

Project Two: The Florida Long-Term Care Elder Population Profiles Survey

by

Larry Polivka, Ph.D.,* Burton Dunlop, Ph.D.,**
and Mary Brooks, M.A., N.H.A***

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Project Analysts:

Katherine Condon, M.A.
Southeast Florida Center on Aging

Kristen Snyder, Ph.D.
Florida Policy Exchange Center on Aging

* Commission Projects Director. Director, Florida Policy Exchange Center on Aging, University of South Florida

** Project Director. Director of Research, Southeast Florida Center on Aging, Florida International University

***Associate Project Director. Assistant Director, Florida Policy Exchange Center on Aging, University of South

Florida

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Florida Policy Exchange Center on Aging
University of South Florida, #30437
4202 E. Fowler Avenue
Tampa, FL 33620-3043
Phone: 813-974-3468
FAX: 813-974-5788
E-Mail: lpolivka@admin.usf.edu**

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CHAPTER 1

Introduction

Long-term care is rapidly becoming an urgent public policy issue. In Florida, Medicaid long-term care costs have increased by more than 100% over the past five years. These costs are projected to increase by another 100% by 2005 if remedial action is not taken.¹

The Commission on Long-Term Care in Florida was established by the 1994 Legislature to develop policy recommendations designed to create a framework for long-term care in Florida. In December 1995, they provided those recommendations to the Legislature and the Governor. Those recommendations were designed to reorganize the long-term care delivery system in Florida in order to contain these escalating costs.

In order to accomplish their task, the Commission contracted with the Florida Policy Exchange Center on Aging at the University of South Florida and the Southeast Florida Center on Aging at Florida International University to conduct two projects. Project One included projections of the need for and cost of providing long-term care in Florida from 1995 to the year 2000; a critique of Florida's current long-term care system; and recommendations for achieving greater cost efficiency and consumer satisfaction in that system.

In Project Two, the Commission contracted with the Policy Center and the Southeast Florida Center to conduct a survey designed to describe clients/residents, age 60 and older, served in Florida's array of publicly supported long-term care programs and to identify the variables that best predict the setting in which a person is likely to receive long-term care. The variables chosen for this study were drawn from the Project One literature review, which included studies designed to identify the major predictors of nursing home use. These include age, functional status, living arrangement, continence status, medication use, region of the state, gender, race/ethnicity and other variables identified in the literature as important predictors of long-term care service utilization.²

¹Long-term Care Cost Projections for the Frail Elderly, December 1995. Commission on Long-Term Care.

²Copies of the data collection instruments used in this study are shown in Appendix A.

This report provides a functional status and demographic description of older adults in Florida's long-term care system and offers a basis for some preliminary inferences about the potential capacity of home- and community-based programs, including residential care, to substitute for nursing home care. The Project Two study, the first of its kind in Florida, is based on an extensive survey focused on descriptive characteristics of a randomly selected, statewide sample of over 2,300 long-term care recipients. The data generated through this survey (only a portion of which is published in this first report) allows for comprehensive profiling of program constituents, which provides a basis for detailed comparisons to be made across and within care settings. This study does not, however, include all of the types of information necessary to make conclusive judgments about who should be served where in the long-term care system.

Organization of this Report

This report consists of six chapters. Chapter 2 describes the sampling and data collection methods used to conduct the survey in each setting. Chapter 3 provides comparisons of select characteristics of clients/residents across and within each of the care settings (programs). The comparisons are based on the variables which have been identified through the research literature as major predictors of nursing home use. The chapter concludes with summary client/resident profiles by care setting. Chapter 4 provides a comparative analysis of the program populations by functional impairment level and concludes with projections of the total number of long-term care recipients in each impairment level per care setting in Florida. Chapter 5 describes the results of a multivariate statistical analysis used to identify the most significant predictors of where clients/residents receive long-term care services. The findings described in Chapters 3, 4 and 5 are used to develop a series of conclusions and policy recommendations in Chapter 6.³

³Researchers with the Policy Center and the Southeast Florida Center on Aging will produce a series of papers, in the months to come, based on a continuing analysis of the survey data. These papers should provide a more refined perspective on several of the issues addressed in this first report and help develop a more informed context for future long-term care reform initiatives.

A summary of the full Project One report for the Commission on Long-Term Care in Florida has been published in Volume I, Long-Term Care for the Frail Elderly in Florida: Expanding Choices, Containing Costs, available from the Florida

Data Collection Methods

The Florida Long-Term Care Elder Population Profiles Survey, conducted in the fall of 1995 for the Commission on Long-Term Care in Florida, was designed to rely on randomly drawn, representative, statewide samples of persons 60 and older receiving formal services in three types of long-term care settings: nursing homes, assisted living facilities (ALFs), and public home care programs (usually referred to as home- and community-based services [HCBS]) in Florida⁴. The total targeted sample size for each of these three populations reflects a desire of the Commission to constrain sampling error to no more than 3% (+ or -) at the 95% confidence level. In addition, a sample size was desired that would permit relatively robust statistical sub-analysis, e.g., by payment source, individual HCBS program and region of the state. To help ensure this for the nursing home population, a basic cross-sectional sample size of 600, as well an augmentation sample of 100 short-stay (< 90 days) cases, if needed, were decided on. To reflect the ALF population, a basic sample of 350 residents and an augmentation sample of 300 residents receiving the Optional State Supplementation (OSS) subsidy were chosen. Because the nursing home and ALF populations are located in facilities, a two-stage random sampling process was required, beginning with a random selection of facilities. For the HCBS population, a proportional sample of 350 active cases from the Home Care for the Elderly (HCE), Community Care for the Elderly (CCE) and Medicaid Waiver programs were targeted. In addition, 350 cases sampled equally from the Channeling program and each of the two Medicaid Prepaid (HMO) Frail Elderly option demonstration programs, CAC-United Health Care's ElderCare Plan and PacifiCare's Independence Plan, in South Florida were sought. Finally, an augmentation sample of an additional 300 clients in the Medicaid Waiver program was desired due to the policy visibility of that program. The total targeted size of the HCBS sample, therefore, was 1,000.

In all cases, data collection consisted of the extraction of key information from case records by graduate nurses or, for the private-pay ALF sample, from interviews of administrators or staff regarding the characteristics of the sample residents. This information was recorded on survey forms and soon thereafter, transferred to computer readable scan sheets. All extraction forms completed at Florida International University (FIU) and all scan sheets were reviewed by the

⁴For Medicaid-funded program populations sampled, the lower age threshold is 65 years of age.

field data collection coordinator to ensure accuracy of data transmission from client records. No data collection or assessment was carried out directly with individual elders. Case records used were the admission Minimum Data Set (MDS) resident assessment forms in nursing homes, and the most recently completed Department of Elder Affairs (DOEA) Uniform Assessment Instrument forms for the HCBS and ALF-OSS populations. In those instances in which any desired information was missing on the most recent assessment form, earlier assessments were consulted or staff interviewed until all available information was obtained.

To maximize state representativeness, obtained sample sizes across all program sub-populations within each setting were compared with program client caseload sizes by region based on the most recent state agency data. The obtained samples were then weighted to reflect the appropriate regional proportions.

Skilled Nursing Facilities (SNFs)

To obtain the 600 nursing home cases, a list of all the nursing homes in Florida, produced by the Agency for Health Care Administration (AHCA), was assembled. This list was organized by four geographical regions of approximately equal total population size (see Appendix B for the listing of counties in each region). This allowed proportionate numbers of cases from each region to be included in the statewide analysis. To ensure that no particular facility's residents would be over-represented in the sample, it was decided to extract data on no more than ten cases in any one facility. Thus, it was reasoned that approximately 60 facilities would need to be visited in order to obtain the 600 cases.

Randomly selected facilities were telephoned until the targeted number agreed to participate. Refusals were almost non-existent. Once on-site, the data collectors worked with the nursing home administrator or designated staff to draw ten cases in random fashion from their files containing the residents' MDS assessment records.

At the point that data collection in nursing homes was about 75% complete, it was apparent that the desired 100 short-stay Medicare-funded cases were not going to be obtained with the cross-sectional survey approach. Consequently, data collectors at that point began augmenting the cross-sectional sample by randomly selecting an additional five cases per facility representing recent discharges whose nursing home stay had been less than 90 days. With the augmentation sample included, complete data were collected on a total of 660 nursing home cases.

The MDS admission assessment was used for data extraction for the nursing home cases. In the instance where residents had more than one admission (e.g., a readmission after a hospital visit, etc.), the most recent admission assessment form was used. In addition to using the most current admission assessment for all nursing home cases, data collectors selected the most recent reassessment from which to record updated activities of daily living (ADLs) status for cases with stays of more than 12 months. Information on caregiving prior to admission was gathered through staff interviews and asked only for those cases with stays up to 12 months. As indicated earlier, whenever any data item was missing from the assessment forms, data collectors pursued missing information all the way back to the initial assessment, if necessary.

Assisted Living Facilities (ALFs)

The ALF resident population in Florida consists of two principal subpopulations: those who pay for their care from private resources and those whose care is subsidized by the state through OSS to their federal SSI payment. The OSS subpopulation of persons 60 and over is estimated to number 5,200. Thus, it is important to know about the private-pay portion because it is very large (over 50,000), and it is critical for the state to know about the OSS population because public resources are used to help pay for their care.

To obtain standardized data on both of these subpopulations, separate data-collection strategies were necessary. The Uniform Assessment Instrument, the desired source of data extraction on this population, has been available through the Health and Rehabilitative Services (HRS) district offices (now from DOEA) only on OSS clients. ALFs use a far less comprehensive standard admission screening form (HRS Form 1823), which was usable for data extraction in 80% of all of the private ALF cases included in the sample. For the private-pay ALF residents, a data-collection strategy similar to that employed for nursing homes was adopted. A sample of 350 was sought. As with nursing homes, the AHCA supplied a list of ALFs statewide. From this list of 1,745 facilities, a random sample of 70 facilities was drawn for inclusion in the study sample. The list of selected facilities was organized by the four regions of the state. It was assumed that a minimum of 35 facilities would need to be visited in order to obtain a total of 350 cases (ten cases per facility). However, it was recognized that many ALFs drawn into the sample might have fewer than ten residents 60 years of age or over.

Moreover, it was assumed that much of the information to be gathered would not be available in written files but would have to be conveyed by the ALF administrator or staff. (This assumption subsequently proved correct.) Consequently, to ensure that information about residents would be accurate, it was decided initially to target only residents whose stay had been 12 months or less. That way, it was reasoned, the admission event would be recent enough in the memory of staff to produce an accurate recording of admission circumstances. However, it soon became apparent that this targeting strategy had to be abandoned if the desired sample of 350 cases was going to be approached within a reasonable time period. The subsequent decision to ignore length-of-stay and to include cases in a cross-sectional manner, as was used with the nursing home sample, was made easier by the data collectors' observation that the ALF staff had no more difficulty answering questions about long-stay residents than about the relatively few residents who had been recently admitted.

Obtaining the targeted number of cases in ALFs remained a difficult task, however, both because eligible cases had to be 60 years of age or older and because so many facilities house fewer than 10 residents. Another hurdle in South Florida was the lack of cooperation from ALFs in Dade County, even when a person fluent in Spanish made the initial contact to explain the study. Participation was so frightfully low that special arrangements were made with the district HRS office to send out a very experienced, former comprehensive assessment and review for long-term care services (CARES) assessor, fully fluent in Spanish and known to the facilities, to gain their cooperation. This move proved extremely successful and the desired number of cases was obtained.

Nonetheless, with only one week left in the allotted schedule to complete the field collection of private-pay ALF cases, and considerably short of the overall goal, data collectors were instructed to obtain as many cases, including OSS cases, as possible in the facilities already scheduled to be visited during that last week. With this combination of strategies, a total of 241 private-pay cases was obtained statewide.

As with nursing homes, data collectors, once in the randomly selected facilities, pulled cases in random fashion from facility resident rosters. Obviously, in those facilities with fewer than 10 residents, all residents 60 and over were included in the sample.

The method employed to gather data on most ALF cases under Optional State Supplementation (ALF-OSS) was virtually identical to that used in the collection of HCE cases. Consequently, the reader is referred to the next section of this chapter, in which the HCE data collection from district HRS offices is described.

Home and Community-Based Services (HCBS)

Home Care for the Elderly (HCE). To obtain the targeted number of HCE and ALF-OSS sample cases, each HRS district was contacted to determine the number of persons 60 and older on their active client rosters⁵. Once these numbers were ascertained, the number of cases needed from each district to represent that district proportionately was calculated. Where a district's cases were distributed across several field offices, sample numbers were targeted proportionally across these offices.

The district subsamples were drawn in one of two ways. In most instances, given specific instructions from the data collectors as to the random manner in which cases were to be drawn, district staff selected the sample and either gave copies of the completed sample case assessment forms to the data collectors on-site or mailed copies to the data collectors at the Southeast Florida Center on Aging. Other districts sent a list of their clients to the Center, whereupon data collectors selected a random sample and informed the district staff of which cases were in the sample. The districts then forwarded copies of the matching assessment forms to the Center for abstraction. Altogether, data were obtained on HCE cases from 12 of the 15 HRS district offices and on ALF-OSS cases from 11 of the district offices.

⁵HRS uses age 65 and over to distinguish elders from younger clients in these two programs. Therefore, the proportionally sized samples targeted in each district reflect this higher age threshold.

Community Care for the Elderly (CCE) and Medicaid Waiver. The CCE and Medicaid Waiver programs are administered for DOEA by more than 50 lead agencies in eleven Planning and Service Areas (PSA) across the state. Each of these agencies, except the one in Dade County, was contacted to determine the size of their CCE and Waiver program caseloads. A spokesperson for the Dade County agency had earlier estimated that it administered 30% of all cases statewide in both programs. These figures later were confirmed to be just slightly overestimated for the CCE program and somewhat underestimated for the Waiver program. In the analysis, cases were re-weighted by region to reflect these more precise estimates. On the basis of this information, the proportionate number of sample cases needed for each of the PSAs was calculated. In those PSAs with up to four lead agencies, a proportional number of cases were drawn from each agency. Where more than four lead agencies operated in a PSA, four agencies were randomly chosen and cases drawn proportionally from each of the four agencies. In those PSAs with one dominant-sized agency, that agency was always included along with others chosen randomly. Sample cases were then selected randomly and proportionately from the four agencies.

As HRS district offices did with the HCE and OSS samples, most lead agencies, following data-collectors' instructions, pulled the assigned number of sample cases in random fashion from their files and mailed copies of the completed Uniform Assessment Instruments on those cases to the Southeast Florida Center on Aging. About one-third of the agencies forwarded a list of all of their elder clients to the Center, where data collectors randomly selected the required number of cases. The agencies then mailed copies of the completed Uniform Assessment Instruments for those cases to the Center for extracting.

Channeling and Medicaid HMO Frail Elderly Programs. Elders enrolling in South Florida's Channeling program and the two HMO Frail Elderly programs, CAC-United Health Care's Elder Care Plan and PacifiCare's Independence Plan, must pass the state's pre-admission screening (CARES) assessment for nursing home placement. Consequently, their completed Uniform Assessment Instruments are available from DOEA's Dade County CARES office. FIU data collectors made an on-site visit to this office to draw the random samples and to extract information comparable to that recorded for the nursing home and ALF populations. Since each of these three programs has almost exactly the same sized enrollee population (approximately 1,200), one-third of the targeted sample of 350 cases was drawn from each.

The findings reported assume inter-rater reliability (a high degree of consistency) in the impairment ratings of clients/residents across the three settings, the five HCBS programs, and geographical regions. The MDS, rather than the UAI, is used for nursing home residents, while there is no assessment instrument that is used uniformly by ALFs. Consistency in our data collection from records was ensured by the use of a standard data-collection instrument applied by the same data collectors across all of the settings and programs. However, our data collection relied heavily on existing records. Because all of those front-line workers and case managers using the UAI are trained by DOEA, we suspect that consistency is high.

Comparisons Across and Within Care Settings

Most formal long-term care services in Florida are delivered in three settings: Skilled Nursing Facilities (SNFs), Assisted Living Facilities (ALFs), and at home with Home and Community Based Services (HCBS). This chapter will begin with a brief description of the survey samples drawn from these three settings of care. The remainder of the chapter describes the key characteristics of each of these populations receiving formal long-term care in Florida. The discussion is organized around Tables 1a and 1b, which display a summary of the survey results for 11 different long-term care program groups within the three care settings.

Skilled Nursing Facilities (SNF)

Although short-term rehabilitation patients were included in the SNF survey sample, results in this report for SNF residents reflect only long-term stays (N=528). The operational definition for "long-term residents" is as follows: individuals who had already resided in the facility for at least 90 days,⁶ or, if admitted more recently, no discharge plan was on record and nursing staff members verbally confirmed that the resident would not be discharged, i.e., both of these conditions must have been met for those admitted within the past 90 days.

Researchers also reasoned that there might be differences in the resident population according to payor source, therefore, the analysis of SNF residents was broken out by the two main payor sources: Medicaid and private-pay. Both of these pay source groups include some residents whose primary source of payment on the day of the survey was Medicare, but who met the operational definition a long-term resident. (Many of these cases were readmissions: established residents returning from a hospital discharge.) As Medicare is a temporary pay source (100 days maximum), these cases were classified according to their secondary pay source, either Medicaid or private pay, to which they will return once their Medicare coverage is discontinued.

⁶Three-fourths of all SNF discharges in Florida occur within the first 90 days following admission (AHCA). Therefore, individuals who have resided in the facility 90 days or more are very likely to continue to stay in the nursing home, long-term.

In this report, the term Skilled nursing facility A (SNF) is used interchangeably with Nursing home.@

Assisted Living Facility (ALF)

All ALF residents in the sample (N=736) were regarded as long-term stays for the purpose of this report. The sample was divided into three subpopulations: Medicaid HMO; OSS; and private-pay. Subsequently, the OSS-ALF subpopulation was further broken down by region, i.e., South Florida and Other Regions. It should be noted that the Medicaid HMO-ALF is a demonstration program available only in South Florida. Approximately 44% of the Medicaid HMO enrollees are cared for in ALFs and 56% receive in-home services in the two programs that serve over 1,300 clients, overall.

Home and Community-Based Services (HCBS)

As with the ALF sample, all 952 HCBS cases were regarded as long-term clients. HCBS is an umbrella term for five different state-funded in-home care programs: Medicaid HMO In-home; Channeling; Home Care for the Elderly (HCE); Medicaid Waiver; and Community Care for the Elderly (CCE). Medicaid HMO In-home and Channeling are both demonstration programs available only in South Florida. HCE, Medicaid Waiver, and CCE are available statewide.

In addition to the 11 program subpopulations listed above, results are also shown in Tables 1a and 1b for each of the three care settings as a whole (the ALL@ columns in Tables 1a and b), based on weighted calculations that reflect the actual proportion each program group represents in relation to the entire population of the care setting. For example, the CCE program is the largest (in terms of client census) HCBS program in Florida, yet a larger sample of Medicaid Waiver clients than CCE clients was drawn for this study. However, in the calculations for the HCBS ALL@ columns, each CCE case was weighted to count more heavily, while the Medicaid Waiver cases were down-weighted to adjust for the intentional oversampling of this relatively smaller program. Therefore, the values shown in the ALL@ columns are not simple arithmetic means, or averages, of the values shown for care setting subpopulations. Instead, these statistics more accurately represent the characteristics of the aggregate population in each care setting in Florida.

Functional Status

Activities of Daily Living (ADLs) (Table 1a; Figures 1 and 2.) Of the three long-term care settings, nursing homes contain the population with the highest average number of ADL impairments, based on a total of five ADLs: bathing, dressing, transferring, toileting and eating. In fact, the mean is almost twice that in ALFs and HCBS programs (4.02 for SNF versus 2.13 in ALFs and 2.30 in HCBS). The average is the same across both the private-pay and Medicaid

Insert figures 1 and 2

SNF subpopulations. The same pattern holds when impairment severity scores⁷ are compared. Both the SNF private-pay and Medicaid resident severity scores are substantially higher than those for the ALF or the HCBS populations in the aggregate.

For ALF residents and HCBS clients, program does make a difference. For example, Medicaid HMO-ALF residents appear to be more severely impaired than either non-South OSS or private-pay ALF residents. Non-South OSS residents, in fact, are clearly the least impaired of the four ALF subpopulations, while OSS-ALF residents in South Florida are more similar to Medicaid HMO-ALF residents than to OSS residents elsewhere. The various HCBS programs appear to fall into three groups: 1) those in the Medicaid HMO and Channeling programs appear to be the most severely impaired, while 2) clients in the Medicaid Waiver and CCE programs appear to be the least severely impaired, and 3) impairment levels among HCE clients generally fall between these two extremes. Notably, the mean severity score among Medicaid HMO in-home clients is even higher than that of nursing home residents.

Instrumental Activities of Daily Living (Table 1a; Figures 3 and 4).

Instrumental Activities of Daily Living (IADL) are also an important measure of functional ability. Although the survey instrument contained ten IADL items, only the following five could be considered in this analysis:⁸ answering the telephone; making a telephone call; handling money; taking medications; and shopping. Therefore, the possible value ranges for the impairment count (mean number) and impairment severity score (mean) displayed at the top of Table 1a is the same for IADLs as it is for ADLs (previously discussed), e.g., 0-5 for number of impairments and 0-10 for the severity score.

Comparison of IADL impairments is possible only for the ALF and HCBS populations, as no extant information on IADLs for SNF residents was available. Although, overall, both the mean number of impairments and the mean IADL severity score are somewhat higher in the ALF population (3.33 and 4.74 versus

⁷Severity of impairment in ADLs was measured using a 3-point scale: no help needed (0); supervision or some help needed (1); and total help needed (2). A severity index was calculated by adding the severity score of all 5 ADLs. The range of this score is 0 to 10, where 0 means that the individual is independent in all 5 ADLs and 10 means that the individual is totally dependent in all 5 ADLs.

⁸Assessment data for five of the ten IADL items were not available for a high percentage of private-pay ALF cases. When asked if their residents could prepare meals, do laundry and housekeeping, perform heavy chores, or use transportation independently, many ALF operators were understandably unable to offer an informed answer, as these are services that had been routinely provided in the facility, or are IADLs the resident never had to perform. Therefore, the ALF and HCBS populations are compared only according to the five IADLs for which the percentage of unavailable data is not substantial.

2.72 and 4.54 in the HCBS population), the average number of IADL deficits is highest among HCBS-HCE clients (4.11). The highest IADL severity scores are found also in the HCE and the Medicaid HMO-ALF subpopulations (7.03 and 7.14, respectively). Again, OSS South HMO-ALF enrollees have greater IADL impairments than either the private-pay or ALF Other Regions residents (6.16 severity score versus 4.77 and 4.09). Both mean number and mean severity score of IADL deficits is lowest among the HCBS Medicaid Waiver and CCE clients (2.36 and 3.96 for Waiver and 2.08 and 3.35 for CCE).

Insert Figure 3 and 4

Functional Impairment Levels (Table 1a; Figure 5). The functional impairment level scale consists of five exhaustive and mutually exclusive categories listed below. This scale, devised for this study, allows long-term care recipients to be classified according to cognitive and activity of daily living (ADL) functional status.

In the impairment level scale, the operational definition of an ADL deficit is non-independent status, which ranges from requiring only supervision to needing total help. The cognitive impairment measures used for this scale were the mental status questionnaire (MSQ, which is the short Blessed Test®) from the Uniform Assessment Instrument, used to classify all HCBS and OSS/ALF cases, and the Cognitive Skills for Daily Decision-Making® scale from the Minimum Data Set (MDS) Resident Assessment Instrument, used to classify all skilled nursing facility and private-pay ALF cases.

Functional Impairment Level Scale:

- Level 1. **Least Impaired®** No to mild cognitive impairment and zero ADL deficits (independent in all 5).
- Level 2. **Mildly Impaired®** No to mild cognitive impairment, and 1-2 ADLs (need some help or total help).
- Level 3. **Moderately Impaired®** No to mild cognitive impairment and 3 ADLs, or moderate cognitive impairment and 0-3 ADLs.
- Level 4. **Seriously Impaired®** No to mild cognitive impairment and 4-5 ADLs.
- Level 5. **Most Severely Impaired®** Moderate cognitive impairment and 4-5 ADLs, or severe cognitive impairment and 0-5 ADLs.

In the aggregate, the nursing home population is clearly the most impaired according to this scale. A total of 80% of the SNF residents are seriously or severely impaired (Level 4 or 5). This compares with a proportion half that size in ALFs (41%) and HCBS (39%). The proportion in the highest impairment level, and, indeed, the distribution across all five impairment levels is closely matched in the private-pay and Medicaid nursing home groups.

This distribution by impairment level, however, differs drastically among the subpopulations of the ALF and HCBS samples. In the ALF Medicaid HMO and the OSS South Region subpopulations, about 60% are found at Level 5 (most impaired); whereas in the ALF-OSS Other Regions and ALF private-pay, the proportion is only around 27%. The OSS Other Regions group contains the highest proportions with either Level 1 or Level 3 impairments (23.9% and 33%, respectively). Among HCBS clients, those in the Medicaid HMO, Channeling, and especially HCE, are dramatically more impaired than those in the Waiver and, especially the CCE, program. In these latter two programs, about half (45.2% of the Waiver and 52.5% of the CCE clients) are, at most, mildly impaired (Levels 1 or 2) and only 34.5% and 25.7%, respectively, are seriously or severely impaired (Level 4 or 5). Conversely, in the Medicaid HMO, HCBS, Channeling, and HCE programs, 68.3%, 60.2% and 67.7%, respectively, are seriously or severely impaired and only 16.7%, 23.7% and 13.5%, respectively, are mildly impaired or

Insert Figure 5

unimpaired. (Impairment levels across the three settings will be discussed in greater detail in the next chapter of this report).

Severe Cognitive Impairment (Table 1a; Figure 6.)⁹ Relatively similar proportions of clients in each of the three settings of care have a severe cognitive impairment, although it is just slightly higher for those enrolled in HCBS (22.9% for SNF; 20.5% for ALF; and 24.0% for HCBS). A slightly higher percentage of SNF Medicaid residents (24.5%) than those paying privately (20.9%) have severe cognitive impairment. Significantly more variation is found by specific ALF and HCBS programs. As was the case with physical impairments, Medicaid HMO-ALF and South Florida OSS-ALF residents have about twice the proportion with severe cognitive impairment (54.5% and 53.3%, respectively) compared with private-pay and Other Regions OSS-ALF residents (18.0% and 25.8%, respectively). Also, as with physical impairment, Medicaid HMO In-home, HCE, and Channeling clients within the HCBS population are more likely to exhibit severe cognitive impairment (48.8%, 45.9%, and 37.8%, respectively) than are Medicaid Waiver and CCE clients (17.8% and 14.5%, respectively).

Incontinence (Table 1a; Figure 7.) Chronic bladder incontinence¹⁰ is much more prevalent in the SNF population than in either the ALF or HCBS populations (50% versus 16.5% and 22.9%, respectively). The difference between the SNF private-pay and Medicaid residents is relatively small (56% versus 50.2%, respectively). The prevalence of incontinence in the ALF-Medicaid HMO program is the same as in the nursing home population (51%). The other ALF programs have much lower proportions: OSS South and private-pay are virtually identical at around 17%, while in the OSS Other Regions subpopulation, only 3% are incontinent. Consistent with other measures of functioning, HCBS clients enrolled in the Medicaid HMOs and Channeling are significantly more likely to be chronically incontinent than are clients in the other three HCBS programs (42.5% and 39.7% contrasted with 18.7% for CCE, 22.4% for HCE, and 24.0% for Medicaid Waiver). On this measure, the HCE group resembles more the Waiver and CCE subpopulations than those in the HMO or Channeling demonstration programs.

Health Status.

⁹ Although the data are presented in Table 1a for having a dementia diagnosis, the reader should rely more on the cognitive impairment level figures. A formal diagnosis of dementia or Alzheimer's is too dependent on having undergone a formal neurological evaluation to make cross-setting comparisons reliable, as HCBS clients are less likely to have had such an assessment than SNF and ALF residents.

¹⁰ Chronic bladder incontinence, with or without bowel incontinence, = Afrequently@ or Aalways@incontinent. (Does not include occasional incontinence.) Includes those with indwelling urinary catheters in SNF sample.

Physical health status is measured with three indicators: 1) hospital admission or an emergency room (ER) visit in the past six months; 2) prior admission to a SNF or an ALF in the last five years; and 3) use of seven or more medications.

Insert Figure 6 and 7 here

Recent Hospital or ER Visit (Table 1a; Figure 8.) The proportion of clients with a hospital or emergency room episode within the past six months is significantly higher in the ALF and HCBS populations than in the SNF population (31.7% and 37.8% versus 22.2%). Within the SNF group, Medicaid residents are slightly more likely to have such a history than are the private-pay residents (23.1% versus 18.6%). Among ALF residents, those enrolled in the Medicaid HMOs are the most likely (40%) and those in OSS South Region, the least likely (26.1%) to have had a recent hospital experience. Interestingly, the HCBS Medicaid Waiver subpopulation is the most likely of all to have had a recent hospital inpatient or ER episode (46%). Next most likely are the Medicaid HMO and CCE populations (40.2% and 39.7%), and least likely are clients in HCE (27.6%).

Prior Admission to a SNF or ALF (Table 1a; Figure 9). ALF residents are the most likely of the three long-term care populations to have experienced a SNF or ALF stay prior to their current admission, with the SNF population a close second. Nearly half (49%) of all ALF residents and 47.2% of all the SNF residents in the sample had this history. It is close to 100% (97.0%) for HMO/ALF residents and the lowest for private-pay ALF residents (32.8%). The proportion is quite high for OSS-ALF Other Regions residents, as well (67.4%). In SNFs it is higher for private-pay residents than for Medicaid (54.6% versus 45.4%). Among HCBS clients, history of a stay in a long-term care facility is very infrequent in comparison, ranging from 8.7% among Medicaid HMO in-home care clients to 15.9% within the CCE program sample. (The CCE and Medicaid Waiver subpopulations are virtually matched at 15.9% and 15.8%, respectively.)

Number of Medications Used (Table 1a; Figure 10). The proportion of clients who use seven or more prescribed medications is identical in the SNF and ALF settings (29.4%) and slightly higher (36%) among HCBS clients, overall. Interestingly, the OSS South Region segment of the ALF population, which on virtually all other measures appears to be in poorer health, exhibits the lowest prescription drug use of all subpopulations studied (only 17.3% use seven or more medications). Similarly, the HCE sub-group within the HCBS program population, which appears to be more impaired on most measures discussed thus far than the Waiver and CCE subpopulations, has a lower proportion of clients (28.6%) who take seven or more medications than the waiver (42.7%) and CCE (34.3%) program populations. In fact, the highest proportion of heavy medication users across all the long-term care program populations can be found among the HCBS Medicaid Waiver clients at 42.7%.

Mental Health Status (Table 1a; Figure 11). Mental health status is captured with two items: 1) history of a mental health problem; and 2) evidence of a current mental health problem.¹¹ Information on history of mental health problems is available for SNF residents and private-pay ALF residents, but not available for other ALF residents or HCBS clients. Indication of a current mental health problem is not available for SNF residents, but is available for all ALF residents and HCBS clients.

¹¹This includes mental illness, mental retardation or other mental health problem.

Insert figure 8 and 9

insert figure 10 and 11

History of Mental Health Problem A larger percentage of residents who have a history of a mental health problem exists among private-pay residents in ALFs (27.2%) than in SNFs (12.3%). Only a small difference exists in the proportion with such a history between SNF residents who are private-pay and those who are Medicaid (10.3% and 12.4%, respectively).

Current Mental Health Problem. With respect to current mental health problems, the proportion is dramatically higher, overall, for ALF residents than for HCBS clients (43.3% and 11.1% respectively). The highest percentage with current mental health problems in ALFs is found in the Medicaid HMO-ALF subpopulation (61.0%), and the lowest percentage is in the OSS-Other Regions group (24.7%). The percentage with current mental health problems is essentially the same for South OSS-ALF and private-pay ALF subpopulations (46.6% and 46.4%, respectively). Among the HCBS program groups, a significant variation exists in the percentage with current mental health problems. The highest percentage occurs in the HCE program (21.4%), while the lowest percentage (6.7%) exists among CCE clients.

Demographic Characteristics

Age Distribution (Table 1b; Figure 12.) Skilled nursing facilities and ALFs serve a higher proportion of the very old than the HCBS programs. The respective percentages 85 and older ("old-old") are 51.5% and 49.9% versus 29.7%. There are more old-old individuals within the private-pay nursing home population than among those whose care is paid for by Medicaid (60.9% and 49.6%, respectively). Among ALF residents, private-pay residents are the oldest (52.9% are 85 or older), while OSS-ALF residents outside South Florida are the youngest (only 18.4% are 85+). Among HCBS programs, Medicaid HMO, Channeling, and HCE have higher percentages of old-old clients when compared to the Medicaid Waiver and CCE programs (37.3%, 32.2%, and 34.7% versus 28.9% and 29.4%, respectively).

Race/Ethnicity (Table 1b; Figure 13)

Hispanics. Hispanics, overall, are the most heavily represented in HCBS programs, where they comprise 20.4% of the enrolled population. They make up 13.1% of the ALF population and only 5.9% of SNF residents. Hispanics in SNFs are more likely to be cared for under Medicaid rather than private-pay (9.3% and 0.9%, respectively). Hispanics in the ALF setting are dominantly in the Medicaid HMO program and OSS-South Florida.¹² Eighty-five percent of Medicaid HMO enrollees and 64.2% of South Florida OSS clients are Hispanic. The majority of Hispanics in the sample receiving long-term care services through HCBS programs are found in those programs that are exclusive to South Florida; Medicaid HMO and Channeling (68.5% and 63.16% of clients in these two programs versus the next closest, 38.8% of the HCE client population). In contrast, only 7.1% of CCE clients are Hispanic.

¹²According to the 1990 U.S. Census, 48.8% of elders in Dade County are Hispanic.

insert figure 12 and 13 here

Non-Whites. (Racial Minorities). Non-white, non-Hispanic elders are under-represented in ALFs (only 3.5% of the ALF population). Representation in the SNF, and especially the HCBS population, is significantly higher (12.9% of the SNF population and 14.9% of HCBS clients). Payment source for non-white, non-Hispanic elders in SNFs is most likely to be Medicaid (17.1%) and very unlikely to be private-pay. Only 2.3% of private-pay residents are non-white, non-Hispanic. Among the ALF population, non-white elders are most likely to be OSS clients (11.7% South Region and 13.5% other regions). The next most frequent payment source for racial minorities in ALFs is Medicaid HMO (8%) and the least common is private-pay (1.2%). The variation across the HCBS programs in representation of the non-white, non-Hispanic population is much less than that found for Hispanic clients. The highest percentage of racial minorities is found in the Medicaid HMO in-home program (20.5%), while the lowest proportions are found in Channeling (11.6%) and CCE (12.7%).

Gender (Table 1b; Figure 14.) In all three settings, overall, approximately three-quarters of the population is female: 76.2% in SNFs; 71.6% in ALFs; and 78.7% in HCBS programs. This proportion varies little by payment source in SNFs. Somewhat greater variations exist across ALF subpopulations. The proportion of females is highest in Medicaid HMO-ALF program (76.0%). OSS residents outside South Florida have the lowest percentage of female residents (66.3%). Similar variation exists across HCBS programs. The highest proportion of females is found in the Medicaid Waiver In-Home Care program (85.2%), while the lowest percentage (74.4%) is in the CCE program. This difference is not a reflection of a younger age distribution, as CCE and Medicaid Waiver have similar percentages of old-old residents (85+ years), i.e., 28.4% and 28.9%, respectively.

Medicaid Eligibility (Table 1b.). SNF residents were defined as Medicaid-eligible if their admitting payor source or the current payor source was Medicaid. ALF residents were categorized as being Medicaid-eligible if they had Medicaid coverage, received SSI, or participated in any welfare program. Overall, the SNF and HCBS populations were designated eligible if they had Medicaid coverage or received SSI or other welfare program. Overall, the SNF and HCBS populations have higher percentages with Medicaid eligibility than does the ALF population (58.7% and 53.4% versus 31.0%, respectively). Within the ALF population, 18.7% of the private-pay and 70.8% of OSS Other Regions residents are Medicaid-eligible. Among HCBS clients, CCE has the lowest percentage with Medicaid eligibility (29.4%). *These comparisons should be treated with extreme caution, as admission to several of the programs analyzed is contingent upon Medicaid eligibility, and financial data available in standardized assessment forms is often either incomplete or inaccurate (and could not be verified in the data collection process for this study).*

Geographic Region (Table 1b; Figure 15, Appendix B). There are discernible regional differences in patterns of long-term utilization. Overall, the distribution of formal long-term care clients across the three settings appear to be the most balanced in North Florida. The exception is among private-pay ALF residents. About 25% of all SNF residents, 24% of all non-demonstration program ALF residents, and about 26% of all HCBS clients reside in that region.

insert figure 14 and 15 here.

The Central Region makes rather heavy use of SNFs and ALFs and limited use of HCBS. Twenty-three percent of all private-pay SNF residents in the state, 52.8% of all OSS-ALF residents outside South Florida, but only 10.4% of all HCBS clients, reside there. Use of private-pay nursing home beds and ALF beds is heaviest in the West Coast Region. Nearly 40% (39.6%) of all private-pay SNF residents and 38.6% of all private-pay ALF residents, but only 23.6% of HCBS clients, in the state can be found there. South Florida makes the least use, proportionally, of SNFs and the greatest use of HCBS. Only 25.2% of SNF residents but 40.1% of HCBS clients, statewide, reside there. South Florida has 31.8% of all ALF residents, including 34.7% of those paying privately.

Social Support (Table 1b). Social support can be defined in two ways: 1) in terms of household composition (living alone; living with spouse; living with son/daughter or other relative; and living with a non-relative); or 2) in terms of whether or not the resident/client has a primary caregiver. No information is available on household composition prior to present residency for Medicaid HMO-ALF and OSS-ALF residents. This information is available only for private-pay ALF residents and for a reduced sample of SNF residents (N=226). Further, it must be noted that for SNF and ALF residents, household composition reflects the time before moving to a SNF or ALF. As HCBS clients are still living in the community, the question on household composition refers to the clients' *current* household arrangement.

Household Composition. (Table 1b; Figure 16.) Most SNF residents (54%) for whom information was available had previously been living with a non-relative or another relative (not a spouse) prior to their current admission to the SNF, which would include living in another facility. There are slightly different distributions of prior household composition for Medicaid and private-pay SNF residents. Both payor sources had substantial percentages living with non-relatives prior to admission (32.9% and 33.8%, respectively). The next most frequent living arrangement of private-pay SNF residents was living alone (28.0%), while for Medicaid SNF residents, it was living with a son, daughter or other relative, but not a spouse (26.0%). Private-pay ALF residents most frequently had been living alone prior to their admission to the ALF (30.1%). Next most common was living with a non-relative (27.6%). About two-fifths (40.9%) of clients in HCBS programs live alone, while next most frequently, they live with a son, daughter, or other relative (30.4%). The least common arrangement is living with a non-relative (2.1%), especially among HCE clients (1.0%). Medicaid Waiver and CCE program clients are the most likely to be living alone (50.0% and 54.0%, respectively). In comparison, Medicaid HMO in-home, HCE and Channeling clients most frequently live with a son, daughter, or other relative (63.0%, 66.3%, and 39.7%, respectively).

Availability of Primary Caregiver (Table 1b; Figure 17.) Twice as many private-pay SNF residents as Medicaid residents reported not having had a primary caregiver prior to admission (31.2% versus 15.6%). The percentage of private-pay ALF residents with no primary caregiver is similar, i.e., 31.8%. There is surprising variation in availability of a primary caregiver across the HCBS programs. Overall, nearly half (45.5%), twice the percentage of nursing home residents, as a whole, do not have one. The HCE program requires that the client have a primary

caregiver; therefore, it is not surprising that it has the lowest proportion without one (2.0%). The next lowest proportion is found in the

insert figure 16 and 17 here

Channeling program (17.4%). Medicaid Waiver and CCE programs have the highest percentage (approximately 60%) of clients without primary caregivers. This may be due to a combination of things, such as higher incidence of living alone and their lower level of impairment. On the other hand, formal services may be needed at a lower threshold of impairment level because there is no one to help informally.

A. Summary Profiles by Setting

Long-Term Skilled Nursing Facility Population Sample. Elders in SNFs in Florida are clearly more impaired than elders in ALFs or HCBS programs, overall, regardless of the particular measure of impairment employed. Little difference exists by payment source in the SNF population. However, the proportion of SNF residents with severe cognitive impairment is similar to that in ALFs and HCBS programs. It is just slightly higher among SNF residents whose care is paid for under Medicaid than for those paying privately.

Chronic incontinence is much more prevalent in the SNF population than in the ALF and HCBS populations. It is slightly higher for private-pay SNF residents than for those under Medicaid.

Among the three settings, SNFs contain the lowest proportion with a hospital stay or emergency room visit in the past six months. Medicaid residents are somewhat more likely to have experienced a hospital episode than are private-pay residents.

Nearly half of SNF residents, about the same proportion as ALF residents, had a prior SNF or ALF stay before their current admission. It is somewhat higher for private-pay residents.

The proportion of SNF residents who take seven or more medications is about the same as ALF residents, but lower than HCBS clients. This percentage is only slightly higher among SNF private-pay residents than among Medicaid residents.

SNFs have the oldest population of the three settings. The proportion of residents who are 85 or older is considerably higher among private-pay than among Medicaid residents.

Of the three settings, SNFs house the lowest proportion of Hispanic elders. Most of these are recipients of Medicaid.

SNFs have a larger proportion of non-whites than ALFs, but a smaller percentage than the HCBS programs. As with Hispanics, non-whites can be found primarily among residents whose care is paid for by Medicaid.

SNF residents are distributed rather equally between North and South Florida, but with a smaller percentage in Central Florida and a substantially higher ratio on the West Coast. The pattern differs somewhat by payment source. The private-pay population is more dominant on the West Coast and the least visible in North Florida.

The household composition of SNF residents (prior to admission) is quite different from that of private-pay ALF residents or the current household composition of HCBS clients. A substantially smaller proportion of SNF residents had lived alone. The pattern of household composition differs for the two SNF payment groups as well. Private-pay residents are much more likely to have lived alone and somewhat more likely to have lived with a spouse than are Medicaid residents. Private-pay residents are much less likely to have had a primary caregiver prior to admission.

Assisted Living Facility Population Sample. The ALF population in Florida, as a whole, is very difficult to characterize. Although, in the aggregate, it looks far less like the nursing home population than the HCBS population, e.g., it is clearly less impaired in ADL function than the SNF population and about the same as the HCBS population. It turns out to include four rather distinct subpopulations: Medicaid HMO, OSS South Florida, OSS Other Regions and private-pay.

The Medicaid HMO enrollees are the most impaired of the ALF subpopulations in both ADLs and IADLs, when mean number and severity scores are compared. However, the combined proportion of seriously and severely impaired (Impairment Levels 4 and 5) is about the same for the Medicaid HMO and OSS South Region subpopulations. The least physically impaired, overall, is the OSS Other Regions group. The private-pay group tends to fall between the two OSS subpopulations in degree of impairment.

Overall, ALFs contain the lowest percentage across the three settings of individuals with severe cognitive impairment, although it is only slightly lower than the percentage in the SNF and HCBS samples. The highest proportions of all subpopulations, however, occur in the Medicaid HMO and OSS South Region ALF sub-samples and resemble the nearly comparable percentages of severe cognitive impairment in the HCBS Medicaid HMO and HCE program groups.

The Medicaid HMO subpopulation among ALF residents has far and away the highest proportion with chronic incontinence. In fact, this figure of 51% equals that of the nursing home population.

The proportion of ALF residents with a hospital admission or ER visit in the past six months is greater than that for SNFs, but less than that for HCBS clients. However, the Medicaid HMO-ALF population is more likely to have had such an episode than all but the Medicaid HMO and HCBS Waiver populations under HCBS. Interestingly, the OSS recipients in the South Region are the least likely of all, except SNF residents, to have visited a hospital.

ALF residents, compared to the SNF and especially the HCBS population, are the most likely to have been in a SNF or ALF prior to their current stay. Medicaid HMO and OSS Other Regions subpopulations have by far the highest levels.

Overall, the ALF population has about the same level of medication usage as the SNF residents, but less than the HCBS population. The OSS South Region subpopulation has notably less usage than other ALF residents.

Reported current mental illness is dramatically higher (about four times) in the ALF population than among HCBS clients. By far the highest proportion occurs

in the Medicaid HMO group and by far the lowest exists in the OSS Other Regions subpopulation.

ALF residents are just slightly younger than the SNF population, but considerably older than HCBS clients. The oldest subpopulation among ALF residents is the private-pay and the youngest, OSS Other Regions.

The ALF population has proportionately more Hispanics than SNFs and proportionately fewer Hispanics than HCBS programs. The Medicaid HMO-ALF group, however, contains the highest percentage of Hispanics of any population in the long-term care system. Very small numbers of Hispanics are included in the OSS Other Regions and private-pay subpopulations.

ALFs house an extremely small proportion of non-whites, considerably less than SNFs or HCBS populations. Of these, the private-pay subpopulation contains by far the smallest percentage.

Nearly three-fourths of all ALF residents in the state can be found on the West Coast or in South Florida. The other two regions house about equally lower proportions.

Household status prior to admission to current setting is available only for private-pay ALF residents. The proportion among this population that lived alone is nearly double that of SNF residents but significantly less than that for HCBS Medicaid Waiver and CCE clients. Private-pay ALF residents are less likely than SNF residents to have had a primary caregiver, but more likely to have had one than the HCBS Medicaid Waiver and CCE subpopulations.

Home and Community-Based Services Population Sample. As is the case with the ALF population, it is difficult and somewhat misleading to compare HCBS clients as a whole to the SNF and ALF populations. The differences across the individual HCBS programs are very substantial on a number of key characteristics. The Medicaid HMO and Channeling subpopulations, with some exceptions, are similar, as are the Medicaid Waiver and CCE program clients at the other extreme. The HCE population usually falls somewhere between these two groupings, although it may look more like one or the other two subpopulation pairs, depending on the particular characteristic at issue.

The Medicaid HMO demonstration group is the most physically impaired, coming close to that of the nursing home population on several measures. Overall, the Channeling population is only slightly less impaired. The Medicaid Waiver and CCE clients are substantially less impaired, although somewhat more so than the ALF-OSS Other Regions residents. On measures of IADL capacity, the HCE subpopulation is the most impaired of all long-term care populations, except for Medicaid HMO-ALF enrollees.

The Medicaid HMO and HCE programs have proportions of clients with severe cognitive impairment levels that approach the high levels of the HMO-ALF and ALF-OSS South Region subpopulations.

The Channeling program has the highest proportion of HCBS clients with a dementia diagnosis. The Medicaid HMO and HCE programs are not far behind, with this diagnosis far less prevalent in the Waiver and CCE subpopulations.

Although somewhat lower than among SNF and HMO-ALF residents, the proportion of enrollees that are classified as incontinent in the HCBS-HMO and Channeling programs is considerably greater than in the Waiver and CCE programs.

Interestingly, the Medicaid Waiver subpopulation, among all of the long-term care populations, has the highest percentage of elders with a previous hospital or ER admission. And overall, this percentage is higher among the HCBS populations than in the SNF or ALF populations. Use of multiple medications, as measured by use of seven or more prescribed drugs, also is the highest among the Waiver subpopulation and, except for HCE clients, also higher among HCBS clients than among SNF or ALF residents.

Indication of a current mental health problem is considerably lower in HCBS client populations than in ALFs, overall. The proportion is highest in the Channeling and HCE programs and very low in CCE.

HCBS clients, on the whole, are considerably younger than residents of ALFs and especially SNFs. The youngest are Medicaid Waiver and CCE clients.

HCBS programs, as a whole, have far higher proportions of minority elders than SNFs and higher than all but the Medicaid HMO and OSS South Region subpopulations in ALFs. Hispanic representation is highest in the Medicaid HMO and Channeling subpopulations and dramatically lowest in CCE. The proportion non-white is highest of all long-term care populations in the HMO, Waiver and HCE programs and somewhat lower in Channeling and CCE.

By a significant margin, the largest proportion of HCBS clients reside in the South Florida Region. This is especially the case with the HCE program. With the exception of HCE, for which the proportion in the West Coast Region is low, proportions are roughly equivalent in the North and West Coast Regions, with the lowest percentages in the Central Region.

Overall, the HCBS population contains the highest percentage of individuals who live alone. The Waiver and CCE programs have markedly higher proportions living alone than the Medicaid HMO or Channeling programs. Not surprisingly, a tiny number of HCE clients live alone.

HCBS programs also contain the highest proportion of individuals with no primary caregiver. Here too, the Waiver and CCE programs show markedly larger numbers of clients lacking such support.

B. Distinguishing Characteristics of Each Subpopulation in Comparison to all Other Subpopulations in the Three Long-Term Care Settings

Skilled Nursing Facilities (SNFs)

Medicaid

@ Most ADL-impaired

Private-Pay

- @ Second most ADL-impaired
- @ Most with chronic incontinence
- @ Lowest percentage with prior hospital or ER visit
- @ Oldest population
- @ Lowest percentage Hispanic
- @ Highest use in West Coast Region

Assisted Living Facilities (ALFs)

HMO

- @ Highest percentage cognitively impaired
- @ Most impaired in IADLs (in comparison with HCBS population)
- @ Equivalent to nursing home in chronic incontinence
- @ Most likely to have had prior SNF or ALF stay
- @ Highest percentage with mental illness
- @ Highest percentage Hispanic

OSS-South

- @ Lowest medication use
- @ Virtually equal to HMO in percentage with severe cognitive impairment
- @ Highest percentage male
- @ Next to lowest percentage incontinent

OSS-Other Regions

- @ Least impaired in ADLs
- @ Next to lowest percentage seriously or severely impaired
- @ Youngest population
- @ Lowest percentage incontinent
- @ Next to lowest percentage with previous SNF or ALF stay

Private-Pay

- @ Smallest percentage non-white
- @ Lowest percentage with severe cognitive impairment
- @ Heaviest use in West Coast Region

Home and Community-Based Services (HCBS)

HMO

- @ Highest ADL severity score
- @ Highest percentage who cannot walk
- @ Highest percentage non-white
- @ Lowest percentage with previous SNF or ALF stay

Channeling

- @ Second to HMO in percentage who cannot walk
- @ Next to lowest percentage with previous SNF or ALF stay

HCE

- @ Next to highest IADL severity score
- @ Heavy enrollment in South Florida
- @ Close to lowest percentage with previous SNF or ALF stay

Waiver

- @ Highest percentage with recent hospital visit
- @ Highest medication use
- @ Next to lowest percentage with severe cognitive impairment
- @ Second to CCE in percentage living alone
- @ Second highest percentage without primary caregiver

CCE

- @ Lowest percentage seriously or severely impaired
- @ Least IADL-impaired
- @ Next to least ADL-impaired
- @ Lowest percentage with mental illness
- @ Lowest percentage with severe cognitive impairment
- @ Highest percentage living alone
- @ Highest percentage without primary caregiver

Comparative Analysis by Functional Impairment Levels

This chapter focuses on the comparisons of the three long-term care setting samples by the functional impairment levels scale developed for this report (discussed in Chapter 3). This analysis allows long-term care recipients with similar ADL and cognitive functional status to be compared according to additional descriptive variables; it offers a more complete profile of five groups ranging from least impaired to severely impaired in SNFs, ALFs, and HCBS programs. It is within the context of this analysis that the issues of appropriateness of placement and assessment of the extent of overlap between care settings can begin to be addressed, albeit not resolved entirely at this stage.

Included in this chapter are a set of tables for each of the three care settings which display profile statistics for sample members in each of the five impairment levels (Tables 2a - c for SNF; Tables 3a - c for ALF; and Tables 4a - c for HCBS). However, the impairment levels are most useful and analytically accessible in the comparison of the proportions of the populations with minimal to moderate impairment versus substantial impairment. Therefore, the five levels were subsequently collapsed into two groupings, Levels 1 through 3 (least to moderately impaired) and Levels 4 and 5 (seriously to most severely impaired). The discussion in this chapter is centered on comparisons using this dichotomy (see Tables 5 and 7).

Also included in the Summary of Findings at the end of this chapter are bar charts that display the estimated total number of long-term care recipients (age 65+) in Florida, per impairment level, in each of the three care settings (Figure 19 for SNF; Figure 20 for ALF; Figure 21 for HCBS) based on the percentages derived from this study sample.

It is important to note that the population samples are considered in this analysis only in the aggregate. Readers are reminded that there are marked differences among individual program groups within the three care settings which are highlighted in Chapter 3, but are not further explored in this chapter. Instead, the intention is to better understand the characteristics of the constituents in each impairment level, per setting, and to discern, for example, whether those who are least impaired and most impaired in the nursing homes resemble the least and most impaired ALF residents and HCBS clients.

A. Long-Term Skilled Nursing Facility Residents in Comparison with Assisted Living Residents and HCBS Clients

Functional Impairment Levels 1-3, Least to Moderately Impaired. As displayed in Figure 18, just 2.3% of the long-term SNF sample fell into impairment Level 1, least impaired, according to cognitive and ADL status upon admission; and a still smaller percentage would be classified in Level 1 based on functional status at the time of the survey¹³ (shown as *current status* in Table 2a). In comparison, 18% of the ALF and 16.9% of the HCBS populations met impairment Level 1 criteria of zero non-independent ADLs and mild or no cognitive impairment at the time of the survey, based on their most recent assessment (Tables 3a, 4a, and Figure 18).

As is true for impairment Level 1, the SNF population also had the lowest percentage classified in Level 2, mildly impaired, at 7.5% versus 15.1% of the ALF and 23.6% of the HCBS populations. The percentage of the SNF sample classified in the two lowest impairment level categories combined (Levels 1 and 2) is far and away the lowest at just under 10% (9.8%) versus one-third (33.2%) of the ALF and 40.5% of the HCBS samples, with the added caveat repeated that an even lower percentage of the SNF sample would be classified as such based on current status, as opposed to functional status upon admission. At the time of the survey, 81.7% of impairment Level 1 and 75% of Level 2 residents had been residing in the nursing home for six months or longer. Evidently, many had experienced a decline in functional status since admission.

Nursing home sample members in impairment Levels 1 and 2 have by definition, at most, mild cognitive impairment and two ADL deficits (most often impairments in bathing and/or dressing). Additionally, the vast majority can walk independently, are continent (only 7.9% are chronically incontinent), most did not have decubitus ulcers or receive I.V. medications and none had a feeding tube. However, SNF Level 1 residents have the highest percentage with a history of mental health problems (29.6%) in comparison with those in the higher impairment levels in the SNF sample, and even in comparison with the ALF Level 1 residents (25.6% of whom have a history of a mental health problem). The ALF population, however, has a substantially greater percentage with mental health conditions (past or present) in all other impairment levels in comparison with both the SNF and HCBS populations.

¹³ The majority of the data collected on the SNF sample was extracted from admission assessments. Thus, in this report, SNF residents are classified into the impairment levels according to their status at the time of entry to the nursing home. However, a second (repeated) measure of ADL status was included in the SNF survey instrument to record updated assessment information (from a quarterly re-assessment) for those who had been in the nursing home one year or longer. In many cases, those who were admitted with zero ADL impairments (Level 1 criteria) subsequently developed ADL impairment and would not be classified into Level 1 if *current* rather than admission data were used. (Note that impairment level classification of the ALF and HCBS samples is based on the most recent assessment data instead of admission data.)

In the SNF sample, impairment Level 1 contains a higher proportion of ethnic minorities, specifically Hispanics, than any other level. In contrast, no racial minorities are classified in SNF impairment Level 1. Instead, the highest percentage of non-whites is found in SNF Level 3, moderately impaired, at 21.5%. Overall, the percentage of racial minorities, primarily African-Americans, in the nursing home population (12.4%) mirrors the percentage in the general

Insert figure 18 here

insert 2a

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insert2c

insert 3a

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insert 4a

insert 4b

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insert table 5

population in the U.S. as a whole. And among all SNF impairment levels, the lowest percentage of those age 85+ appears in Level 1 (37.4%), and the highest percentage in Level 2 (63.8%).

Of all SNF residents whose primary source of payment was Medicaid on the day of the survey (Apay source now,@Table 2b), the lowest percentage by far (16.5%) is classified in impairment Level 1. Medicaid recipients represent roughly 40% or more of all other SNF impairment levels (2-5). Additionally, more than half of all those with a current and temporary pay status of Medicare in the entire SNF long-term sample are dually eligible (their secondary pay source is Medicaid).

It is useful to look at the long-term SNF residents who fall into impairment Levels 1 through 3 collectively (see Table 5), as members of this group (N=106) do not exceed the criteria for admission into a standard licensed ALF, based on cognitive and ADL impairment criteria alone, given the current regulatory guidelines for admission and continued residency in that care setting. Exactly 20% of the SNF sample falls into impairment Levels 1-3 combined; none of which are bedfast, a condition which would make one ineligible for care in an ALF. Additionally, less than 2% of the SNF residents in Levels 1-3 have a total dependency in any one of the five ADLs, which could also preclude eligibility for care in a standard licensed ALF (see Table 5).

The current eligibility criteria for care in an ALF with an Extended Congregate Care (ECC) license are more liberal than standard ALF admission criteria, to allow for the care of residents with greater functional impairment in the ECC setting. However, total dependence in four or more ADLs exceeds the ECC limit, as does having decubitus ulcers more serious than stage two. In addition to the 18% to 20% of the SNF long-term population in Levels 1-3, there are residents in impairment Levels 4 and 5 who would not exceed these ECC eligibility criteria, although determining this percentage would require additional analyses beyond the scope of this report.

Medical conditions and diagnoses should also be considered before concluding that virtually all of the SNF residents in impairment Levels 1 through 3 could be safely or adequately cared for in a lower level of care, such as an ALF. It would be most prudent to identify those cases in which a serious or unstable condition, or a multiplicity of diagnoses, would warrant more careful and consistent medical monitoring than may be available outside of a skilled nursing facility setting before arriving at a final percentage figure of those Ainaappropriately placed,@or transfer-eligible.

Analyzing diagnoses in this study is not a quick or easy matter, as the majority of sample members have additional diagnoses beyond those contained in the computerized database, making it necessary to refer to the data collection instruments to account for the Awritten-in@diagnoses in order to develop complete medical condition profiles. Nevertheless, there was sufficient curiosity surrounding the permanent placement in a nursing home of those who evidently had little or no functional impairment, and relatively low utilization rates of skilled therapies and nursing services at the time of admission (see Table 2b), to prompt us to delve into the task of developing a diagnoses profile of the 53 SNF impairment Level 1 and 2 sample members. This case level

profile of the least and the mildly impaired long-term SNF residents is included in this report (Tables 6a and 6b) in order to further inform the policy debate, as well as to illustrate the point that while none of these individuals were functionally impaired (upon admission), this does not necessarily mean they were all in good health. Unfortunately, diagnostic profiles for the ALF and HCBS samples are not available to include for comparison and it cannot be ruled out that these profiles may look very similar to the SNF profiles included in this report. (This is a hypothesis that will be tested in further analysis.)

In comparison with the nursing home sample, the percentage in the three lower impairment levels is three times higher in the ALF and HCBS populations, which are basically matched with 59% and 60.3%, respectively, in Levels 1 through 3 versus 20% in the SNF sample (Table 5). It appears that those least to moderately impaired in the nursing home differ the most from their counterparts in the ALF and HCBS populations only in terms of their proportional representation and in having the highest percentage with a dementia diagnosis (55.7% in the SNF versus 32.8% in the ALF and 6.4% in the HCBS groups). On most other measures, the SNF impairment Levels 1-3 sample looks quite similar to the ALF least to moderately impaired group, except that there are notably lower percentages of incontinence and racial minorities in the ALF population.

Among the three care settings, the HCBS Level 1-3 group is the least cognitively impaired, as well as the youngest (with half the percentage of those 85+ in comparison with the SNF and ALF groups), and most likely to be married. The HCBS Level 1-3 group however, is the most dependent in bathing (16.4% need total help) and has the highest percentage among the three groups of those having a recent hospital admission or emergency room visit (Table 5).

Impairment in instrumental activities of daily living (IADL) can be compared only between the ALF and HCBS populations, as IADL data were not available from the MDS assessments in the nursing homes. Also, data were not consistently available in the ALF sample for half of the ten IADL items in the data collection instrument, making the comparisons between ALF and HCBS somewhat limited in scope, as well. (The percentage of information not available is shown in Table 3a and the reason for this setback is discussed in Chapter 3). Therefore, the ALF and HCBS populations are compared in this study only according to the five IADLs for which the percentage of unavailable data (for the ALF cases) is low: answering the phone, making a phone call, taking medications, handling money, and shopping. These are also the IADLs that are the most dependent on cognitive function alone, as opposed to physical stamina, and are among the last IADLs to be lost. As shown in Table 5, ALF residents are substantially more IADL impaired than the HCBS clients in the lowest impairment levels, except for shopping ability. However, this may not be measuring the same thing when applied to people living at home who need to buy groceries, for example, versus people living in an ALF who have their meals provided and perhaps, their shopping needs limited to personal hygiene sundries. Therefore, shopping may be a much more difficult or cumbersome task, for those at home.

Functional Impairment Levels 4 and 5, Seriously and Most Severely Impaired. In comparison with the ALF and HCBS populations, the SNF long-term population has the greatest percentage of residents in each of the two highest functional impairment levels, totaling 80% in Levels 4 and 5 combined (Table 7). Just over half (50.2%) of all SNF long-term residents are

insert 6a

insert 6b

classified into the most severely impaired category of Level 5, versus the nonetheless surprisingly high proportion of about 30% in Level 5 in each the ALF and HCBS populations (Figure 18).

Across the three care settings, the highest percentage of impairment Level 5 constituents with non-independent status in each of the five ADLs is found in the SNF population. SNF Level 5 members also have the highest percentage with a diagnosis of dementia (73.9%) and with chronic incontinence (67.9%). (See Tables 2a, 3a, and 4a.)

The skilled nursing facility impairment Level 4 and 5 group is not the most impaired according to all measures, however. As shown in Table 7, the HCBS Level 4 and 5 group has the highest percentage with an inability to walk (46% in HCBS Level 4 compared with 20.2% in SNF Level 4) and with severe cognitive impairment (80.3% in HCBS Level 5 versus 45.9% in SNF Level 5).

The fact that the HCBS population, overall, has the lowest percentage of those with a formal diagnosis of Alzheimer's disease or other dementia, yet has the greatest percentage with severe cognitive impairment is not a conflicting or inconsistent finding, and probably says nothing about the comparative prevalence of Alzheimer's disease or related disorders within the population. It is reasonable to assume that a smaller proportion of people in publicly supported in-home care programs, compared to those in SNFs and ALFs, have had access to the neurological evaluation process that leads to, or rules out, a diagnosis of Alzheimer's disease. Evidently, the SNF and ALF populations have relatively high percentages with a formal diagnoses at all stages of the disease, including the earliest stages when cognitive impairment is minimal.

As previously stated, the SNF Level 4 and 5 sample has the highest percentage of those with non-independent status in each of the five ADLs, in comparison with the ALF and HCBS Level 4 and 5 groups. However, in a more focused analysis in which only the percentage requiring total help in an ADL was compared, the HCBS Level 4 and 5 group turned out to have the highest percentage of the most severely ADL-impaired. As shown at the top of Table 7, the percentage of HCBS Level 4 and 5 sample members who need total help in each ADL is substantially higher than in the comparable SNF group, and ranges from a high of 56.6% needing total help with bathing (versus 37.4% in the SNF group) to 21.3% totally dependent in eating (compared with 12.9% for SNF).

The percentage of Level 4 and 5 constituents needing total help in ADLs is the lowest by a wide margin in the ALF population, ranging from 11.7% needing total help with bathing to 4.4% totally dependent in eating. This is not surprising, however, given the current regulatory structure which precludes admitting or retaining residents in a standard licensed ALF who have a total dependency in any ADL (except for eating); although ECC-licensed ALF residents may have total dependencies in up to four ADLs (and very few ALF residents in this sample would exceed that criterion). Additionally, total dependency in transferring from bed to chair, etc. is expressly prohibited with few allowances due to ALF safety regulations (ability to evacuate in case of fire). Less than 5% (4.7%) among the most impaired in the ALF sample, require total help with transfers.

While the overwhelming majority of ALF residents appear to meet the current admission guidelines that pertain to physical impairment, fully half of the

residents in Levels 4 and 5 exceed the regulatory limit for cognitive impairment, as they are severely impaired, or judged to be unable to make simple decisions. The 50.7% in ALF Level 4 and 5 with severe cognitive impairment even far exceeds the SNF percentage of 28.6%. It appears that if the letter of the law in effect regarding cognitive functioning in the ALF population were strictly enforced, over 8,000¹⁴ current ALF residents age 65+ in Florida would be technically ineligible to remain in this care setting, and would have to seek alternative placement.

In addition to having the highest percentage of those needing total help in ADLs, the HCBS Level 4 and 5 group is also significantly more IADL impaired than the comparable group in the ALF sample, as shown in Table 7.

Table 7 also reveals the pronounced differences in the demographic composition of impairment Level 4 and 5 constituents across the care settings. The proportion of Hispanics in the HCBS group approaches one-third (31.9%) versus 16.2% in the ALF and 6% in the SNF comparison groups. Further, racial minorities comprise 19.6% of the HCBS Level 4 and 5 group, compared with 12% in the SNF and only 5.2% in the ALF groups. Finally, the lowest percentage of those who are 85 and older and the highest percentage of married individuals is found in the HCBS sample (38.2% 85+ and 31.7% married).

B. Summary of Findings

The functional impairment level groupings established for this study are most useful in the comparison across the three care settings of the proportions of the populations with minimal to moderate impairment versus substantial impairment. As illustrated in Figure 18, the long-term SNF population is skewed towards the highest impairment levels, with 80% categorized in Levels 4 and 5 combined, compared with half that percentage in the ALF and HCBS populations. Figure 18 also shows that the percentage falling into each consecutive impairment level is quite consistent, for the most part, in the ALF and HCBS populations.

It was found that among those categorized in impairment Levels 1 through 3, having moderate ADL and cognitive impairment at most, the HCBS population has the lowest percentage of moderate cognitive impairment and IADL impairment. Thus, the HCBS group appears to be the least impaired among those in the lowest impairment levels. (See Table 5.)

The situation reverses, however, when the constituents of impairment Levels 4 and 5 are compared. At the highest impairment levels it is the HCBS group that has the greatest percentage of those who are the most impaired of all, as evidenced by the relatively high proportion of those needing total help in any give ADL, who cannot walk, and the exceedingly high percentage with severe cognitive

¹⁴Based on 20.5% of the total ALF study sample with severe cognitive impairment (see Table 1a) of 39,555 (estimated population of 65+ in Florida ALFS) = 8,108. And 50.7% of the estimated total of 16,217 in Levels 4 and 5 = 8,222.

impairment. (See Table 7.) On these measures, the HCBS group is substantially more functionally impaired than even the SNF, as well as the ALF Level 4 and 5 residents. This

Insert Table 7

group is also the most IADL impaired. Although comparisons of diagnostic profiles of SNF, ALF and HCBS Level 4 and 5 sample members cannot be made at this point (and would be very important to consider in further analysis,) it is apparent that some of the most functionally impaired individuals in the entire study sample are being cared for at home.

A roughly estimated 20% of the SNF long-term care population would not exceed admission criteria for care in an ALF (particularly an ECC-licensed facility) based on cognitive and ADL functional status. Conversely, up to 20% of the population presently being cared for in ALFs *does* exceed the current criteria for continued residency, based on their inability to make simple decisions due to severe cognitive impairment. Few in the ALF population, however, would appear to exceed the regulatory limit pertaining to physical impairments.

Figures 19, 20 and 21 display the estimated total number of individuals in Florida's long-term care programs that would be categorized into each impairment level, per care setting, based on the percentages derived from this study sample. The calculations and assumptions employed to arrive at baseline figures for the total current population in the three care settings are stated at the bottom of each figure. According to these projections, the greatest number of the least impaired formal long-term care recipients (age 65+) in Florida are ALF residents (7,159 in impairment Level 1); whereas a total of only 1,056 long-term SNF residents and 4,866 HCBS clients meet impairment Level 1 criteria. At the other extreme, an estimated 23,067 long-term SNF residents meet Level 5 (most severely impaired) criteria, along with 11,471 ALF residents and 8,458 HCBS clients in Florida who are also severely impaired.

Insert figure 19

Figure 20

Figure 21

Multivariate Analysis: Predictors of Program Placement

The multivariate analysis is designed to identify variables (client characteristics) with the greatest power to predict where, under the present system, an elderly person receiving long-term care will receive that care. The results of the multivariate analysis are presented as odds ratios. They indicate the relative importance or power of the variables tested to predict which elders, among those receiving formal long-term care in Florida, are likely to receive that care in a nursing home, in an assisted living facility, or in a home- and community-based services program, respectively, rather than in either of the other two settings. Those predictive factors showing up as statistically significant are discussed below. Table 8 displays in descending order of importance the significant positive and negative predictors for each setting.

It should be noted that the power of each predictor variable is determined after the effects (power) of every other variable in the analysis has been measured. This procedure allows the power of each predictor variable to be determined independently of the influence of any other variable or of all of the other variables measured collectively.

Age. In general, older age is associated with care receipt in a nursing home, and to some extent an ALF, but in-home care recipients, overall, are younger. Care recipients 85 and older are over 2.5 times more likely, and those 75-84 are 1.9 times more likely, than recipients 60-74 to be in a nursing home. Only as age reaches 85+ are clients more likely (2 times) than those 60-74 to be receiving care in an ALF. Age is inversely related to use of in-home care, irrespective of other characteristics. Those 75-84 are only about half as likely as those 60-74 to be getting HCBS and those in the oldest category (85 and over) are less than one-third as likely. Age is the fourth most powerful predictor of nursing home residence and the third most powerful predictor of ALF residence.

Gender. Gender appears to be associated only with use of HCBS. Females are 1.4 times more likely than males to be in a home-care program.

Race/ethnicity. Being non-white among recipients of formal long-term care is strongly associated with receipt of care at home and negatively related to being in an ALF. Non-whites in the system are 2.78 times more likely than whites to be receiving their care at home but only 10% as likely as whites to be residing in an ALF. Non-white status is the single most powerful

predictor of HCBS utilization among the variables tested. It is the fourth most powerful (negative) predictor of ALF use.

Hispanics receiving formal long-term care also are 1.77 times more likely than whites to receive that care at home. They are significantly less likely than whites (only 21% as likely) to be receiving care in a nursing home.

Living alone. Formal long-term care recipients who lived alone prior to receipt of services are more likely (1.68 times) than those living with others to receive their care at home and they are significantly less likely (64% and 67%, respectively) than those living with others to receive their care in a nursing home or ALF.

Medicaid eligible. Medicaid eligibility is negatively associated with both nursing home and ALF residence but it is a significant positive predictor of enrollment in home-based care. These relationships undoubtedly reflect largely program eligibility criteria of the HCBS programs which target lower income elders.

Functional impairment level. Several of the composite indicators of impairment level constructed for this study, measures that include both functional (ADL) status and cognitive status, are significant predictors of nursing home and ALF residence and weaker predictors of HCBS utilization. They are positive predictors largely of ALF use. In fact, the least impaired clients are twice as likely as the most impaired clients to be in an ALF. This is the second most important factor associated with ALF residence. Further:

- C Those at the intermediate level of impairment are 1.82 times more likely than the most impaired to be in an ALF.
- C Persons at the next to most severe level of impairment are similarly (1.85 times) more likely than the most severely impaired to be in a nursing home. This finding appears somewhat puzzling but is supported further by the odds ratio reflecting the relationship of impairment level to use of formal home care. That is, the most severely impaired appear more likely to be cared for at home. Those at the intermediate and lowest levels of impairment are only 13% and 16%, respectively, as likely to be nursing home residents as are the most severely impaired.
- C Impairment level is unrelated to HCBS use except for persons who are more severely impaired. These individuals with next to the highest level of impairment are 60% as likely as the most severely impaired to be an HCBS enrollee.

Interaction of impairment and living alone. When impairment level is measured interactively together with living alone status, however, a somewhat different picture emerges. When individuals at Impairment Level 2 (next to the least impaired) live at home, they become 2.7 times more likely than those who are the most impaired and living alone to be receiving in-home care; and among individuals with next to the most severe impairments (Level 4), those who live alone are 2.87 times more likely than those most severely impaired and living alone to be residing in a nursing home. This makes intuitive sense as it seem likely that very few, if any, elders who are at the most impaired level could live by

themselves. These interactive measures are the second and third most powerful predictors, respectively, of HCBS and nursing home utilization; and this association is in addition to the independent effects of impairment level and living alone measured separately.

Mobility problem. Having a mobility problem is the third most powerful predictor of HCBS utilization. Individuals in the system with a mobility problem are 2.32 times more likely to be receiving care at home rather than in an ALF or nursing home when compared to long-term recipients with normal mobility capacity. This variable is also a negative predictor of ALF residence. Persons with a mobility deficit are only 38% as likely as those with normal mobility to be in an ALF rather than in either of the other two settings. Mobility status is unrelated to nursing home use.

Continence status. Continence status is significantly associated with nursing home and ALF residence. It is a positive predictor of the former and a negative predictor of the latter. Those receiving formal long-term care who are incontinent are nearly twice (1.91 times) as likely as those who are continent to be in a nursing home. In contrast, incontinent individuals are only about half (57%) as likely as continent individuals to be in an ALF. Continence status is unrelated to HCBS utilization.

Prior nursing home or ALF stay. Formal care recipients who experienced a nursing home or ALF stay within five years preceding admission to their current locus of care are substantially more likely to be found in a nursing home or an ALF. The variable is the single most powerful predictor of ALF residence and the fifth most powerful predictor of nursing home residence. Such individuals are 2.4 times more likely than those without a prior stay to be in a nursing home and 2.24 times more likely than those without a prior stay to be in an ALF. Persons with prior nursing home or ALF stays, however, are only 22% as likely as those with no previous nursing home or ALF stays to be in a HCBS program. This factor is the sixth most powerful predictor of participation in a home-based care program.

Prior hospital or ER visit. Individuals receiving formal long-term care are more likely to receive that care in an ALF or at home if they have experienced a hospital or emergency room visit within the last six months than if they have not. The odds are 1.69 times greater for ALF residence and 1.44 times greater for home-based care. In contrast, persons with such a recent hospital episode are only 35% as likely (65% less likely) to be long-term nursing home residents (those who have resided in the SNF 90 days or more).

Use of seven or more medications. Use of seven or more prescribed medicines is positively associated with HCBS participation, negatively associated with ALF utilization and unrelated to nursing home residence. Individuals with at least seven medications are 1.78 times more likely than those taking fewer medications to be receiving HCBS. This variable is the sixth most powerful predictor of HCBS use. However, the odds that a person taking seven or more drugs will be a resident of an ALF are only 0.65 of those who are on fewer medications.

Region. The geographical region of the state in which an elder recipient of long-term care resides is an important predictor of the setting within which that

person will receive care. In fact, it is the most important determinant of nursing home residence. Elders receiving formal care in Central Florida are about 7.5 times more likely to receive that care in a nursing home than are their counterparts in South Florida. The likelihood that care recipients will receive their care in a nursing home is nearly four times greater in North Florida than in South Florida. The odds for those on the West Coast are 1.83 times greater than for recipients in South Florida. In stark contrast, residence elsewhere than in South Florida is negatively associated with both ALF and HCBS utilization. Long-term care recipients in Central Florida are only 47% as likely as those in South Florida to be in an ALF, and those in North Florida are only 35% as likely to be receiving their care in an ALF as recipients in South Florida. Similarly, the odds that recipients are receiving care at home if they reside in the Central, North or West Coast regions of Florida are only 23%, 59%, and 47%, respectively, of those odds for recipients of formal long-term care in South Florida.

A. Conclusions

From these findings, it appears that there is some limited rationality to the pattern of matching health care needs with setting of care. That is, those with the greatest deficits in those areas of physical functioning that require human assistance, such as ADLs and continence, are more likely overall to receive care in a nursing home or an ALF than in HCBS. The match, however, is extremely loose with significant exceptions. Clearly the populations residing in nursing homes and ALFs are more nearly similar (and therefore offer greater substitutability potential) to each other than the HCBS population is to either of the other two. The HCBS population in the aggregate is a different population in a number of important aspects than either the ALF or nursing home population and is disproportionately located in South Florida.

Overall, social factors are at least as important as health or functional factors in predicting who will end up in a particular long-term care setting. Age, race and living arrangements are very powerful determinants of care setting. In combination, living arrangements and impairment level have still an additionally powerful influence on locus of care. Being non-white is the single best predictor of HCBS utilization and the combined status of moderate impairment and living alone is the second best predictor of HCBS program participation. To the degree that it captures generalized frailty and medical risk, age, of course, may be as much an indicator of health condition as a measure that gauges social or cultural norms of appropriateness of care mode. With respect to age, it appears more acceptable to institutionalize an elder if that person is very old.

Region of the state in which an elder resides, also a factor bearing little relationship to health, is a very significant determinant of where an elder will receive long-term care. It is the single most important predictor of nursing home residence by a very wide margin. Whether this situation reflects differences across Florida in cultural norms, in professional practice patterns of physicians, nurses, social workers or pre-admission screening assessors, or in service availability, is an empirical question.

All of this suggests that any attempt to reconfigure the distribution of recipients of formal care across the three types of settings in Florida without taking these social, regional and perhaps administrative factors into account would fail. Unless current allocation patterns reflect largely administrative or professional

judgment (in which case training or re-training efforts would be called for) or they reflect regional service availability differences (in which case "unbalanced" service access could be addressed by policy makers), changing them will be far more challenging than merely establishing clear-cut program admission criteria based on impairment level alone, even if those criteria were to be uniformly and consistently applied.

B. Caveats

The three separate logistic regression equations from which the reported odds ratios were derived provide the relative importance of only those variables that were included in the equations. There may well be other unmeasured factors that, if tested, would prove to be significant predictors as well. That this could be the case is suggested by the fact that the included variables explain between 25% and 30% of the variation in outcomes of each of the three equations. Although this level would be considered high by experts who conduct studies in areas as complex as this, it still leaves 70-75% of the variation unexplained. The most likely predictor variables as determined from past research were included in the equations. The most notable exception is a measure of IADL capacity, a variable with potentially very powerful predictive power. Unfortunately, it could not be included in this analysis because the data available for profiling the nursing home population did not include IADL measures.

Secondly, the analysis reported here treats the three settings in the aggregate without separating out variables according to the particular payment source for clients in nursing homes and ALFs or the specific program under HCBS in which clients are enrolled. From the results of univariate and bivariate analyses reported earlier, it appears that the results for HMO-ALF and OSS-ALF residents in South Florida might be distinguishable from those of other residents of ALFs if tested independently. It is clear from the basic analyses, however, that the characteristics of clients within HCBS programs differ enormously, with Medicaid HMO and CCE programs at the extremes. Consequently, disaggregated analyses according to HCBS program will be carried out in the near future.

Finally, the study population for the analysis reported here consists only of elders who are receiving formal long-term care, i.e., they are participants in the current "system." The results do not apply directly to the general population of elders in Florida and thus do not predict who in that general population will end up in one or another of the three care settings nor, indeed, in any formal long-term care arrangements.

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Conclusions and Recommendations

Arguably, the most striking finding of the research is the differences in functional impairment levels *within* care settings and the similarity of resident impairment levels *across* care settings. Differences among HCBS program populations, for example, are greater than those between the HCBS populations and the ALF populations overall. The finding that nursing home residents, on average, are substantially more impaired than the clients/residents of the home- and community-based programs is not surprising. The finding, however, that the average impairment levels of clients in the Medicaid HMO Assisted Living and In-Home programs, the Channeling program and the HCE program equal or approach the average impairment level for the nursing home residents should not be very surprising either, given the objectives of these programs (e.g., to reduce nursing home use among the seriously impaired). This finding appears to support the view that targeting substantial packages of social and health care services to the seriously impaired elderly can be a cost-effective strategy for reducing nursing home use.

The fact that participants in the HCBS Medicaid Waiver and CCE programs were not found to have the same levels of functional limitations does not imply any failure on the part of these programs. Although the average impairment levels of clients in the HCBS Waiver and CCE programs are substantially lower than those in the other HCBS programs, a high percentage of clients in these programs have no primary caregivers. Two-to-three IADL impairments, coupled with an ADL dependency, in the absence of a primary caregiver, could place many of these clients at substantial risk of nursing home placement.

The data collected in this survey show a high level of similarity in impairment profiles between residents of nursing facilities and clients in both of the Medicaid Option HMO programs and the Channeling program. These program participants have a high level of both ADL and IADL impairments. Additionally, participants in these programs are frequently severely cognitively impaired (38% to 54%).

In all of the community-based programs, however, clients/residents showed high percentages of chronic incontinence (40% to 51%), except for HCE (22%), and except for the Medicaid HMO-ALF, substantial percentages who cannot walk without total assistance (22% to 30%). In terms of functional impairment levels (ADL impairment plus cognitive impairment), a majority (50% to 58%) of the clients/residents in the four programs are in the highest (fifth) impairment level. A majority (61%) of the residents in the South Region OSS assisted living facilities are also in the highest impairment level, which is largely a function of the high percentage of these residents who are severely cognitively impaired (53%).

These findings should not be interpreted to mean that 50% to 70% of the clients/residents in these HCBS and ALF programs are as frail or as much in need of skilled care as the average nursing home resident. Such a determination cannot be made without additional analysis. It does seem reasonable, however, to conclude that there is sufficient overlap between the clients/residents of these programs and nursing home residents to support both further study of the health status and service utilization of these similarly impaired individuals and an attempt to divert some percentage of nursing home facility residents to less costly placements.

As discussed, the data indicate that the Medicaid HMO-ALF program participants in Dade County are substantially impaired. This program is also serving a much higher percentage of residents with a current mental health problem than any of the other programs for which data are available. It appears that ALF programs are serving residents who are more impaired than permitted under the current regulations for a standard licensed assisted living facility. ALFs are allowed to serve moderately cognitively impaired residents; but many ALF residents are severely cognitively impaired. The current ALF statute and rules should be reviewed in light of these findings.

It is estimated that there are currently 280,000 people in Florida over age 65 with three or more impairments in ADLs.¹⁵ For the most part, the state provides two levels of care to these frail elderly people: nursing home care for the severely impaired and home- and community-based care for the moderately impaired. Only the Medicaid HMOs and the Channeling program provide a level of funding commensurate with what the research literature indicates is required to effectively divert a person from nursing home care.

Recommendations

- C The state should expand funding for programs designed to deliver home and community-based services to those who are at greatest risk of nursing home placement (i.e., those with three or more deficiencies in activities of daily living/CADLs).** The development of these programs is necessary to contain future growth in long-term care costs.

The cost-effectiveness of home- and community-based long-term care programs, however, is substantially dependent on the capacity to target their use to those who are seriously impaired and clearly at risk of requiring nursing home care. This capacity is at least partially a function of client assessment and case management procedures specifically and rigorously designed to identify high-risk clients and ensure their timely referral to appropriate home- and community-based programs. The state should assess the procedures currently in use and make whatever changes are required to ensure their efficiency and accuracy in identifying high-risk clients.

- C The multivariate analysis shows that region of the state is a more important predictor of nursing home placement than impairment level. This finding**

¹⁵Long-Term Care for the Frail Elderly in Florida: Need and Cost Projections (1995-2010), Alan Ackman. Report to the Commission on Long-Term Care in Florida, 1995. The Florida Policy Exchange Center on Aging.

warrants further investigation into the availability of home- and community-based long-term care services across regions of the state.

C The effects of age, race and ethnicity in determining where a frail elderly person receives long-term care services should also be assessed.

Controlling for impairment level and other variables, the findings from this study indicate that the oldest elderly are more likely to be served in a nursing home or assisted living facility than in a HCBS program. There may be many good reasons for this age disparity, but they are not revealed by the analyses conducted for this study.

Non-white elderly people are far less likely to be ALF residents than white elderly. The research literature on nursing home use report underrepresentation of non-whites among nursing home residents. The findings of this study are consistent with the literature in terms of private-pay nursing home use, but not in terms of Medicaid financed nursing home care, where non-white elderly are well represented (i.e., 17% of the sample). Reasons for the low percentage of non-whites in ALFs are not readily apparent and there is little in the research literature on this issue.

As intensive versions of assisted living (e.g., Extended Congregate Care) designed to serve seriously impaired residents become more frequently used as alternatives to nursing home care, it will be necessary to increase the number and percentage of non-white residents. **One of the first steps in achieving this objective should be a study of the ALF program to determine reasons for the white/non-white differences in the current use of state-supported assisted living.**

C Finally, a comprehensive analysis of the two Medicaid Pre-Paid HMO plans for the frail elderly should be conducted. The evaluation should be based on an array of outcome measures, including health and functional status measures, and a uniform set of cost data. The analysis could be expanded to include samples of clients from the Channeling, HCE and the CCE programs. The addition of these public programs would provide a more comparative context for assessment of the findings.

Data should be collected on the following set of variables:

- **Consumer characteristics (client):** demographic characteristics (age, sex, SES), health status, functions status (ADL, IADL and cognitive deficits), and caregiver status.
- **Program process inputs:** number and kinds of services received (acute, chronic and long-term care services), sources of services, case management procedures (type of assessment conducted and service plans developed, monitoring and quality assurance activities), types and frequency of consumer participation in decision making, and aggregate calculations of service costs.
- **Program outcomes:** health (morbidity, mortality and other health related measures), functional (ADL, IADL) and psycho-social

(psychological measures) status, consumer satisfaction, and case manager caregiver assessments of care quality and outcomes.

The impairment profiles of clients in these programs (the Medicaid Pre-Paid plans, Channeling and HCE) are very similar to the nursing home resident profile, which justifies a more in-depth analysis of their relative cost-effectiveness vis-a-vis measured outcomes. The analysis should not be designed as a definitive assessment of the value of these programs. As Florida moves toward a more managed care approach to long term care, however, the state and provider entities, including managed care organizations, need to learn more about how these managed care programs work and about how to design valid and cost-efficient process and outcome measures.

The two Pre-Paid plans are among the leaders in the development of managed care approaches to long-term care and its integration with acute care in Florida. As such, they offer an unparalleled opportunity to learn more about the mechanics of managed care and about how to measure costs and outcomes.

Acronyms

AHCA	Agency for Health Care Administration
ALF(s)	Assisted Living Facility(ies)
CARES	Comprehensive Assessment, Referral and Evaluation System (Florida)
CCE	Community Care for the Elderly
DOEA	Department of Elder Affairs
ECC	Extended Congregate Care (Florida)
ER	Emergency Room
HCBS	Home- and Community-Based Services
HCE	Home Care for the Elderly
HMO	Health Maintenance Organization
HRS	Florida Department of Health and Rehabilitative Services (currently Department of Child and Family Studies)
IADL	Incidental Activities of Daily Living
MDS	Minimum Data Set
MSQ	Mental Status Questionnaire
OSS	Optional State Supplementation
PSA	Planning Service Areas
SNF(s)	Skilled Nursing Facility(ies)
SSI	Supplemental Security Income (Federal)
UAI	Uniform Assessment Instruments

APPENDIX A

Data Collection Instruments:

Skilled Nursing Facilities Instrument
Assisted Living Facilities Instrument
ALF Study Site (Facility-Specific) Instrument
Uniform Assessment Instrument Extraction Form (for HCBS cases)

APPENDIX B

Florida Regions Map (FIU/Florida Poll Study Regions)

