

Assisted Living in Public Housing: An Evaluation of Helen Sawyer Plaza

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Part I: Executive Summary

In January 1999 Helen Sawyer Plaza, a previously under-utilized public housing building for seniors, opened its doors as a multi-level assisted living facility (ALF). The previous year, Miami-Dade Housing Agency (MDHA) had successfully obtained funding from the State of Florida for the innovative transition and contracted with M.I.A. Consulting Group, Inc. (MIA) to develop the management and service delivery model, as well as to provide day-to-day administration of the new ALF.

MIA's founders were interested in evaluating the effectiveness of the model they created and implemented at HSP, called the *Total Housing Enterprise Model* (THEM). In particular they wanted to examine:

- ▶ The impact of THEM on (a) HSP residents, as compared to a similar group who chose not to move from non-assisted public housing, and (b) HSP residents over time.
- ▶ HSP residents' level of satisfaction with services.
- ▶ Identification of major strengths or limitations in HSP's service delivery system.
- ▶ Exploration of potential measures to document benefits of THEM, such as nursing home diversion and elimination of fragmented service coordination and delivery.

To that end, between January and December 1999, the Southeast Florida Center on Aging conducted an evaluation of the HSP-ALF. In response to the broad focus of the project, the methodology was designed to measure a number of indicators of effects and outcomes such as life attitudes, emotional health, cognitive function, satisfaction, medication use, hospitalizations, discharges, and staff attitudes and perceptions. Data were collected from HSP resident interviews, files and records, interviews with a control group comprised of elder public housing residents in other MDHA units, surveys of HSP employees, and detailed interviews with MIA principals.

This report provides a general description of the model introduced at HSP, an overview of the assisted living industry, results of data-collection and analysis, and recommendations for expanding and/or applying the study results.

Highlights of the results include the following observations:

- ▶ Resident scores at Time-1 and Time-2 showed improvement in measures of cognitive function and mental health. Furthermore, resident scores on a self-rated health question remained steady.
- ▶ Resident scores on the Geriatric Depression Scale, used as a measure of mental health, were very positive at both administrations, registering well within the "no concern/low concern" range. An improvement in scores was noted at Time-2.

- ▶ Residents indicated a high level of satisfaction with assistance provided to them when they moved to HSP.
- ▶ Resident satisfaction with the services offered at HSP was high at both survey administrations. At Time-2, only three of 22 statements elicited an average score over two (agreement with a positive statement) and no statement elicited an average score over three (on a four-point scale).
- ▶ Resident turnover at HSP between January and November was 22.7%. According to a 1998 American Seniors Housing Association survey, average ALF resident turnover rates were 53.8%.
- ▶ Of the residents leaving HSP during the study period, 20% were discharged to nursing homes as compared with an average 43% cited in a 1998 national survey report.
- ▶ On open-ended questions, residents commented most frequently about food preferences. The next most frequent response referred to the peace and tranquility residents experience at HSP.
- ▶ Despite an industry survey indicating that the costs of private rooms and provision of a full range of services were prohibitive for elders with low incomes, HSP is able to offer both to their residents.
- ▶ According to staff surveys, employees are extremely satisfied with their work at HSP and believe it is a good place for both them and the residents (a finding virtually unchanged from Time-1 to Time-2).
- ▶ Employee turnover between January and November 1999 was 21.8%, compared with national average annual staff turnover rates between 52% and 55% (National Center for Assisted Living, 1998).
- ▶ HSP far exceeded the Florida DOEA ALF staffing standard in each month of the study period.
- ▶ Larger samples are needed to confirm conclusions regarding effects of the THEM on residents. Moreover, a more comparable control group is needed before longitudinal findings can be corroborated with a cross-sectional assessment.

Despite methodological and operational challenges present during the pilot phase, results suggest that residents have benefited since relocating to HSP. The innovative *Total Housing Enterprise Model* and a successful public-private partnership between MDHA and MIA offer rich opportunities for both improving and expanding options for elders who reside in public housing facilities in Miami-Dade County and elsewhere. The potential economic and social benefits of this model support expansion of the concept and further evaluation of its overall effectiveness.

Part II: Background

A. Purpose of Study

A special report recently released by the U.S. Department of Housing and Urban Development's Office of Policy Development and Research (November 1999) articulates growing concern about lack of affordable services and housing options to allow low-income older residents with varying care needs to age in place. The report recognizes that provision of service coordination and support services for low-income elders in public housing has improved, but called for "more fundamental changes...to continue serving the low-income elderly population that is aging in place". The report also strongly urges increased funding and development of programs to "improve the range and coordination of housing/service combinations".

In 1996, responding to national and local concerns like those voiced in the 1999 HUD report, the MDHA asked MIA to assess the functional needs of low-income elders living in public housing in Miami-Dade County. The assessment was designed to determine the degree to which there was a need for housing options offering a higher level of care than traditional independent living with home and community-based supplemental services. The MIA study documented significant demand for affordable, high-quality assisted living facility (ALF) and extended congregate care (ECC) options for elders residing in public housing to enable them to delay and/or avoid nursing home placement (i.e., displacement). Armed with these findings, in 1998 the MDHA successfully petitioned the State of Florida for \$1.2 million to transform and operate HSP, an underutilized public housing facility for elders, into a multi-service residential facility (Miami-Dade Housing Agency Report, FY 1998).

The MDHA contracted with MIA to develop a plan for offering an assisted living facility option to public housing residents within the structure of the Housing Agency. The consultants created a concept called the *Total Housing Enterprise Model* (THEM) based on vertical integration of housing facilities for elders. A key feature of this model is the elimination of fragmentation in coordination and delivery of the full range of ALF services. MIA is now responsible for implementing the model, which includes adult day care and extended congregate care (ECC), in addition to the assisted living facility, as a pilot program at HSP. The model also provides a unique funding component that combines basic SSI/OSS resident income sources with the Medicaid ALF-Waiver subsidy (to provide in-home services) for eligible residents as well as the HUD Federal housing subsidy (which MDHA receives for each resident in its housing units). The overall funding approach, and specifically the HUD subsidy, enables HSP to provide either a private, single-occupancy studio apartment or a private one-bedroom apartment (for married couples only) to all residents, to maintain and staff a free transportation

service, and to provide other non-traditional benefits at no additional cost to residents. The MDHA retains ownership of the facility.

HSP-ALF opened its doors in January 1999 and drew initial clientele from public housing residents who had been identified by MDHA case managers as needing a higher level of care than could be provided to them in non-assisted public housing facilities for elders. The case managers were given criteria for the Medicaid ALF-Waiver Program and were asked to identify all public housing residents who met those criteria. These care workers produced a list of 124 pre-screened public housing residents who then were offered the opportunity to move to HSP. The decision to live in HSP was entirely voluntary.

MIA enlisted the assistance of the Southeast Florida Center on Aging (SFCOA) of Florida International University to evaluate how well HSP is meeting the needs of its residents and how effectively the overall model meets the goals of MDHA. This final report on the initial pilot phase, prepared by the SFCOA, presents findings, conclusions and recommendations based on assessments at Time-1 (baseline) and Time-2 (five months later), and other collected data.

B. Assisted Living Facility Industry

For frail elders and adults with disabilities who require moderate to significant assistance to remain in a home setting, assisted living provides a housing option to meet personal and supportive care needs. The Assisted Living Federation of America defines an assisted living residence as “a special combination of housing, personalized supportive services, and health care designed to meet the needs – both scheduled and unscheduled – of those who require help with activities of daily living” (ALPA, 1999). Philosophically, assisted living emphasizes personal dignity, autonomy, independence and privacy, with the objective of maintaining and/or enhancing the capabilities of frail older persons to remain as independent as possible in a non-institutional, homelike environment (Citro & Hermanson, 1999; Kane, Kane & Ladd, 1998; Utz, 1999).

Variations across states in the definition and regulation of ALFs as well as the housing and services offered make it difficult to establish the exact number of assisted living facilities and residents in the United States. However, a recent study estimated there were 11,472 ALFs nationwide, with approximately 650,000 beds and 558,400 residents, at the beginning of 1998. Occupancy rates averaged 84 percent in the previous year (Hawes, Rose & Phillips, 1999). One respondent in the same study estimated resident turnover rates to be 30 – 35 percent (Manard & Cameron, 1997). The average length of residency in an assisted living facility in 1997 was 26 months (Citro & Hermanson, 1999).

There are many variations in pricing structure among ALFs nationwide. The average annual cost cited in the Hawes, Rose & Phillips (1999) article was between \$12,000 and \$24,000. The authors noted this was somewhat understated because more than half of the ALFs included in the study offered minimal privacy and services. Furthermore, many ALFs, even in the high service/high privacy sector, do not cover all services. Residents often pay extra for such services as medication administration, transportation or nursing care. Out-of-pocket spending for basic needs such as supplemental insurance, uncovered health care and medication costs, clothing, sundries, etc. also must be considered. According to data from the U.S. Bureau of the Census, 40 percent of persons aged 75 and older had incomes in 1997 of less than \$10,000 per year while 84 percent had incomes of less than \$25,000 (Hawes, Rose & Phillips, 1999), making only the lowest-priced ALFs affordable for the majority of elders who could benefit from this level of care.

A 1997 industry survey identified a number of barriers to development of ALFs for lower-income elders and disabled adults. The application process for the HUD 232 loan program was consistently described as prohibitively slow-moving. Furthermore, many developers expressed a willingness to accept Medicaid, but only if reimbursement rates were adjusted. Some states were offering to pay as little as \$20 per day and would not factor in level of care. The study found that almost all respondents ruled out private living units as prohibitively costly for ALFs serving elders with low incomes (Manard & Cameron, 1997).

No references were found to a public-private partnership like the one between the Miami Dade Housing Authority and MIA. However, the CASERA Project (Golant, 1999) identified four models for merging housing and service provision in public housing settings. While none of the models exactly mirrors the HSP approach, the *Congregate Housing and Capitation Model* (CHCM) and the *Two-Tiered Assisted Living Program Model* (TTALPM) include elements reflected in MIA's THEM model. The *Congregate Housing and Capitation Model*, which targets low-income frail elders at-risk who meet nursing home eligibility criteria established under the Medicaid Waiver Program, is characterized by "one-stop shopping for services, services provided on-site, and cost of services determined through a capitated system". In addition, like the THEM model, a blend of HUD/PHA and client-based funding such as Community Care for the Elderly (CCE) and Medicaid Waiver, are essential components. However, unlike the CHCM model, MDHA contracts with MIA, an independent management company, to coordinate and/or provide services for the facility rather than undertaking coordination of multiple providers themselves.

The *Two-Tiered Assisted Living Program Model* (TTALPM) is characterized by two levels of service within a facility, a defined set of services to be provided for each level and service coordination with home and community-based services. The purpose of

this model is to provide continuum of care options within a single facility. While HSP offers two levels of care, assisted living and extended congregate care, it differs from the TTALP model because the tiers at HSP do not include the “least restrictive” living option with contracted support for home and community-based services. Home and community-based services are available to public housing residents. However, these were no longer sufficient for those who chose to move into HSP.

In summary, the innovative *Total Housing Enterprise Model* and a successful public-private partnership between MDHA and MIA offer rich opportunities for both improving and expanding options for elders who reside in public housing facilities in Miami-Dade County and elsewhere. The potential economic and social benefits of this model support expansion of the concept and further evaluation of its overall effectiveness.

C. Helen Sawyer Plaza

Helen Sawyer Plaza, located at 1150 N.W. 11th Street Road, is a fully renovated public housing building with 104 units (21 one bedrooms allocated for married residents, and 83 efficiencies for single occupancy). All units are air-conditioned, equipped with individual emergency alarm systems, private bathrooms, food preparation areas including refrigerator, and balconies.

The ground floor of HSP has a full kitchen with dining area, a community room, administrative offices, maintenance staff area, lobby and public rest rooms. The property has an electronic entry system and a 24-hour security guard. An on-site adult day care program is also housed on the ground floor and one floor has been designated and approved for extended congregate care (ECC).

Residents of HSP have access to a wide range of services provided at no cost above the established monthly fee. These include:

- ▶ Individualized care plans that allow residents to choose what services they need, and how and when these services will be delivered.
- ▶ On-site activities such as physical, hearing and speech therapy; social, cultural and recreational activities; and involvement in resident government.
- ▶ Transportation to medical appointments, cultural and recreational events.
- ▶ Three full meals per day, including accommodation for special dietary requirements, and three snacks each day (seven days per week). Room service is provided when needed.
- ▶ Available assistance with bathing or showering, dressing, laundry and housekeeping, ambulation and transferring, grooming and hair care.

- ▶ Nursing services provided by an in-house full-time registered nurse. Assistance with medication management is also provided.
- ▶ An adult day care program, located on the ground floor, where individualized service plans are developed by the case managers, according to residents' needs. A limited number of non-residents may participate in the adult day care program as well.
- ▶ Extended congregate care offered to residents with temporary illnesses or increased medical needs requiring a level of care and service beyond those normally provided in an ALF.

In order to qualify for residence at HSP, an individual must be at least 60 years of age, Medicaid-eligible, at risk of being placed in an institutionalized care setting, and require minimum assistance to live independently.

Residents' optional state supplement (OSS) stipends combined with each individual resident's income (SSI) pay the monthly cost of residency. Subsidies from the Medicaid ALF-Waiver Program (for eligible residents) and the HUD Federal housing for low-income elders program also underwrite resident expenses. Residents receive \$43 in cash from their SSI income per month as a personal allowance.

MIA is responsible for management of the ALF, ECC and adult day care programs, including the provision and supervision of all employees and services at HSP. This exclusive approach to service coordination and delivery, which promotes integration and reduces fragmentation of service delivery, is a primary feature of the THEM model.

In order to both contain employment costs and offer employees a good benefits package, MIA outsources many of the human resource functions at HSP through a staff leasing arrangement. However, because so much emphasis is placed on the staff's ability to perform their jobs with a positive and respectful attitude toward residents, MIA retains control of hiring and day-to-day supervision of employees. The initial staff of eight was selected from 120 candidates.

In August 1999, residents elected their first advisory group. Management reported a high level of resident participation in the nomination and voting process. Although no specific stratification was required, nor was it built in to the selection process, the advisory group includes representation reflective of the racial and ethnic diversity of the residents.

As of December 22, 1999, 74 residents were living at HSP and 30 individuals were employed there, excluding the MIA principals.

Part III: Methodology

This pilot study addressed the following questions:

- ▶ What is the impact, if any, of MIA’s THEM on (a) HSP residents, as compared to a corresponding group who chose not to move from non-assisted public housing, and (b) HSP residents over time?
- ▶ Are HSP residents satisfied with the services they are receiving and are their needs being met?
- ▶ What are the major strengths and limitations in HSP’s service delivery system?
- ▶ How can HSP evaluate and document the benefits of its service delivery model?

The methodology was designed to measure a number of indicators of effects and outcomes such as life attitudes, emotional health, cognitive function, satisfaction, medication use, hospitalizations and discharges, as well as staff attitudes and perceptions. Data were collected from HSP resident interviews, files and records, interviews with a control group comprised of elder public housing residents in MDHA housing units, a survey of HSP employees, and interviews with MIA principals.

Although the period covered by the preliminary evaluation was relatively brief, it was decided to set in place at the outset a rigorous evaluation design that could be

utilized to measure resident outcomes over a considerably longer period. A quasi-experimental design that includes both longitudinal and cross-sectional dimensions was adopted. This approach is depicted in Figure 1.

**Figure 1
Experimental Design**

	<u>Time 1</u>	<u>Intervention</u>	<u>Time 2</u>
Treatment Group	O ₁₁	(X)	O ₁₂
Control Group	O ₂₁		O ₂₂

- O represents points of observation or measurement; 11 means Group 1 at Time 1, 12 means Group 1 at Time 2, etc.
- X means living at HSP and receiving ALF services

Sampling methods, measurement and data analysis strategies are discussed in greater detail in the following sections.

A. Data Collection

Resident Interview (See Attachment D)

The evaluation team used personal interviews with residents to collect measures of cognitive status, quality of life, attitudes/emotional health, physical health, perception of facility compliance with required standards, and satisfaction with specific aspects of HSP services. The resident interview took about one hour to complete.

Data from the resident interviews can be useful in three ways: (a) to compare with the control group's scores on several of the same indices, (b) to compare resident scores at Time-1 and Time-2, covering a span of approximately five months, and (c) as management information for MIA and the MDHA to help them assess effectiveness of operating policies and procedures.

Approximately six months after admitting the first residents to the HSP-ALF, all were asked to participate in the SFCOA study. Each resident received a letter from SFCOA staff explaining the purpose of the study and asking for participation (see Attachment B). HSP staff followed-up to obtain consent form signatures. Of the 47 residents living at HSP at the end of June 1999, 30 (64%) gave consent to participate in the pilot study. At the Time-1 interviews, one participant who had given consent was in the hospital, one refused to answer, and six were unable to respond. One resident agreed to be interviewed but did not consent to the file review component. Thus, the Time-1 interview sample included 22 residents. At Time-2, five of the 22 Time-1 participants were either no longer at HSP or were unavailable at the time of the interview. One resident, who gave informed consent but refused to answer survey questions at Time-1, did complete the interview at Time-2. Therefore, the Time-2 interview sample included 18 residents. Time-1 data collection occurred in July 1999 and Time-2 took place in December 1999.

Control Group Interview (See Attachment E)

The control group interview, which took about 30 minutes to complete, was designed to provide comparison data regarding cognitive status, quality of life, attitudes/emotional health, and physical health as one approach to answering the basic research question of the study. The sections on compliance with ALF mandates and the satisfaction survey given to residents were not included. A section regarding home and community-based services, however, was used to determine the degree to which non-assisted public housing residents might be receiving similar services to those provided by the ALF. Control group interviews were conducted approximately five months apart, mirroring the resident sample.

MDHA provided MIA with a list of 124 public housing residents who qualified for ALF residency based on recommendations of MDHA case managers as well as assessment scores on activities of daily living (ADL) and instrumental activities of daily living (IADL). The initial resident prospects for HSP ALF placement were drawn from this list and this same list was intended to be the universe from which the control group sample would be selected.

For the Time-1 control group sample MDHA asked their residential services social workers to obtain written consent for participation; 18 elder public housing residents

signed consent forms in early July. Cover letters and consent forms, similar to those used for residents, were provided (See Attachment C). At the time of the interviews (three to four weeks later) one enrolled participant was hospitalized, one was ill, one was deceased, three people refused participation, and three people did not answer their door and/or telephone. As a result, the sample size of the Time-1 control group was reduced to nine. Moreover, one of the nine was not on the original prospect list.

For the Time-2 interviews, MDHA residential services were again responsible for identifying control group participants. MDHA attempted to include the 18 residents who gave consent to participate at Time-1. Most were either unwilling or unable to participate at Time-2. Table 1 shows the disposition of the 18 Time-1 elders in the control group sample at Time-2.

Table 1
Disposition of Time-1 Control Group at Time-2

Disposition	N	Percent
Unwilling to visit Helen Sawyer	3	16.6 %
In the hospital/other health reason	4	22.2 %
Lease violations/being evicted	2	11.1 %
No longer appropriate	1	5.6 %
Deceased	1	5.6 %
Unable to contact	1	5.6 %
Reason unknown	4	22.2 %
Participated Time-2	2	11.1 %
TOTAL	18	100.0 %

MDHA residential services social workers obtained consent from twenty-one (21) public housing residents for the Time-2 interviews, including five who consented to participate at Time-1. On the day the interviews were scheduled, seven of the 21 were either unavailable or unwilling to be interviewed at HSP. Therefore, 14 control group interviews were completed at Time-2. Moreover, 14 of the 21 Time-2 control group respondents were not on the original prospect list. In the end, only two control group participants were interviewed at both Time-1 and Time-2.

Several factors changed between Time-1 and Time-2 and may help account for the reduction in participation of Time-1 subjects at Time-2. Time-1 interviews were conducted in the individuals' residences while Time-2 interviews were conducted at HSP. The change was arranged because the Time-1 interviewers were relatively unsuccessful at getting elders who had consented to participate to agree to talk on the day of the actual interview. HSP provided transportation for the Time-2 interviews. In addition, participants at Time-2 were offered a modest stipend (\$10.00) and a free lunch as incentive to participate in the interview.

Due to limitations in the control group samples, data from the control group interviews could not be interpreted in any comparative context. The most serious of these limitations are the low number of duplicate respondents in the Time-1 and Time-2 interview groups and the disparity in demographic characteristics between the Time-1

and Time-2 cohorts. In addition to the significant differences between the two control group cohorts, neither group actually turned out to resemble the HSP resident sample closely enough to permit a comparison. Consequently, measures on the two control group samples are not presented in the body of this report. A fuller treatment of control group results can be found in Attachment H.

Staff Survey (See Attachment F)

The staff survey was developed by the research team to determine the degree to which staff self-report compliance with certain mandated resident care standards, as well as their general attitude regarding HSP. The survey, which took approximately 15 minutes to complete, collected information about staff demographics, compliance with mandates regarding resident care, work satisfaction, general attitudes about the facility and the overall quality of care provided to residents. In addition, staff was given the opportunity to make any additional comments they wished.

The Time-1 staff survey was administered to 25 HSP employees. Three employees of MDHA who worked full-time on the premises of HSP were also included in the survey. Two employees did not respond; thus the total Time-1 sample was 26. At the time of the Time-2 staff survey, 25 individuals were employed, again including the two MIA principals. All HSP employees, participated at Time-2, however, MDHA staff did not. Therefore, the total sample at Time-2 was 25. The MIA principals completed the survey both times.

The survey was administered to staff at a general staff meeting in mid-July 1999 and again, in the same setting, in mid-November 1999. All staff was asked to participate although participation was voluntary.

B. Resident Outcome Measures

Health Care Utilization

It was hypothesized that hospital admissions would be lower among HSP residents than among the control group and that they would decrease over time as residents' experience living at HSP lengthened. It was reasoned that their medical needs would be addressed earlier and more appropriately, thus reducing the acuity of symptoms and making a trip to the hospital less necessary.

Use of Medications

The rationale for observing use of prescriptions drugs was similar. It was hypothesized that the medication management service would lead to a reduction in the use of duplicate and contra-indicated medications. This would be a function of more consistent administration (individuals not repeating and/or missing doses) as well as

proactive intervention with physicians where HSP nursing staff identified potentially unnecessary medication prescriptions.

Physical Health

HSP residents were expected to experience better health overall and to improve in their self-perceived health status from the point they entered HSP. This is anticipated to result from the presence of staff capable of monitoring their conditions as well as from improvements in their emotional well-being stemming from residence in a pleasant and stable environment.

Emotional Health

All else equal, HSP residents were expected to experience overall improvement in their emotional well-being relative to that of the control group and to improve over time once they entered HSP. The sanguine effect of a supportive and stimulating environment encapsulated by the model of ALF care would be expected to extend even to their cognitive status over time. Specifically, HSP residents, relative to the control group and over time, should evidence a higher level of life-satisfaction and a lower level of depression. All else equal, HSP residents also should score higher on a scale of cognitive status.

Nursing Home Admissions

Given that facility staff are on-site, first and foremost, to assist residents with dependency needs, it was hypothesized there would be less need for residents to enter a nursing home to receive these services than would be the case were they living in non-assisted HUD-funded housing for elders. Thus, relative to the control group, one would expect to see fewer nursing home admissions among HSP residents.

C. Informed Consent

Consent forms were obtained for all resident and control group subjects who participated in the study. No resident files were reviewed unless consent was obtained.

A sample resident consent letter and consent form is provided in Attachment B. Attachment C includes a copy of the control group consent letter and consent form.

D. Data Analysis

All quantitative data were computer-analyzed utilizing SPSS software. Descriptive statistics, including averages, ranges, and proportions, were calculated for each of the measured variables.

Part IV: Results

A. Demographics

Residents

Comparisons in this section include only the 18 HSP residents who participated at both Time-1 and Time-2, including the one resident who refused to complete the interview process at Time-1, but did complete the interview process at Time-2.

The average age of the samples was 82.4 and 82.6 for Time-1 and Time-2, respectively. The minimum age was 60 (61 at Time-2) and the maximum age was 100 both times. The group was evenly split by gender; 50% male and 50% female. Fourteen (77.8%) respondents were White and 22.2% were Black.

The ethnicity section of the interview form allowed for distinctions between “Cuban” and “Other Hispanic”, and between “Haitian” and “Other Caribbean”. Some inconsistencies occurred in how these categories were applied by residents at Time-1 versus Time-2. To simplify, in this report the two Hispanic categories were collapsed into one, as were the two Caribbean categories. The ethnic breakdown thus was 72.2% Hispanic, 5.6% Caribbean and 22.2% Other.

Table 2 shows results for marital status at Time-1 and Time-2. The distribution changed only because one respondent indicated she¹ was “Single” at Time-1 and “Divorced” at Time-2.

Education was recorded at three levels: grade school only (meaning respondent completed no more than 6th grade), high school (meaning respondent completed some grades beyond 6th up to and including high school completion), and beyond high school (meaning respondent participated in some post high school degree program). Half of the sample (50.0%) reported grade school only; 33.3% reported high school and 16.7%, beyond high school.

Table 2
Marital Status, Time-1 and Time-2

Status	Time-1	Time-2
N	18	18
Widowed	55.6 %	55.6 %
Married	11.1 %	11.1 %
Divorced	22.2 %	27.8 %
Single	11.1 %	5.6 %

¹ In order to maintain complete anonymity, “she” is used generically to refer to any specific resident.

Staff

Table 3 shows the demographic results for staff surveyed at Time-1 and Time-2. Four demographic elements were measured: age, gender, race and ethnicity. Race and ethnicity categories used for the resident and control group surveys were also used for employees. As with the other cohorts, the Hispanic and Caribbean categories were collapsed from two to one, respectively. Anecdotally, some respondents indicated they consider being Hispanic as a race (versus ethnic group).

Because a number of respondents did not indicate certain demographic characteristics, particularly ethnicity and race, comparisons between Time-1 and Time-2 cannot be made.

**Table 3
Staff Demographics, Time-1 and Time-2**

Category	Characteristic	Time-1	Time-2
<i>N</i>		26	25
<i>Age</i>	Average	46	45
	Oldest	72	60
	Youngest	20	24
	Not reported	0	3
<i>Gender</i>	Male	16.0 %	4.0 %
	Female	84.0 %	84.0 %
	Not reported	0	12.0 %
<i>Race</i>	White	50.0 %	24.0 %
	Black	23.1 %	32.0 %
	Asian	0	4.0 %
	Not reported	26.9 %	40.0 %
<i>Ethnicity</i>	Hispanic	73.1 %	60.0 %
	Caribbean	0	0
	Other	23.1 %	4.0 %
	Not reported	3.8 %	36.0 %

B. Resident Interview (See Instrument, Attachment D)

Cognitive Function

After reporting demographic information, residents were administered the Short Portable Mental Status Questionnaire (SPMSQ) to determine their level of cognitive function (Table 4 provides the scoring key). Scores on the SPMSQ are based on the number of wrong answers given to the 10 questions. Therefore, lower scores indicate better cognitive functioning. For the 17 residents who completed the SPMSQ at both administrations, the Time-1 and Time-2 average scores were 3.12 and 2.81,

**Table 4
SPMSQ Scoring Key**

0-2 errors	Intact cognitive function
3-4 errors	Mild cognitive impairment
5-7 errors	Moderate impairment
8-10 errors	Severe Impairment

respectively, indicating improvement in cognitive function within this cohort.

In the Time-1 sample, five respondents scored in the moderate impairment range and one respondent scored in the severe impairment range. Because of the likelihood that persons

scoring in the moderate and severe impairment ranges would not be able to give valid information on the rest of the questionnaire, these participants' responses were excluded from further analyses, reducing the Time-1 sample to 12 for the remaining

sections of the interview. In the Time-2 sample, two respondents scored in the moderate impairment range and one respondent scored in the severe impairment range. Their responses were thus excluded from further analyses, reducing the Time-2 sample to 15 for the remaining sections of the interview.

Eleven (11) residents scored either in the mild impairment range or better at both Time-1 and Time-2. Of these, 54.5% (6) had intact cognitive function and 45.5% (5) had mild impairment at Time-1. At Time-2, 81.8% (9) of the 11 had intact cognitive function and 18.2% (2) had mild impairment. The remaining comparisons in this report reflect only those 11 residents with either mild impairment or intact cognitive function at both administrations.

Self-Rated Health

In order to determine residents’ attitudes regarding their own health status, respondents were asked to rate their health as compared to others their age on a scale from 1 to 4, with 1 representing “excellent,” 2 representing “good,” 3 representing “fair,” and 4 representing “poor.”

The average scores for the 11 residents at Time-1 and Time-2 were 2.9 and 3.0, respectively. Two resident scores stayed the same, four scores improved and five were more negative.

Satisfaction with Life

The Diener Satisfaction with Life Scale (DSL) is composed of five statements rated on a 7-point scale, from strongly agree (7) to strongly disagree (1). The highest possible score is 35 and the lowest is 0. The scoring key for the DSL is presented in Table 5. The average respondent score on the DSL for the 11 respondents was 27.9 and 24.9 for Time-1 and Time-2, respectively. Comparing Time-1 with Time-2, one respondent’s score remained the same, three improved and seven were lower.

0 – 9	Extremely dissatisfied
10 – 14	Dissatisfied
15 – 19	Slightly dissatisfied
20	Neutral
21 – 25	Slightly satisfied
26 – 30	Satisfied
31 – 35	Extremely satisfied

Note: Highest possible score = 35

The results indicate relatively high satisfaction with life at both administrations. However respondents, overall, were somewhat less satisfied with life at the second survey administration. The significance of this change is indeterminable. Small changes in scores can have a relatively large impact because of the small sample. In addition, with improved cognitive function and more daily support, some residents may

have re-set their criteria for life satisfaction, and the reductions in scores may reflect greater expectations.

Depression

The Yesavage Geriatric Depression Scale (GDS) is a series of 15 yes-no questions. The score on this scale is obtained by summing the number of negative responses. A score between six and ten is suggestive of depression and a score of greater than ten “almost always” indicates depression (www.glmed.org/Gds/GDS.html, 1999). The worst possible score is 15 and a score of 0 indicates an absence of depression indicators. Average GDS scores for Time-1 and Time-2 were 4.2 and 4.0,

respectively, well below the range suggestive of depression. Scores remained the same for one of the 11 eleven respondents; five individual scores were less suggestive of depression at Time-2 and five were more suggestive. No respondent scored over ten either time. Table 6 shows the number of

Table 6
YGDS Result Categories, Time-1 and Time-2

Category	Range	Time-1	Time-2
No/low concern	0 – 5	6	7
Suggestive	6 – 10	5	4
Almost Always	11+	0	0
N = 11			

respondents in the relative categories at both survey administrations. One notable limitation of this measure was the absence of a control for residents on medications that treat depressive symptoms.

Perceptions of Compliance with ALF Mandates

The next group of questions assessed residents’ perceptions regarding compliance of the staff and facility with specific ALF mandates for resident care. Each of the 14 questions was scaled from 1 to 4, with 1 representing “almost always,” 2 representing “often,” 3 representing “sometimes,” and 4 representing “almost never.” Respondents also had the option of answering “don’t know” to each of the questions. The questions are consistently stated so that the lower the score, the more favorable the response, with a minimum of 1 (=best) and a maximum of 4 (=worst). The results for each question are reported in Table 7 below.

Table 7
Perceptions of Compliance with ALF Mandates, Time-1 and Time-2

Question	Time-1	Time-2
1. Are you treated with dignity and respect?	1.0	1.4
2. As a resident, is your privacy respected?	1.0	1.0
3. Does staff address you by your preferred name?	1.0	1.3
4. At admission, were you asked about your interests and community activities?	2.3	2.2
5. Are you included in the activities in which you wish to participate?	1.8	2.0
6. Can you participate in shaping policies that affect resident living?	1.7	2.1
7. Were you included in developing your service plan?	1.4	2.5
8. Are you permitted to develop and maintain relationships in the community?	1.0	1.3
9. Are you permitted to develop and maintain relationships with your family?	1.0	1.1
10. Are you encouraged to write or express your comments regarding services?	1.5	2.0
11. Are your/other residents' comments considered in shaping activities and policies?	1.2	2.1
12. Is affordable transportation available for your medical appointments?	1.1	1.3
13. Is affordable transportation available for your community and social activities?	1.7	2.5
14. Is someone available on the premises 24 hours a day if you need them?	1.0	1.0
1 = Almost Always 2 = Often 3 = Sometimes 4 = Almost Never		N = 11

Average scores were relatively high at both administrations. Between Time-1 and Time-2 the average scores remained the same on two questions, improved on one question, and were less favorable on the remaining 11 questions. A number of factors may have contributed to the change in scores. Question 7, which produced both the greatest variance from Time-1 to Time-2 and the most negative response at Time-2, provides a good example of confounding influences. While a false negative might be suggested because Question 7 requires event memory recall that may not be acute for some of the subject population, within the current study there is also no way to rule out that the poor response indicates problems with the service planning process. In fact, every resident signs the service plan developed when they are admitted to the facility.

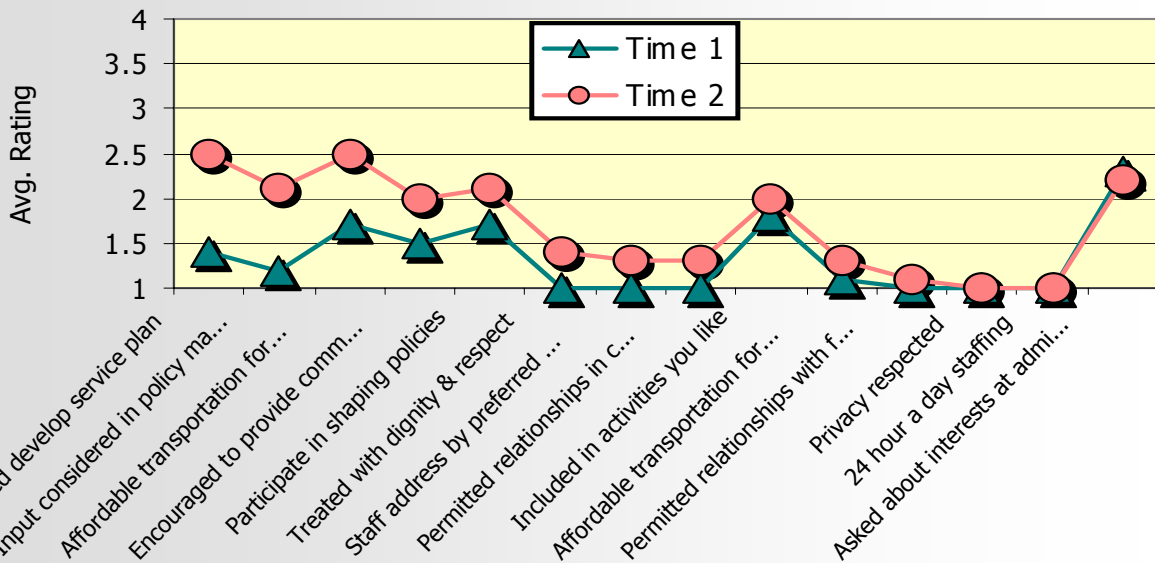
With regard to Question 4, despite relatively low resident recall on this issue, in addition to discussion during the admission process, HSP staff conducted several surveys during the pilot year to identify activity interest. HSP staff report increased resident participation in activities. Question 10, similarly, reflects (CONTINUE ON PAGE 20 OF DRAFT)

Chart 1 below illustrates average scores, in descending order, by the greatest variance in score between Time-1 and Time-2. Chart 2 presents the average score at

Assisted Living in Public Housing: An Evaluation of Helen Sawyer Plaza

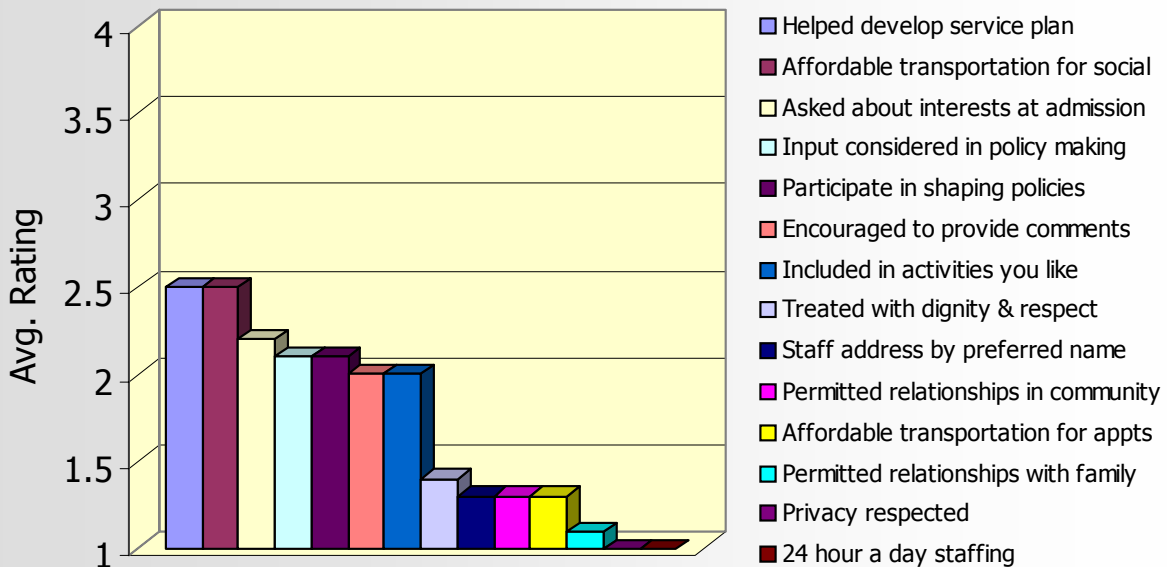
Time-2 for each question in descending order, showing the most negative responses reading from left to right.

Chart 1
Compliance With ALF Requirements, Time-1 and Time-2



1 = Almost Always 2 = Often 3 = Sometimes 4 = Almost Never

Chart 2
Compliance With ALF Requirements, Time-2 Ordered



Satisfaction with Services

The next section of the interview, consisting of 26 statement items, assessed the satisfaction of residents with the services provided at HSP. Interviewees were asked to respond to statements using a four point scale where 1="strongly agree," 2="agree," 3="disagree," and 4="strongly disagree", with "don't know" as a fifth option. The first four items addressed issues regarding the move to HSP. The remaining items addressed satisfaction with facilities and on-going services. All items were stated positively; thus a lower score indicates a more favorable response.

The first four items, which focused on respondents' move to HSP, were not used at Time-2 because no new residents were interviewed at the Time-2 administration. Note that the sample represented with this specific data refers to a group of 15 respondents who completed the Time-1 survey (one respondent terminated the interview just before this section). The Time-1 results are quite favorable, with no item getting a score less favorable than "agree". Table 8 below shows the mean response for each of the four statements.

Table 8
First Four Statements on Satisfaction With Services, Time-1 Only

Question	Time-1
1. I received all the help I needed to move my belongings from my old house or apartment.	1.6
2. I was satisfied with the information I received before I moved here about the benefits.	1.3
3. My apartment was clean when I moved in.	1.0
4. I received all the assistance I needed to get settled into my new apartment at HSP.	1.3
1 = Strongly Agree 2 = Agree 3 = Disagree 4 = Strongly Disagree	N = 15

The average scores for the remaining statements (5 – 26) at Time-1 and Time-2 are shown in Table 9 below. There was virtually no overall change in satisfaction between Time-1 and Time-2, although this varied by topic. Satisfaction ratings on five statements remained the same, eight indicated greater satisfaction at Time-2 and nine indicated less satisfaction at Time-2.

**Table 9
Resident Satisfaction With Services, Time-1 and Time-2**

Question	Time-1	Time-2
5. I like the way the food tastes here.	1.9	2.7
6. I get enough food to eat here.	1.2	1.2
7. The other residents at HSP are friendly to me.	1.2	1.7
8. The people who work at HSP are friendly to me.	1.0	1.0
9. I have all the utilities I need to be comfortable in my apartment.	1.1	1.0
10. All the utilities in my apartment work.	1.1	1.0
11. The common areas here are clean.	1.0	1.0
12. The chairs, sofas, benches and tables in the common areas are comfortable.	1.0	1.3
13. If I want to participate in activities here, there are plenty of things to choose.	1.5	1.7
14. When I participate in activities here I enjoy them and have fun.	1.4	1.4
15. I think it is good that we can have pets here.	3.0	3.5
16. My apartment here feels like home.	1.3	1.5
17. The staff here helps me when I have problems.	1.1	1.2
18. I can tell the staff here are always willing to talk to me.	1.2	1.1
19. I am able to make important personal decisions without staff interference.	1.0	1.4
20. I am able to manage my money with the monthly allowance I get.	1.4	1.6
21. I like using the shared risk agreement when I make personal decisions.	2.7	2.0
22. The staff here goes out of their way to help me.	1.7	1.5
23. The transportation service provided by HSP is comfortable.	1.8	1.5
24. The transportation service provided by HSP is on time.	1.7	1.6
25. It is easy for me to arrange for transportation from HSP when I need it.	1.6	1.6
26. I would recommend this place to a friend.	1.7	1.3

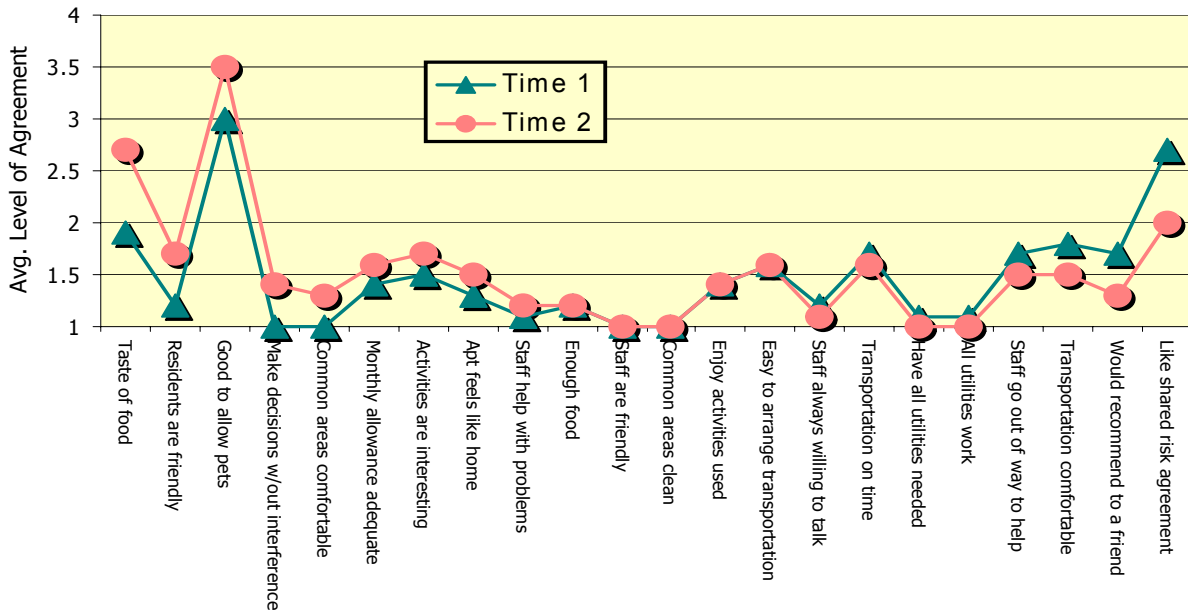
1 = Strongly Agree 2 = Agree 3 = Disagree 4 = Strongly Disagree

Chart 3 below shows the average scores, in descending order, by the greatest negative difference in score between Time-1 and Time-2 reading from left to right. Of note is the presence of relatively large changes, both positive and negative, at both ends of the graph. Items #5, #7, #15, #19 and #12 showed relatively large negative variation, while items #23, #26 and #21 showed relatively large favorable variation. Chart 4 presents, in descending order, the average score at Time-2 for each question, showing the most negative responses reading from left to right. While some attitudes appear to have shifted significantly, changed responses for just one or two residents have a relatively large impact on the average score because of the small sample size.

The results do indicate that residents are satisfied overall, with only three statements registering average scores over "2" at either Time-1 or Time-2.

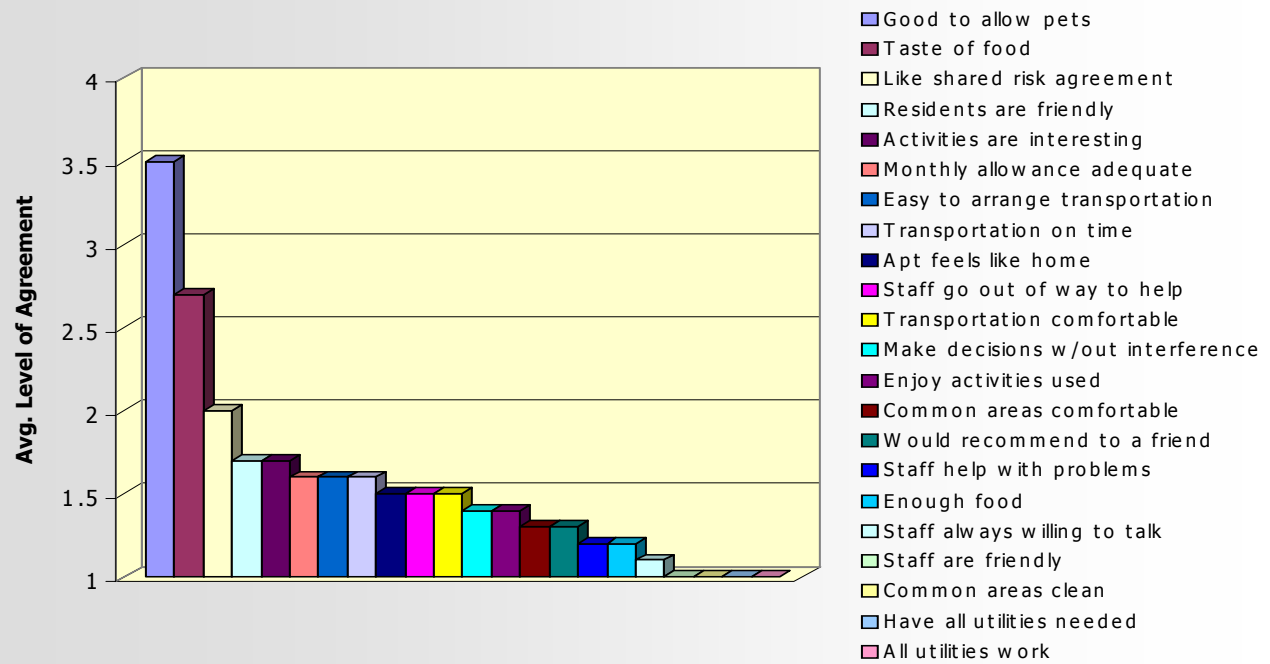
Chart 3

Satisfaction With Services, Time-1 and Time-2



1 = Strongly Agree 2 = Agree 3 = Disagree 4 = Strongly Disagree

**Chart 4
Satisfaction With Services, Time-2**



Open-Ended Questions

Open-ended questions offered survey respondents an opportunity to add information of interest to them that may not have been elicited in the more structured parts of the assessment. Six structured open-ended statements were included to elicit comments in broad content areas. Residents were also asked to add any thoughts they wished to have included on any topic prior to concluding the interview.

The open-ended statement that elicited the most response focused on the food. In answer to the statement, "the best thing about living at Helen Sawyer Plaza, residents frequently referred to the peace and tranquility. Most of the statements elicited no specific response from most of the sample.

Summaries of resident responses on the open-ended questions are included in Attachment I.

C. Staff Surveys

Responses on the Staff Survey at Time-1 and Time-2 were not analyzed because all scores were either a "one" (strong agreement with a positive statement) or "two" (agreement with a positive statement). In fact, at Time-1, 11 of the 26 respondents (42%) answered with all "ones", the most positive response option. When the survey was repeated at Time-2, the results were similar, with 11 of the respondents (44%) again scoring all "ones". The remaining 14 Time-2 respondents either "strongly agreed" or "agreed" with all of the statements, with the exception of one respondent who indicated "disagree" for the statement, "Residents have a say in making rules that affect the way they live."

Although MIA management made no attempt to influence employee response on the surveys, their presence when the survey was administered may have contributed to the pronounced positive results. In future studies, staff surveys should be administered in a setting where management is absent to eliminate any opportunity for contamination of results.

D. Aggregate Outcome Measures (See Instrument, Attachment G)

Table 10 below summarizes the indicator data collected for the 11-month study period, with the exception of activity, transportation and staff data. The activity data are not shown because the staff at HSP modified their approach to counting activities as well as resident participation in activities during the study period; it was unclear whether or not the information before and after the change was comparable. Transportation data are not included because records indicated consistently high usage, mainly for medical visits. Staffing data are presented separately in Table 13 later in this section.

Admissions and discharges, hospitalizations, medication use and staffing are discussed in detail following the summarized data in Table 10.

Table 10
Aggregate Outcome Measures, January – November, 1999

Indicators	Jan	Feb	Mch	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
<i>Admissions and Discharges</i>											
# New Residents	10	6	7	11	8	9	9	7	5	6	10
# Residents Discharged	0	0	1	2	1	2	3	2	3	4	2
# Residents Living at HSP	10	16	22	31	38	45	51	56	58	60	68
<i>Hospitalizations</i>											
# Hospitalized One Time	3	1	3	3	4	3	5	6	13	10	11
% Hospitalized One Time	30.0%	6.3%	13.0%	9.1%	10.3%	6.4%	9.3%	10.3%	21.7%	15.6%	15.5%
# Hospitalized >One Time	0	0	0	0	0	0	1	2	1	2	3
% Hospitalized >One Time	N/A	N/A	N/A	N/A	N/A	N/A	1.9%	3.4%	1.7%	3.1%	4.2%
<i>Medication Use</i>											
# Residents* with Meds record	7	11	14	21	23	23	23	22	22	23	21
# Meds/Resident*	4.9	5.6	6.5	5.3	5.7	5.9	5.4	6.4	6.0	6.2	6.1

* Residents who agreed to participate

Admissions and Discharges

A total of 88 residents moved into HSP, with an average of 8 new residents per month, during the period January through November 1999. The minimum number of new residents to move in during one month was five (September) and the maximum number in one month was 11 (April). During this same period, HSP discharged 20 residents, an average of just under two persons per month. Table 11 shows the discharge reasons for both the entire HSP population during the 11-month study, and for the 29 residents in the sub-group who signed consent for participation in the file review portion of the study. Despite discharges, the total number of residents living at HSP consistently increased over the entire study period (see Table 10).

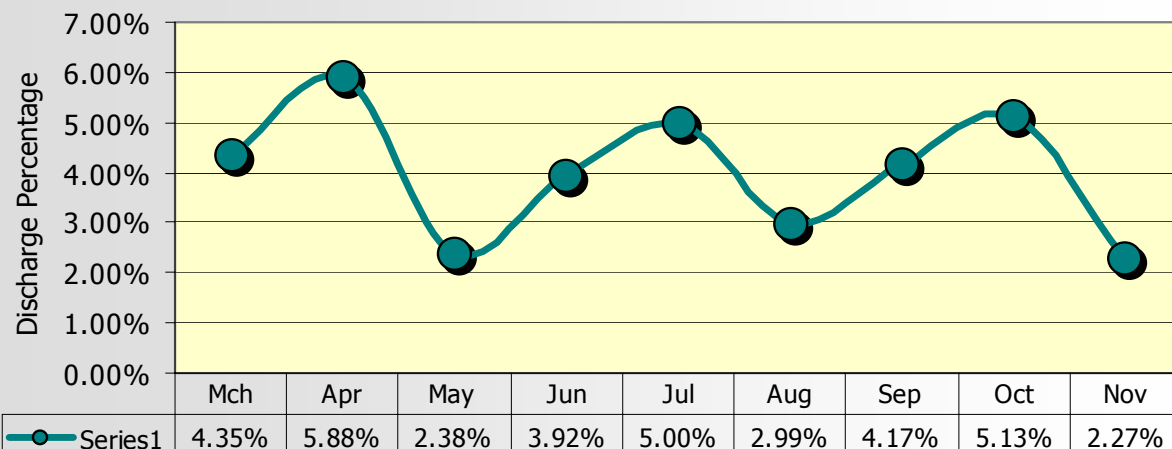
Table 11
Discharge Reasons

Discharge Reason	Total Residents	Study Residents*
N	88	29
Deceased	7	3
To mental health facility	3	0
To nursing home	4	0
To other ALF	2	1
To family or friends	2	1
Back to independent living	2	0
TOTAL	20	5

* Sub-population of total residents who consented to participate

Chart 5 below shows the discharge rate (number of discharges as a percentage of total residents moving in), for the 11-month study period. The pattern is sporadic and no specific trend is discernable.

**Chart 5
Discharge Rates per Resident**



Note: There were no discharges in January and February

N = 88

Table 12 provides an industry context, comparing the HSP discharge rates, by discharge reason, to data from the National Center for Assisted Living 1998 Survey (Facts and Trends: The Assisted Living Sourcebook, 1998).

Both the higher rate of deaths and the lower rate of nursing home discharges (for HSP as compared to the NCAL data) point to the value of additional research to better understand the trends for these key indicators at HSP.

**Table 12
Comparison of Discharge Rates, by Discharge Reason**

Discharge Reason	Total HSP Residents	NCAL Data
N	20	N/A
Deceased	35 %	22 %
To nursing home	20 %	43 %
To other ALF	10 %	9 %
To independent living	10 %	13 %
Other	25 % ¹	14 % ²

* Sub-population of total HSP residents who consented to participate
¹Includes residents who moved with family & to a mental health facility
²Includes residents who went to a hospital & to another setting

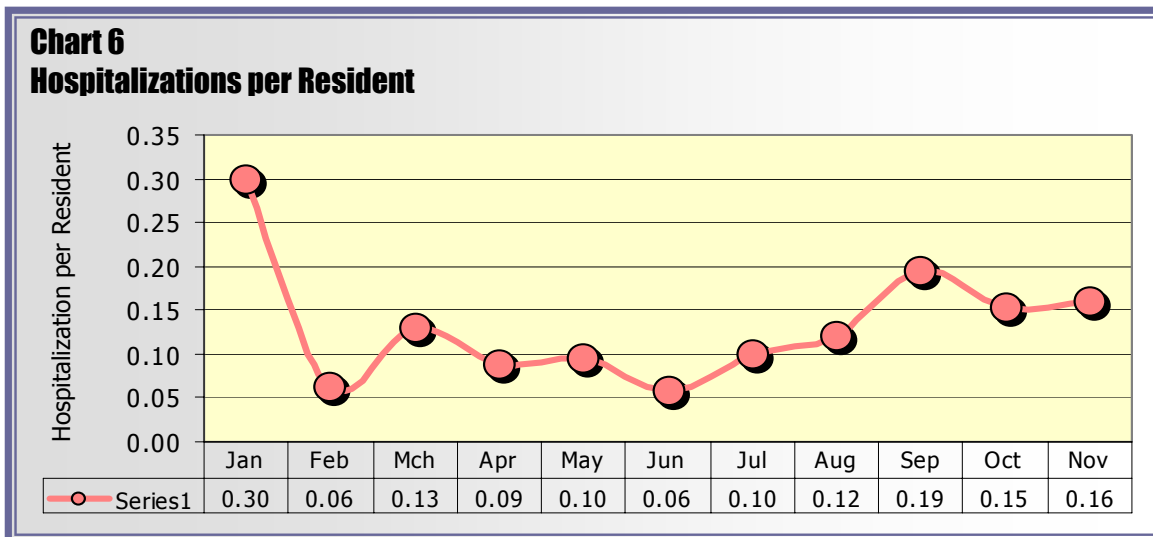
Hospitalizations

For the 11-month study period, an average of 5.6 people were hospitalized per month. Beginning in July, at least one person was hospitalized more than once. In November, three residents were hospitalized more than one time, the most frequent occurrence of that event.

Because there is no physician on the premises, HSP staff calls 911 when a resident experiences any questionable health episode. Each 911 call that results in transport to a hospital is documented on a transfer form that is placed in the resident's file. The form does not include documentation regarding whether the resident was seen in the emergency room and released or subsequently admitted to the hospital. In September, HSP staff began compiling a daily census report that captures hospitalizations in more detail. However, to be consistent for the entire study period, hospitalization data were collected from the transfer forms placed in each resident's file.

Chart 6 below indicates the ratio of residents hospitalized at least once in the month to total residents. Hospitalizations per resident increased over the course of the eleven-month study period. Although this pattern is contrary to that hypothesized, it is nevertheless logical. Hospitalizations might increase, rather than decrease, because in-house staff will be more alert to the need for medical attention and more likely to insist that residents with symptoms seek hospital care than the residents would be themselves if unmonitored.

One of the MIA principals attributed the rise in hospitalizations and increase in multiple hospitalizations per month to the growing number of residents with chronic conditions such as diabetes and kidney disease. She also observed that residents were sometimes weakened by a hospital stay, due to displacement and disruption of routines, which in some cases resulted in re-hospitalization. (Personal communication with Conchy Bretos, January 21, 2000).

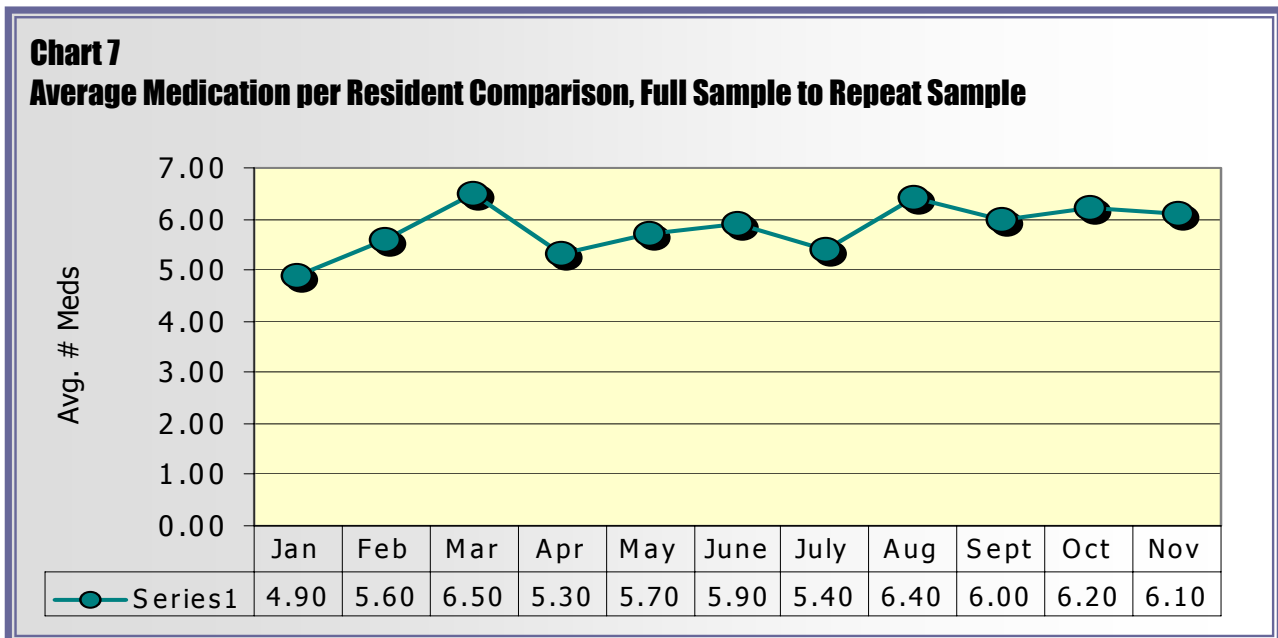


Medication Use

Data on number of medications per resident per month were collected on those residents who gave consent for file review (29 residents), as this information was contained in individual resident files. With the exception of January, when there was a

medication record for all seven residents, a few medication records (ranging from one to six) were not available in individual charts each month at the time the data were collected. HSP staff indicated that procedures for distributing and documenting medications improved over the course of the pilot phase. Furthermore, medication records may have been temporarily pulled from files for reasons unknown to the study team. The impact of the incomplete information cannot be quantified and should be factored in when interpreting the results, including the absence of evidence to support the hypothesized reduction in average medications per resident.

Chart 7 shows the average medications per resident for the 29 residents who gave consent to participate in the study. Numbers (i.e., the denominators applied) were adjusted for the one resident who left in August and the two residents who left in October.



Staffing

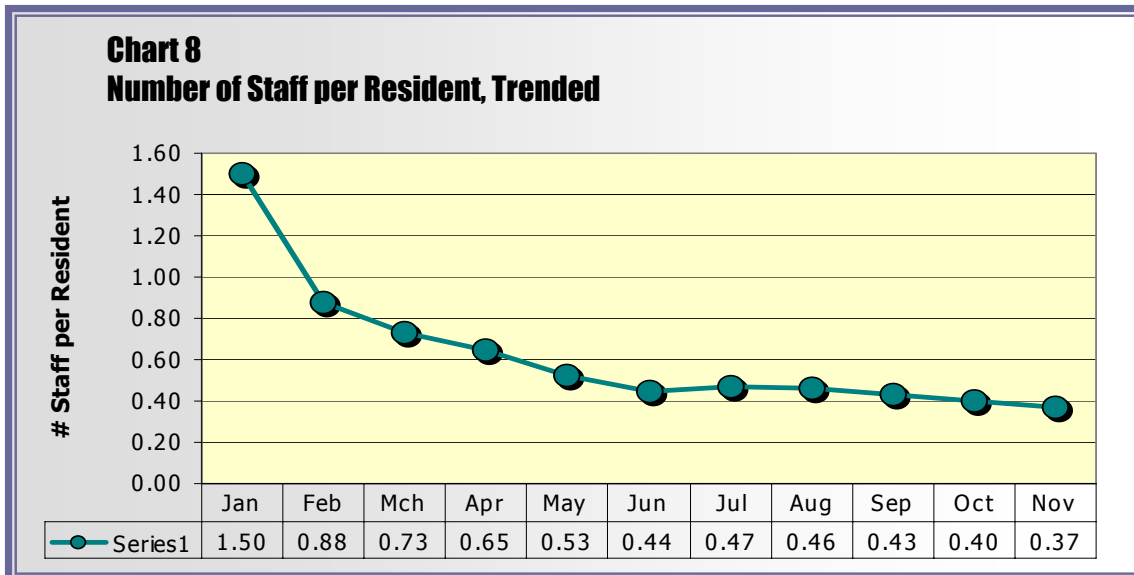
Table 13 presents staff data for the study period. An average of 1.6 new staff was hired per month. The largest number of staff (15) was hired in January. No employees were hired in February, June or September. Between January 1, 1999 and November 30, 1999 seven staff members left: two resigned (one within the first month), two were dismissed for poor work performance, one returned to a previous job, one was unsuccessful in passing the Certified Nursing Assistant Examination, and one left for an unknown reason.

**Table 13
Staff Aggregate Data**

Indicators	Jan	Feb	Mch	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
# Staff Hired	15	0	2	4	1	0	4	3	0	1	2
# Staff Leaving	1	0	0	0	1	0	0	1	1	2	1
Total Staff Working	15	14	16	20	20	20	24	26	25	24	25
# Staff per Resident	1.50	0.88	0.73	0.65	0.53	0.44	0.47	0.46	0.43	0.40	0.37

Chart 8 below shows the trend line for the number of staff per resident during the study period. While the pattern shows a gradual reduction in the number of staff per resident over the 11-month study period², it may simply indicate an appropriate adjustment in this ratio. No industry data regarding standards or targets for staffing levels in assisted living facilities could be found. The National Center for Assisted Living (NCAL, 1998) states, "The number and type of staff employed by an assisted living facility should depend on a number of factors including state regulations, the number of people living in the facility, each resident's service requirements and the range of services offered."

The State of Florida Department of Elder Affairs requires that "all ALFs have sufficient staff to provide or arrange for the provision of services to its residents consistent with the level of care needed and offered...In addition, DOEA regulations set minimum requirements for staffing of an ALF." (ALF Administrator's Guide, 4/97). Minimum staff levels set for the number of residents in November, the last month of data collection, was 448 staff hours weekly or eight FTEs. HSP has far exceeded this standard (see Tables 10 and 13) in each month of the study period.



² The dramatic change from January to February reflects the necessary high staffing at start-up to cover essential functions, regardless of the number of residents.

Part V: Conclusions

The evaluation of Helen Sawyer Plaza by the Southeast Florida Center on Aging produced intriguing results. Residents expressed high levels of satisfaction with services and conditions at HSP, and staff satisfaction was even higher still. Some hypotheses were supported, while others were contradicted; however, the contradictions were not necessarily indicative of poor performance. Overall, there were many indicators that the model employed by MIA at HSP is working.

The driving force behind the existence of the HSP-ALF is the growing need for a blending of services and housing options for frail elders with low incomes who reside in publicly-supported housing. With increasing demands on public resources, maximizing those resources is critical. The improvements in cognitive function of HSP residents, the consistency in life satisfaction and levels of depression over time, the relatively low discharge rate to nursing homes, as well as the high levels of satisfaction among staff and residents, support the conclusion that frail elders benefited as a result of living at Helen Sawyer Plaza over the 5-month evaluation period.

The study was designed to respond to MIA's interest in evaluating the effectiveness of the model created and implemented at HSP, and focused on measures that would provide insight and information regarding:

- ▶ The impact of THEM on (a) HSP residents, as compared to those who chose not to move from non-assisted public housing, and (b) HSP residents over time.
- ▶ HSP residents' level of satisfaction with services.
- ▶ Identification of major strengths or limitations in HSP's service delivery system.
- ▶ Exploration of potential measures to document benefits of THEM, such as nursing home diversion and elimination of fragmented service coordination and delivery.

The first six months of the pilot study consisted of developing the study design and assessment instruments required to provide answers to the research questions. Baseline data were collected from residents, a control group and staff. During the last six months of the pilot study, additional data collection and tracking occurred; and detailed interviews were conducted with MIA's principals. A summary of the results include the following observations:

- ▶ Comparisons of resident scores at Time-1 and Time-2 (approximately 5 months apart) were inconsistent, with slightly lower scores on measures of self-rated health and life satisfaction, but improved average scores on cognitive function and depression scales.
- ▶ Overall resident satisfaction with services and compliance with ALF mandates remained high, although some individual measures showed modest decreases.

- ▶ According to staff surveys, employees are extremely satisfied with their work at HSP and believe it is a good place for both them and residents (a finding virtually unchanged from Time-1 to Time-2).
- ▶ Record-keeping procedures on some aggregate outcome indicators were modified during the pilot study period. While it is normal for new ventures to make improvements in operational procedures, especially during the early phases, resulting gaps and/or inconsistencies in some of the information reduced the number of objective indicators that could be evaluated.

A. Recommendations for MIA

- ▶ The screening and referral process employed by MDHA case managers should be examined in more detail to determine (a) if all residents who could benefit are being identified, and (b) whether the process itself leads to inappropriate referrals (which could result in more than one relocation move for an inappropriately placed resident). MIA may also want to systematically review the reasons people refuse to move to HSP and the frequency of “rejected” referrals (by HSP), by reason.
- ▶ MIA should look at how ECC is being utilized. It is important to determine whether the availability and use of this service contributes to cost savings, avoidance of displacement or any other desirable outcomes and, if so, how.
- ▶ MIA should review the resident care planning process. The data showed that residents have poor recall that care planning occurred, which may indicate that they do not optimally benefit from it. MIA should explore methods to make this activity more understandable and relevant.
- ▶ A more detailed assessment of activity utilization and satisfaction will help MIA better determine how to allocate its activity budget. There also may be some opportunities to improve the way activity records are maintained so that detailed analysis is feasible in the future. In particular, it is important to document the names of all residents at each session of a particular activity, and to be able to cross-reference residents who attend more than one of them.
- ▶ Transfer forms need to have more structure in order to collect data that are more discrete and descriptive. For example, temporary and permanent nursing home discharges should be differentiated. ER visits versus hospital admissions should also be identified as separate occurrences. These, and other data, would be more useful if they were captured in a computerized database.
- ▶ MIA should examine the hospitalization per resident trend in more detail to determine why this pattern occurred and should also monitor this measure over

time. Utilization of the census report as the basis for data used in this measure might produce results more consistent with expectations.

- ▶ The medication use per resident results were not consistent with expectations. MIA should better understand the impact of missing information and should seek to assure that medication use is consistently documented and retained in individual files. In order to expand opportunities to monitor this measure over time, MIA may want to place medication use records in a database. This would also afford the opportunity to monitor aggregate use without violating individual resident confidentiality.
- ▶ MIA should develop the capability to produce a demographic profile of all facility residents. Not only would this help MIA and MDHA optimize administrative planning, but also it would enable future evaluation efforts to establish, conclusively, whether or not resident and/or control samples are representative of the HSP resident population as a whole.
- ▶ While cognitive function appeared to improve, similarly anticipated improvements in life satisfaction and mental health were not realized within the relatively brief study period. MIA should continue to monitor these outcome measures.
- ▶ The data regarding resident perceptions of compliance with ALF mandates and resident satisfaction with services should be reviewed carefully. MIA should examine current practices, particularly in relatively weak areas, and identify opportunities and strategies for improvement. In addition, MIA should seek to capitalize on areas where satisfaction appeared to improve between administration of the two assessments.

B. Recommendations for Future Research

- ▶ Given that it was possible only to carry out a short-term study rather than a long-term evaluation, findings are suggestive rather than definitive. The evaluation design, set in place for an extended time frame, had several limitations when applied to the relatively brief study period covered here. One of these, obviously, is the small sample size on which the analyses were based. For most outcomes, the sample size was 11. It would have been nearly three times that size had all eligible HSP residents consented to participate in the study at baseline. However, even if all had consented, the number still would have been only big enough to detect extremely large treatment effects. Another limitation stems from the potential for selection bias owing to the relatively small proportion of residents who did consent to participate in the study. That is, those who agreed to participate may well have been quite different, on average, from those who chose not to participate, thus

yielding potentially an unrepresentative reflection of resident opinion and outcomes. Gaining consent among this population is extremely challenging and will have to be given careful consideration in a follow-up evaluation.

- ▶ The current study looked only at residents who moved into the HSP-ALF early in its existence. To fully understand the impact of the model and any other factors at play in terms of resident benefits, future research should include residents who moved in six months or more after the HSP-ALF began operations.
- ▶ Longitudinal studies would provide important information regarding how long any improvements realized as a result of relocation to a vertically integrated assisted living environment are sustained and would respond more definitively to the issue of nursing home admission delay and/or avoidance.
- ▶ Future research should evaluate the hypothesis that use of psychotropic drugs would diminish over time as a function of the benefits of living in an ALF setting. This hypothesis should be tested by separating psychotropic medications from other medications in the data-collection process.
- ▶ One significantly unique aspect of the HSP model clearly is the addition of the HUD housing subsidy to other traditional ALF funding streams. The additional stipend enables MIA to provide residents with amenities and services like private rooms and grooming assistance in addition to the multiple levels of care and expansion of in-home services available in other more expensive ALF settings -- amenities which otherwise could not be secured for ALF residents of this income level. The impact of other unique aspects of HSP, including the management characteristics and personal involvement of the MIA principals, and the public-private partnership between MDHA and MIA, also should be examined.
- ▶ A cost-benefit analysis of HSP's funding structure as compared to the structure employed in other subsidized ALF models would help to isolate aspects of funding that are most cost-effective and, therefore, most valuable as models for replication.
- ▶ In order to test the impact of the unique factors, an extended evaluation of HSP should include other ALFs with similar resident populations under both Medicaid ALF-Waiver and Extended Congregate Care funding, as well as a truly comparable public housing resident sample. A three-group design is needed to rigorously evaluate the housing subsidy and other unique characteristics of this model of ALF care within public housing.