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# Assisted Living Research: Still in its Infancy But Beginning to Grow

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**C**ompared to other care settings, such as nursing facilities and hospitals, assisted living is a fairly new industry. Yet, a body of research data regarding care, practices, and attitudes in AL already has emerged. This article offers a look at studies and surveys that recently have appeared in the literature and provides insights from some clinicians who have tackled the new and rugged terrain of assisted living research.

## **Maryland Study: Dementia in AL**

In a Maryland study to examine the prevalence, recognition, and treatment of dementia and other psychiatric disorders in assisted living, researchers undertook a comprehensive review of medical histories and conducted cognitive and neuropsychiatric evaluations of 198 volunteer AL residents; 75% were age 80 or older, and 78% were women.<sup>1</sup>

Authors found that nearly 70% of residents had dementia, as diagnosed by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*. At the same time, family members or caregivers recognized up to 80% of dementias. Almost three-fourths of participating residents were evaluated effectively, and just over half were treated adequately. The researchers concluded that while



dementia is common in assisted living facilities, it is under-recognized and under-treated. The fact that dementia is suboptimally addressed, they suggested, may contribute to morbidity and prevent residents from aging in place to the degree that otherwise might be possible.

“The most surprising aspect of our findings was how frequently these disorders occur in assisted living facilities,” said one of the study’s authors, Constantine Lyketsos, MD, MHS, Professor of Psychi-

atry and Behavioral Sciences and Co-Director of the Division of Geriatric Psychiatry and Neuropsychiatry at The Johns Hopkins Hospital in Baltimore, MD. “We thought that we maybe would see a 50% incidence of dementia, not the 80% we found,” he added. These findings are applicable to ALFs across the board, Dr. Lyketsos noted, “since we used a broad random sample.”

Because about half of the residents with dementia and other mental health problems were not

being treated, Dr. Lyketsos recommended that ALFs make it a priority to “ensure that these conditions are detected.” The literature is full of instruments to assess dementia in the elderly, he offered. However, he explained, “None of these has been designed specifically for use in assisted living facilities.” He suggested the need for “a tool that addresses how assisted living works. Since ALFs have a lack of resources, they need a tool that can be administered accurately and easily in about 5 to 10 minutes.”

Dr. Lyketsos suggested that ALFs get used to seeing residents with dementia and other mental health problems because such conditions often are a reason that seniors move from their homes in the community to ALFs or other settings. “Most older people who are cognitively intact generally can stay in their homes and likely will choose to do so. Very few residents are in assisted living because of a lifestyle choice,” he said.

The good news is that facilities can learn from studies such as this one and plan for better assessment and treatment for individuals with dementia. “The key to success for assisted living facilities is to create dementia-friendly environments and to implement processes and guidelines for dementia recognition and management that staff and clinicians find palatable,” Dr. Lyketsos observed. With the publication of this research, he added, “We are starting to get the word out there. We’re beginning talks with legislators about what they can do to make it easier for facilities to address dementia and ensure that residents get the care they need.”

### **Examining Health Status of AL Residents**

Researchers conducted a secondary data analysis involving residents of several LifeTrust America, Inc. assisted living facilities in the Southeastern U.S. to compare health status with healthy habits in

residents. Scott McPhee, DrPH, OTR/L, FAOTA, Executive Director, Physical Agent Modalities Practitioners Credentialing Agency, and colleagues studied Healthy Generation Surveys completed by 1,079 residents.<sup>2</sup> The bulk of the survey dealt with five domains—physical, emotional, spiritual, social, and intellectual. The questionnaire asked residents about whether they currently, previously, or never had various health conditions—such as vision problems or other issues for which they would see a practitioner. Additionally, residents answered questions about their current habits

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affecting health, such as smoking, alcohol consumption, eating breakfast, eating healthy snacks, and exercising regularly. The surveys were administered to residents by specially-trained facility staff.

The authors found that residents who had more current physical health conditions also indicated that they more frequently participated in healthy habits. The researchers offered that perhaps when seniors acquire certain physical conditions, they begin to develop healthy habits.

The study results suggested to Dr. McPhee that “given the choice, opportunities, and education, AL residents largely will comply with healthy habits.” He added that

LifeTrust facilities already are using some of the information from the study to improve services. For example, he noted, “We found that residents weren’t drinking enough water. So they instituted ‘water cooler breaks,’ where they put water coolers on carts and take them throughout the facilities. Residents have really responded to this, and they now look forward to standing around the water cooler.”

Another change that was implemented related to nutrition. “We determined that people needed and wanted more education and information about what they eat. So they put nutritional information on the menus,” Dr. McPhee stated. He concluded, “the survey results have given us ideas about new and better ways to accomplish things.” Other innovations have included theme luncheons with guest speakers on various health-related topics and presentations by area high school debate teams with the residents as judges.

One restriction of the study, Dr. McPhee admitted, was that the facilities involved house predominantly middle-class or upper-middle class seniors. “We’d love to replicate this survey in lower income assisted living environments or other settings,” he offered. However, he stressed, the questions likely would have to be revised depending on what region of the country they are used in and other demographic and cultural aspects of the residents involved. For example, Dr. McPhee explained, “The questions in the spiritual domain had a strong emphasis on organized religion, which is appropriate for the deep South. However, these same questions may not be appropriate in the Northeast or in large metropolitan areas.”

### **Studies Hit Broad Range of AL Issues**

There have been many studies addressing issues specific to assisted living facilities and residents in the past year or two. However,

compared to the research addressing community-dwelling seniors or even elderly nursing facility residents, the number of articles in the literature focusing on AL seems small. The following are summaries of some of the more recent studies regarding AL:

- **Medication Undertreatment in Assisted Living Settings.** Dr. Sloane and colleagues studied a stratified survey sample of 193 residential care/assisted living facilities in Florida, Maryland, New Jersey, and North Carolina. They gathered medical and drug regimen data on 2,014 residents age 65 and older. The authors found that of 328 residents with congestive heart failure, 204 (2.2%) were not receiving an angiotensin-converting enzyme inhibitor. Of 172 individuals with a history of myocardial infarction, only 39.5% were getting aspirin and 23.8% were receiving beta-blockers. Sixty-one percent (61%) of residents with osteoporosis were not receiving calcium supplementation and over 50% weren't getting any osteoporosis treatment of any kind. While residents' age, race, sex, comorbidity, cognitive status, and activities of daily living (ADL) dependency generally were not associated with patients not receiving medications, the authors did find that facility type and frequency of physician visits sometimes were associated with nonprescribing. They concluded that undertreatment of conditions appears to be common in ALFs and that these facilities need to pay more attention to drug therapy. (*Arch Intern Med* 2004; 164(18):1957-1959)
- **Behavioral Symptoms in Residential Care/Assisted Living Facilities: Prevalence, Risk Factors, and Medication Management.** Dr. Gruber-Baldini and colleagues undertook a stratified random sample of 93 residential care/assisted living residents in

four states (FL, MD, NJ, and NC) to examine the prevalence, correlates, and medication management of behavioral symptoms. About one-third of residents exhibited one or more behavioral symptoms once weekly or more. Thirteen percent displayed aggressive behavioral symptoms, 20% exhibited physically non-aggressive behaviors, 22% had verbal behavioral symptoms, and 13% resisted taking medications or help with activities of daily living. Researchers found that behavioral symptoms were more common in smaller facilities, that

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more than half of residents were taking a psychotropic medication, and that two-thirds of residents had some mental health problem indicator (ie, dementia, depression, psychosis, or other psychiatric illness). The authors concluded that it is necessary to integrate mental health services within the process of care in this setting to manage and accommodate the high number of behavioral symptoms exhibited by residents on a regular basis. (*J Am Geriatr Soc* 2004;52:1630-1637)

- **Predictors of Functional Impairment in Residents of Assisted Living Facilities: The Maryland Assisted Living Study.** Dr. Burdick and colleagues examined predictors of functional impair-

ment in AL residents in cognitive, mood, and health domains. The study employed an experienced team of neuropsychiatrists, nurses, and technicians using a variety of tests and assessment tools to evaluate 198 residents in 22 ALFs. Authors found that greater cognitive impairment, as well as worsened depression and medical health, were significant predictors of functional impairment in AL residents. They further suggested that their results may help develop a more efficient model of care in this setting. (*J Gerontol A Biol Sci Med Sci* 2005;60(2):258-264)

- **Osteoporosis: Health Beliefs and Barriers to Treatment in an Assisted Living Facility.** The authors looked at residents' perceptions of osteoporosis and the barriers to treatment of this condition in ALFs. Using an exploratory, qualitative study design, the researchers studied five residents with osteoporosis via semi-structured interview. They discussed responses in light of the Health Belief Model and offered a framework for interpreting and understanding beliefs about osteoporosis. The authors expressed hope that this model will serve as a foundation for future osteoporosis interventions in assisted living. (*J Gerontol Nurs* 2005;31(1):24-30)
- **Perceived Anxiety, Depression, and Sleeping Problems in Relation to Psychotropic Drug Use Among Elderly in Assisted Living Facilities.** This study of 93 residents of "old-age" and nursing homes in Sweden used information from medical records and structured interview questionnaires. Many residents reported sleeping problems, anxiety, and depression, and 70% were taking one or more psychoactive drugs. The most commonly used psychotropics were benzodiazepines for anxiety, benzodiazepine-related agents for insomnia, and

- selective serotonin reuptake inhibitors (SSRIs) for depression. These individuals continued to receive these drugs on entry into the facility, and about 30% were prescribed new psychotropics. Of those residents who said on the questionnaire that they had problems with sleeping, anxiety, or depression, more than half said that they had not spoken to a nurse or physician about these issues. The authors, Drs. Holmquist, Svensson, and Hoglund, concluded that communication between residents and nurses, physicians, and other clinicians appears to be inadequate and that prescription of psychotropic drugs for these patients should be reviewed in light of these communication gaps. (*Eur J Clin Pharmacol* 2005;Mar 11)
- Cruise Ship Care: A Proposed Alternative to Assisted Living Facilities. Drs. Lindquist and Golub examined seniors' needs in ALFs and the viability of utilizing cruise ship care to address those needs. The authors listed the similarities between cruise ship travel and assisted living care and created a decision tree of options—including cruise ship care—for non-independent care for seniors. Additionally, the article proposed that cruise ship companies could accommodate the care needs of seniors who are interested in this type of care. (*J Am Geriatr Soc* 2004;52(11):1952-1954)
  - Moving to an Assisted Living Facility: Exploring the Transitional Experience of Elderly Individuals. The authors conducted a qualitative study of elderly citizens to examine the effects of relocation to an ALF. Through small group interviews, seniors had the opportunity to discuss their feelings about their move and details of their adjustment process. Issues of ties to the past, independence, affection,

and adjustment came up repeatedly. The authors suggested that nursing interventions can help provide assistance and enhance adjustment for residents transitioning from the community to an ALF. (*J Gerontol Nurs* 2004;30(10):26-33)

- An In-service Evaluation of Hip Protector Use in Residential Homes. The authors identified 745 residential home residents who were deemed eligible to wear hip protectors; 535 agreed to wear the device after one week. Twelve-month compliance was 78%. At three months, adherence was highest among demented residents (83%) and residents classified as “always confused” (86%), compared to non-demented individuals (73%) and those considered “never confused” (72%). At the same time, incontinent residents (82%) were more likely to wear the protectors than continent individuals (73%). Overall, the researchers concluded that there is a 48% chance of residents continuing to wear the hip protectors after one year. (*Age Ageing* 2005;34(1):52-56)
- Beyond the Rhythm and Routine: Adjusting to Life in Assisted Living. The authors conducted a qualitative study to examine the influences on everyday decision making of four ALF residents. Study results suggested the influence of several factors on decision making, as well as resident satisfaction with their ability to make decisions. These factors include trigger event, level of physical functioning, internal and external support systems, and past patterns of decision making. The researchers also addressed strategies for assessing and strengthening these factors so that residents can make effective decisions and feel satisfaction with the decisions they make. (*J Gerontol Nurs* 2005;31(1):17-23)
- Microbiological Evaluation of

Foodservice Contact Surfaces in Iowa Assisted-Facilities. This study of 40 ALFs in Iowa looked at the microbiological quality of food-contact surfaces, including countertops, cooking equipment, and cutting boards, to assess effectiveness of cleaning and sanitation efforts. Standards were set for aerobic plate count, Enterobacteriaceae, and *Staphylococcus aureus*. Only two facilities were determined to meet standards for all surfaces in all three areas. The authors concluded that cross-contamination from surfaces that failed to meet the standards could result in food contamination and that training/education is needed to ensure proper hand washing, cleaning, and sanitation procedures. (*J Am Diet Assoc* 2004;104(11):1722-1724)

- The Wheat Valley Assisted Living Culture: Rituals and Rules. An ethnographic study at one assisted living facility, Wheat Valley, was designed to describe the cultural knowledge individuals use to organize behaviors. The study involved interviews with residents, family members, and staff and information from various facility documents. An understanding of the facility's culture, the authors suggested, serves as a springboard for discussions about practice implications. (*J Gerontol Nurs* 2005;31(1):9-16)

### **Benefits and Barriers: What It Takes to Be a Contributor**

Conducting research in assisted living facilities can be challenging. However, understanding likely objections and barriers can help researchers develop strategies for successful studies.

The major barrier to AL research is getting the cooperation of the facilities, said Dr. Lyketsos. “They are very nervous that you will do research on them and how they do things and that you will be reporting them to licensing agencies if you


see something wrong.” To overcome this barrier, he suggested, “Make facilities partners in your research.” Find out what their interests and needs are, he offered, and what information or knowledge would be useful to them. “Share with them what you discover and give them data that can help them make positive changes,” he explained.

Personal attention is key to gaining facility cooperation, Dr. McPhee added. “If there was a problem or a new executive director coming into one of the facilities, we would jump in the car and go there for a face-to-face meeting. And we were Scott and Tim, not Dr. Johnson and Dr. McPhee. It makes a difference when facility leaders and staff see you as a real person and not just a voice on the phone or an e-mail address,” he said.


If the researcher doesn’t have facility-wide staff buy-in, it can hurt the study and even invalidate findings. For example, said Dr. McPhee, “We got data from one facility that just didn’t seem correct. We went back and checked it, and we discovered that the staff contact there couldn’t see the utility of collecting the data. So that person was completing all the surveys personally, just checking off information randomly.” If there are individuals who seem to be resistant, it is important to find out what their objections are and determine how to address them, he recommended.

It also is important not to create an added burden for staff and clinicians caring for residents. “Staff members have to take time out from their busy day to do what you need them to do,” Dr. Lyketsos noted. He offered, “Sometimes we can work it into their day, and we provide education in exchange for their time. Other times, they do the work at the end of the day, and we pay a stipend for their time.” Whatever approach the researcher takes, he stressed, “Do it in an ethical way. And don’t forget to put money for this in the study budget.”

Getting informed consent from residents is another challenge. “Many resident will not consent to be in the study, and those who do must be informed completely, accurately, and in a way that they clearly understand what the study is, what will happen to them, and so on,” Dr. Lyketsos said. It is important to determine if residents have the decision-making capacity necessary to choose for themselves whether or not they want to participate in a study. For residents deemed incompetent, it may be possible to get consent from a designated surrogate decision maker. “Every step of the way, you must



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meet Institutional Review Board guidelines,” he emphasized. He added that having a “dedicated research team is essential.”

The very nature of assisted living can be a barrier to research. Unlike skilled nursing facilities, which are federally regulated and have similar structures (eg, presence of a physician medical director and monthly drug regimen reviews conducted by consultant pharmacists), ALFs are regulated to varying degrees by the states and offer a wide range of services. This can make multi-facility studies more challenging. However, there are ways to address this. “If you use one corporation’s facilities in your study, there is like-

ly to be more consistency in services and programs. Additionally, larger chains are more likely to have government affairs staff who can tell you about how regs differ from state to state,” said Dr. McPhee.

Researchers give their studies the best chance of being successful if they “are clear on exactly what they want to find out,” explained Dr. Lyketsos. He also emphasized the importance of “taking great pains in preparation. Line up your ducks regarding what facilities you will approach to participate and how you will approach them.” Finally, he suggested, “Have a good team and adequate funding.”

### **ALFs Are Prime Study Ground**

As more Americans choose an assisted living facility as a senior living option and the acuity of residents increases as they age in place, ALFs increasingly will need information and research data to provide the best possible programs, services, and care for residents. There is much that is unknown about this care setting, and administrators, clinicians, staff, residents, and family members all will benefit from a growing body of research specific to AL. As Dr. Lyketsos suggested, “The focus of assisted living research has to be understanding the heterogeneity of residents better and using this understanding to develop interventions and services to improve their lives. We need intervention methodologies that can be used effectively in the real world.”

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