally reported to be good or excellent. Most (76%) of these individuals were long-time residents of the community in which the CCRC is located. Unmarried women were older than married individuals, but the groups did not differ in perceived health or (for married participants) in spouse’s perceived health.

**Procedure and Measures**

Individuals were interviewed in their homes in 1995 (premove) and after moving to the CCRC in 1997 (postmove). The variables used in the analysis are from 1997 postmove responses, with the exception of the summed community service use score, which was calculated from services reported to be used in the 1995 premove interview. Students trained in interviewing administered surveys on housing (including use of CCRC facilities), social life, well-being, and health. The surveys took about an hour and a half to complete. Respondents also completed a short booklet of items at home.

Respondents reported on these topics as well as their use of CCRC services, including health services (prescription drugs, onsite doctors or nurses, onsite counseling, physical therapy, skilled nursing facilities, and home health care), fitness facilities and services (fitness area/weight room, swimming pool, water aerobics, health and wellness program), and other services (insurance billing assistance, bank, beauty parlor/barbershop, additional meals, transportation). These categories are rather loosely defined as many of the services can have dual purposes. For example, the fitness area, swimming pool, and wellness program may be used for recreation or preventative maintenance but could also be used as part of a structured therapy program. Those who had used the CCRC’s skilled nursing facilities also noted why, for how long, and whether they were satisfied with the care they received. Also, except for the latter item, married individuals reported on their spouses’ use of CCRC services.

To examine the relative role of need, enabling characteristics, and predisposing characteristics in CCRC service use, we used several additional items. Measures used as need variables included an item for perceived health that asked respondents to rate their health on a scale ranging from 0 to 10 (M = 6.97) and an eight-item scale on restrictions in ADLs (α = .90, M = .86/8.0). Included in the eight-item scale were indicators of difficulties in walking six blocks, climbing stairs, completing housework, caring for personal needs (dressing, bathing, toileting, etc.), shopping, driving, working outside the home, and keeping doctors’ appointments. In addition, respondents reported all illnesses with which they had been diagnosed (M = 3).

In thinking about enabling characteristics, it seemed that a respondent’s use of a service would be more strongly facilitated by a spouse’s use of services than by use of services by friends and acquaintances. Variables representing respondent use, respondent reports of spouse CCRC service use, and premove community service use were coded as 0 if the service had not been selected and 1 if the service had been selected. Summed service use scores were created for spouse CCRC service use, respondent’s CCRC service use, and respondent’s premove community service use by summing the original indicator variables. The Social Integration and Reliable Alliance subscales of the Cutrona Social Provisions Scale (Cutrona & Russell, 1987), which assess the degree to which individuals feel connected to and able to depend on others (mainly close friends), were used in discriminant and regression analyses to see if higher scores on the subscales predicted greater use of CCRC services. Finally, items measuring predisposing characteristics were age cohort (<76.5, >76.5), gender, marital status, and the respondent’s premove summed community service score.

**Data Analysis**

In the data analysis, we examined frequencies for individuals’ reports of CCRC service use, after which chi-square tests were conducted to assess relationships for married individuals’ reports of their own and their spouses’ use of each CCRC service. Respondents’ reports were also entered into a principal-axis factor analysis with varimax rotation. The services did not load in a manner that was acceptable or predictable. Therefore, each individual service was used as a dependent variable in the analyses.

Next, we simultaneously entered items representing need characteristics (perceived health, ADL restrictions, number of illnesses reported), enabling characteristics (spouse’s service use [for married respondents] and the Cutrona subscales of Social Integration and Reliable Alliance), and predisposing characteristics (age cohort, gender, marital status, and premove summed community service use) into a forward stepwise discriminant analysis, with respondent service use measures as dependent variables to assess which independent variables were able to discern users from nonusers of each service. Linear regressions were used to determine which of the independent variables could predict total CCRC service use for married and unmarried respondents separately.

**Results**

Table 1 displays item means for respondents’ reported use of CCRC services, listed in the average order of frequency with which respondents used them. Table 1 shows that CCRC services were used by anywhere from none to over half of the respondents, with prescription drugs used most often. Generally, re-
Table 1. Frequency of Use of Continuing Care Retirement Community Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Unmarried Respondent (n = 40)</th>
<th>Married Respondent (n = 51)</th>
<th>Spouse* (n = 51)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onsite pharmacy</td>
<td>58</td>
<td>68</td>
<td>70</td>
</tr>
<tr>
<td>Insurance billing</td>
<td>35</td>
<td>45</td>
<td>47</td>
</tr>
<tr>
<td>Bank</td>
<td>33</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>Swimming pool</td>
<td>23</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Health/wellness program</td>
<td>22</td>
<td>26</td>
<td>21</td>
</tr>
<tr>
<td>Fitness area</td>
<td>23</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Beauty or barber shop</td>
<td>20</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Onsite nursing/physicians</td>
<td>13</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Physical therapy</td>
<td>8</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Water aerobics</td>
<td>15</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Transportation to events</td>
<td>13</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Additional meals</td>
<td>3</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Transportation</td>
<td>5</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Recreational therapy</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Onsite counseling</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Home health care</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Catering</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Spouse service use was reported by the respondent.

Twelve individuals also reported having used the CCRC’s skilled nursing facilities in the past year, for an average stay of 31 days. All were satisfied with their care. Seven were recovering from surgery—6 from orthopedic surgery, such as replacement of a hip or knee. Four individuals reported using the facilities when they experienced abdominal pain, shingles, a fracture, or recuperation from a heart attack or intestinal virus; a fifth reported convalescence for an unknown reason.

Measures of predisposing, need, and enabling factors were entered into a forward stepwise discriminant analysis for 11 service use items. Services that were used by fewer than 5% of respondents were excluded from the analyses. The data were coded as 0 if the service was never or rarely used and 1 if the service was frequently used. The following factors were specified: age cohort (≤76.5 or >76.5), gender (male or female), marital status (unmarried or married), the number of reported illnesses, perceived health (scale of 0 to 10), number of limitations in ADLs, Social Integration and Reliable Alliance subscale scores, spouse’s summed service use score, and the premove summed (community) service score. The results of the discriminant analyses are presented in Table 3.

The physical therapy and onsite pharmacy services were most used by those who rated their health as being poorer, whereas visits to the onsite physician and nursing staff were made by those who had more illnesses. Those filling their prescriptions at the CCRC had an average health rating of 6.2 out of 10, whereas those who reported not using the service had an average health rating of 8.3. Individuals who reported visiting the onsite physician and nursing staff reported a greater number of illnesses (average of 6.2) than those who did not (average of 3.4). None of the other independent variables were effective in dis-
Swimming Pool
Onsite Nursing/Physician
Physical Therapy
Beauty or Barber shop
Insurance Billing

For married respondents, increased number of illnesses and limitations in ADLs were the strongest relationships between respondent and spouse service use. For unmarried respondents, the number of ADL limitations, age cohort, and the Social Integration and Reliable Alliance Scale were not effective in discriminating between users and nonusers in that they reported suffering from more illnesses than those who did not use the pool. In addition, pool users were predominantly women. In examining use of the health/wellness center, we found health status and spouse service use to be the best at discriminating between users and nonusers in that they reported suffering from more illnesses than those who did not use the pool. In addition, pool users were predominantly women.

Two other CCRC services had discernable groups: use of insurance billing and the beauty/barber shop. Users of CCRC insurance billing services were different from nonusers in that they reported suffering from more illnesses and reported that their spouses used more CCRC services. Those who used the onsite beauty/barber shop reported poorer health than those who did not. The number of ADL limitations, age cohort and the Social Integration and Reliable Alliance Scores were not effective in discriminating between users and nonusers of CCRC services.

Table 4 presents the results of linear regressions that were run to identify the predictors of total service use. We ran regressions separately for married and unmarried respondents. Spouse service use was a predictor of greater respondent service use for married respondents, followed by increased number of illnesses and gender. Married men with a greater number of illnesses and who reported that their spouses used more CCRC services were more likely to be service users themselves. For unmarried respondents, number of illnesses and limitations in ADLs, in addition to greater service use before moving into the CCRC, were significant predictors of summed service use.

**Discussion**

The most frequently used CCRC services were the onsite pharmacy, insurance billing, and the bank, all services of convenience to those residing in the CCRC. Only a fourth (or fewer) of the sample population reported using the remaining services. Because most CCRC residents continued to see many health care professionals offsite (primary care physicians and specialists), the level of reported service use is not surprising or inconsistent with previous research (Krout et al, 1990). This finding should be of some interest to facility managers, as the frequency of use of these services dictates the number and hours of staff. Also, knowledge of the most commonly used services and the nature of their use can assist those in the field in establishing policy protocol and estimating reasonable fees and monthly charges.

As hypothesized, we found that service use was positively related to reports of spouse use. This was true for a majority of the more frequently used services. The strongest relationships between respondent and spouse service use were for those services where use would logically be linked, such as the bank, transportation, insurance billing, and physician visits. Spouse service use also emerged as a significant discriminator in multivariate analyses of those who used insurance billing and the health/wellness center and was a predictor of total service use. It is important to note that marital status in and of itself did not predict service use. The primary importance of spouse service use raises the question of what happens when a spouse service user dies or moves into a higher level of care in a CCRC. Does the remaining spouse continue to use wellness services, for example, or does he or she...
stop using services and experience a decline in health? If so, how should CCRC staff respond?

The two other variables measuring the level of social integration and close friendships (seen as enabling factors) were not useful in discriminating between users and nonusers of CCRC services or in predicting total service use. Thus, the relationship of informal support and CCRC service use is complex. Traditional indicators of the availability of informal support are found to be neither positively nor negatively related to service use. Spouse use of services, not marital status, emerged as the important informal relationship measure. This finding suggests the need for additional research, as it is logical to assume that services, particularly fitness and recreational services, would be closely tied to social involvement, especially for unmarried individuals. It also raises interesting questions for housing managers who may assume that residents with higher levels of social involvement are also more likely to use services. Our data indicate that this is not the case. Assuming that the use of services such as the swimming pool and wellness program is good (i.e., keeps residents healthy and prevents or delays the use of costly assisted living or skilled nursing care), then how is such use increased?

We found that indicators of need for services (health status, number of illnesses) are related to CCRC service use as hypothesized, and this impact is independent of spouse use of services for married respondents. It appears as though poorer health and greater number of illnesses were most influential in respondents' use of onsite services, regardless of whether the service was mainly a medical, fitness, or other type of service. Results of the discriminant analysis yield a picture of the CCRC service user as one who is in declining health, most likely with chronic illnesses, and who uses health-related services in response to his or her needs. Respondents who reported that their health was poorer were the predominant users of onsite physical therapy, swimming pool, wellness center, pharmacy, and beauty/barber shop. Although use of the beauty/barber shop is not a health-related service, it is not surprising that those in poorer health would be more inclined to use it, given that they would be less likely to drive and get around in the community. All of the onsite health services reduced or eliminated the need for residents to commute to other facilities or locations for those services.

The picture for the relationship between prior and current service use is also more complex than hypothesized. The impact of service use before relocation to a CCRC was mitigated by marital status. Use of services before relocation to the CCRC was only conditionally related to CCRC service use for unmarried individuals. Marital status is important not in its own right, but because the use of many services appears to be couples based. This suggests the need for further analysis of service use in the context of couples or household decision making.

On the other hand, need factors, as measured by health indicators, are the strongest predictors not only of services that are medically oriented (prescription drugs, physical therapy, and onsite physicians), but also of services that can be seen as preventative. We expect elders who are sicker to be more likely to use the former services. The onsite availability of services and an emphasis on wellness are important marketing and planning tools for CCRCs. Our data reveal that residents who use services that can be seen as preventative are not healthier. This suggests that more attention needs to be given to increasing the use of preventative health services by CCRC residents before poor health sets in.

Before these implications can be broadly applied, more research will need to be done in other CCRC settings. The primary limitation of this study is a rather small sample population. In addition, the facility was brand new—a drawback in that the services were still being established and staffed, and a benefit in that it allowed us to follow service use within the CCRC from the outset. The longitudinal design of the study will allow us to follow these individuals and see what patterns of service use continue to emerge as the facility and population mature.

In conclusion, our findings on service use in a CCRC are consistent with investigations of the use of service provided in other residential and community contexts. Thus, the behavioral model would appear to be applicable to the study of CCRC service use, and findings from studies of community-based service use can be instructive for the planning and management of CCRCs. Use of community services before relocation to the CCRC is only conditionally related to CCRC service use for unmarried individuals. Marital status is important not in its own right, but because the use of many services appears to be couples based. This suggests the need for further analysis of service use in the context of couples or household decision making.

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**Berner Hanley Professor of Gerontology**
**Department of Child Development and Family Studies, Purdue University**

Purdue University seeks an outstanding senior-level social scientist to serve as the Berner Hanley Professor of Gerontology in the Department of Child Development and Family Studies. Primary responsibilities include research and grant writing, teaching, and providing leadership for further development of gerontological research and academic programs in the Department and University. Contributions to outreach and service activities also are expected. Area of specialization within gerontology is open. Candidates for this newly established position should have an international reputation, and an exceptionally strong record of scholarly publications and significant external grant support. Candidates should hold a Ph.D. in gerontology, human development, family studies, sociology, psychology, or a closely related social science field. Evidence of strong research and teaching skills is required. Applications from minority scholars are strongly encouraged. The appointment will be made at the full Professor or advanced Associate Professor level. Appointment as a Distinguished Professor also may be considered. This is a 10-month appointment with a desired starting date of August 2001. Salary is open and competitive.

Nominations, correspondence, and applications should be directed to Dr. Douglas Spenkle, Chair, Berner Hanley Professor Search Committee, Department of Child Development and Family Studies, Purdue University, West Lafayette, IN 47907-1269. Candidates should send a vita, representative publications, and names, addresses, and phone numbers for three references. Initial screening of materials will begin January 8, 2001. Applications will be accepted until the position is filled. Purdue University is an Equal Opportunity/Affirmative Action Employer.