COLLECTION AND ANALYSIS OF DEMOGRAPHIC EXPERIENCE OF CONTINUING CARE RETIREMENT COMMUNITY RESIDENTS

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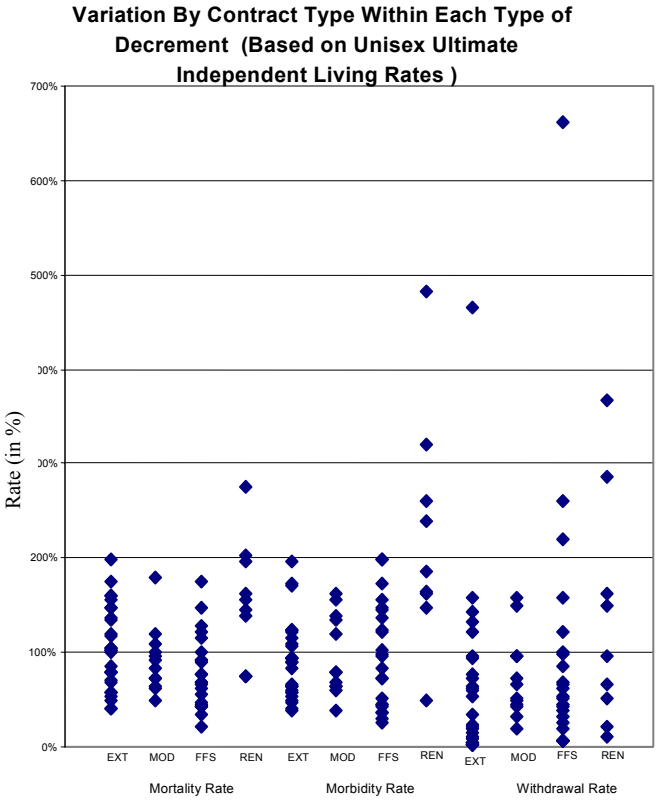
COLLECTION AND ANALYSIS OF DEMOGRAPHIC EXPERIENCE OF CONTINUING CARE RETIREMENT COMMUNITY RESIDENTS

EXECUTIVE SUMMARY

The objective of the study was to develop a valid resident experience database to allow financial and operational analyses of CCRC and other senior congregate living arrangements, based on data specific to these facilities. Utilizing experience from 72 facilities, the study developed actuarial decrement rates for mortality, morbidity and withdrawal patterns.

The study exposed several significant results. First, the observed actuarial decrement rates varied significantly from facility to facility. The chart to the right summarizes the range of each facility's data compared to the overall average rates. The range of results is viewed in columns corresponding to contract type and decrement type (mortality, morbidity, and withdrawal). While beyond the scope of this study, the results may indicate differences in admission standards.



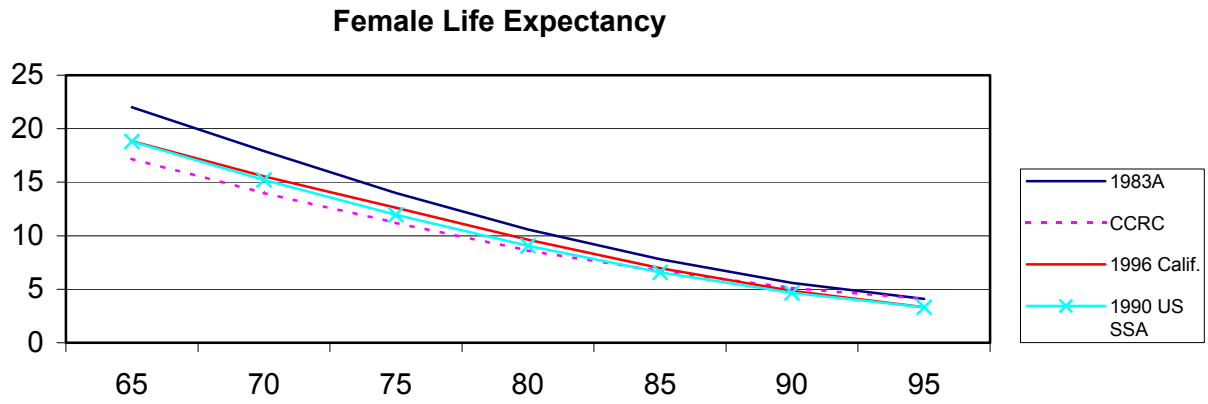
Second, there were no statistically significant differences observed for the decrement rates between Extensive, Modified and Fee-For-Service resident contracts. As expected, mortality and morbidity rates were consistently higher for Rental facilities compared to other forms of resident contracts. The similarity of the magnitude of the data points for the first three contract types, within each decrement rate, illustrates the lack of variation between contracts.

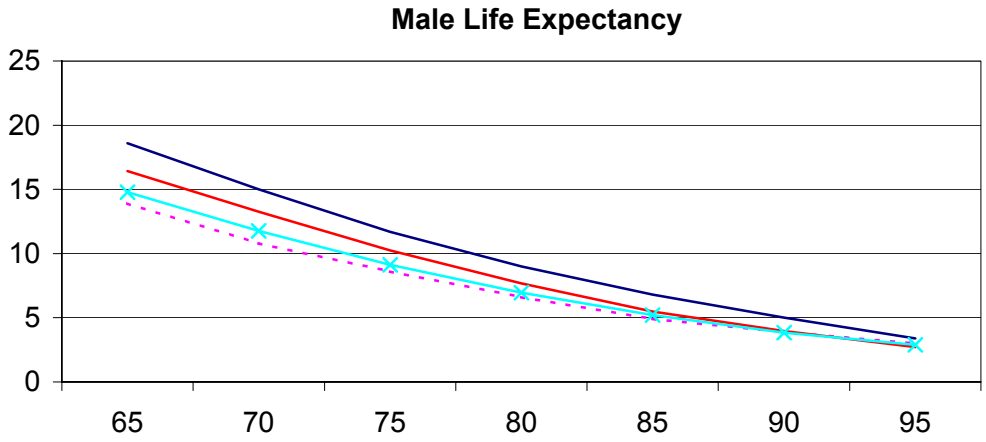
Third, the life expectancies developed from the experience were shorter than the authors anticipated. A common benchmark in the industry has been to compare CCRC residents with annuitant buyers, thus utilizing the 1983A table as a standard mortality table. In 1996, Hal Barney presented the results from 80 CCRCs in California in the Transactions of the Society of Actuaries ("Transactions"). The results of that study indicated that CCRC residents had shorter life expectancies than annuitant buyers. At the time, Barney demonstrated the life expectancies developed for California CCRCs were much closer to the 1990 Life Tables for the United States Social Security Area. Additionally, there are a number of data issues with the California study that would suggest that the ultimate life expectancy for CCRC residents should be less than what is presented in the California study.

- The California study did not look at ultimate data, but grouped all select periods together. This approach understates the ultimate mortality rate.

- The California study did not look at level of care information, since it was not available. Especially in the case of a new facility, which would likely not experience significant health care utilization, this would understate the ultimate mortality rate.

We have presented below a summary of the life expectancies based on the ultimate CCRC experience study decrement rates, with the withdrawal decrement removed, compared to both the 1983A table and the 1996 California CCRC table. The results indicate that CCRC resident life expectancies lie slightly below the 1996 California CCRC Table.





Although we have found these results to be consistent with the previously published study in the Transactions of the Society of Actuaries, we acknowledge that some members of the peer oversight group have expressed reservations about the consistency of the findings from this study with previously found decrement rates and life expectancies from proprietary databases.

Fourth, the research team found that selection patterns typically observed in insurance industry experience and assumed by actuaries involved in CCRC analysis were not found in this CCRC data experience. The CCRC experience data selection patterns were much more "shallow"; that is, strong observed selection patterns in the decrement rates, for a new entrant into the facility, were not apparent in the experience data for mortality and morbidity. While this was found to be true in aggregate, individual CCRCs were found to exhibit selection to varying degrees.

Fifth, as expected, the research team found significant differences in the voluntary withdrawal rates between the contract types. The rental contracts, having no financial barrier to voluntary withdrawal had the highest withdrawal rates. Similar to the Rental contract, the Fee-for-Service contract, with no health care guarantee, had higher withdrawal rates than the Extensive contract.

Finally, the length of stay analysis illustrated that there was a correlation between both the resident contract type and healthcare configuration of the facility, and the time spent in the health center (assisted and skilled care) during the resident's lifetime. Contrary to expectations, residents with contracts offering extensive healthcare guarantees spent relatively less time in health center than their counterparts with alternative contracts. However, as expected, residents in two-level facilities (independent living and skilled nursing only) spent less time in the health center than residents in three-level facilities (independent/assisted/skilled).

The user of the tables presented in this study should be cognizant of the variability of the results by facility. The application of the decrement rates in this study should reflect the characteristics of the facility, including medical screening criteria of the facility, resident contract types, and other factors affecting the decrement rates including regional variations, socio-economic levels of the residents, competitive pressures from nearby facilities, and the facility configuration.

An electronic version of the tables presented in this report is available upon request from the Society of Actuaries.

Acknowledgements

The author would like to acknowledge the assistance of many individuals, whose assistance was invaluable, and without which this project would not have come to fruition. The staff of Actuarial Forecasting & Research and CCRC Actuaries, LLC was invaluable in completing this research: Brad Paulis, Neil Bittner, Michael Mak, Jennifer Schultz, and Bill Harris et al. Specifically, the authors would like to thank the oversight committee: Gary Brace (Chair), Dwight Bartlett, Kathryn Brod, David Cole, Amy Lampo, Jack Moorhead, and Eric Stallard. The authors would also like to thank the Society of Actuaries staff liaisons: Bruce Iverson, Jack Luff, and Kara Clark. A special acknowledgement goes to Korrell Crawford for the thankless task of herding cats and keeping everything on schedule. There were also many other individuals too numerous to name that were instrumental in this project.

OVERVIEW

A. Introduction

In 1994, Mr. Harold L. Barney, FSA, MAAA, President and Founder of Actuarial Forecasting and Research ("AF&R"), was awarded a Small Business Research Program grant from the National Institutes of Health in order to conduct a study on Continuing Care Retirement Community ("CCRC") resident data. The project was designed to collect data on a large sample of CCRC experience and to develop a new set of mortality and morbidity tables for this specific type of population. Unfortunately, Mr. Barney's untimely death prevented him from personally finishing this very important project. This report represents primarily Mr. Barney's initial efforts and merely our best attempts to complete the project as he designed the project to be completed. CCRC Actuaries, LLC was engaged by the Society of Actuaries to complete this research project.

The project was to develop a valid database to allow objective analysis of CCRC and other senior congregate living arrangements based on data specific to these facilities. In contrast to current generic databases, this database, designed for updating and future enhancement, was built from the collection of 100,000 life years of CCRC experience. This new database allows the development of tools to provide sound financial projections of future costs and determine whether a CCRC's contracts are appropriately priced.

In addition to developing a standard set of mortality and morbidity assumptions that could be used by actuaries developing actuarial liabilities in the analysis of CCRCs, the study had secondary goals of examining and identifying variables to consider in developing these assumptions. These variables under consideration included age, gender, type of residential contract, medical screening, geographical location and differences in the health care delivery system. In addition, the study was to collect, analyze and report on length of stay information in assisted living and skilled nursing facilities.

The National Institute on Aging initially funded this project to collect CCRC mortality and morbidity data. The Society of Actuaries subsequently provided a supplemental funding of the project to assure its completion. The researchers are indebted to both organizations. This data is critical to the financial solvency and management planning functions (including population projections and facility configuration decisions) of the retirement industry and to policy and decision makers interested in long-term care and the aging process.

Since the completion of this study, the long-term care industry has undergone significant changes, including but not limited to the increase in the sale of long-term care insurance and an increased tendency to build more than three levels of care. While this report does not evaluate the effects of changing conditions in the industry, the current environment must be evaluated when working with a CCRC.

For the purposes of this study, a CCRC is defined as a community that provides or arranges for the provision of housing and health-related services to an older person under an agreement(s) effective for the life of the person or for a specified period greater than one year. Provided below are definitions for each contract type.

Extensive Agreements (with entry fee)

An extensive agreement includes housing, residential services, amenities, and unlimited, specific health-related services with little or no substantial increase in periodic (monthly) payments, except for normal operating costs and inflation adjustments. Extensive agreements provide for the prepayment of medical expenses, similar to an insurance arrangement, and are sometimes known as life care agreements. While an extensive agreement generally requires a higher monthly fee in the early years of residence in the CCRC, it allows the resident to plan for future, unexpected health care expenditures with a steady stream of monthly fee payments.

Modified Agreements (with entry fee)

A modified agreement includes housing, residential services, amenities, and specific amounts of long-term nursing care with no substantial increase in periodic (monthly) payments. For example, the resident may receive thirty days of long-term nursing care per year without increased charges. After that period, the resident pays the standard daily rate, or the resident may pay a discounted daily rate for all nursing care. Some communities offering a modified contract increase the monthly payments when assisted living or nursing care is required, but at a rate that is less than the resident would pay if the resident were not covered by a continuing care resident agreement.

Fee-for-service Agreements (with entry fee)

A fee-for-service agreement includes housing, residential services, and amenities for the fees stated in the agreement. Health-related services, including long-term nursing care and assisted living services, are paid for as they are used. Under a fee-for-service agreement, the residents usually enjoy lower monthly fees in the early years of residency in a cottage or apartment but in turn must accept the risk of paying for care later, should the resident need to transfer to another level of care.

Rental Agreements (no entry fee)

A rental agreement has no up-front entry fee, and the costs of the living unit, services, and care are covered solely by the monthly fee. For comparable living units, a monthly fee only is likely to be higher than the monthly fee paid under the entry fee and monthly fee agreement described above.

Equity Agreements (purchase) (condominium, cooperative, or membership)

These types of CCRC agreements involve the actual purchase of real estate or membership. They are the least common type of agreement and are dependent on the trends in the general real estate market to establish value. Ownership agreements have most of the characteristics of ownership found outside the CCRC industry, with the addition of entry eligibility requirements that affect resale. The service and health care package transactions generally are separate from the purchase transaction.

B. Data

The initial universe of CCRCs was developed utilizing membership information provided by the American Association of Housing and Services for the Aging and supplemented by other industry sources. From this universe of approximately 1,500 retirement communities, one hundred fifty communities were selected on a random basis to become participants. Forty-five were determined not to be qualified as CCRCs and ten additional communities declined to participate upon receiving the solicitation. Ultimately of the ninety-five initial samples, seventy-four facilities successfully participated and were able to supply five years of resident data ending between 1995 through 1997.

CCRC Delivery System Definitions

Continuing Care Retirement Communities provide some guarantee of long term care services in exchange for the payment of an initial entrance fee and subsequent monthly service fees at each level of care offered by the CCRC. CCRCs vary by the type of nursing care provided as well as the access to such care. The most common or typical model is to provide residents with three alternative living arrangements: independent living units ("ILUs"), assisted living units ("ALUs") and skilled nursing facility ("SNF") care in three distinct locations. SNF care generally ranges from intermediate health care to skilled nursing care. In general, CCRCs provide at a minimum either ALU or SNF as part of the health care delivery system. Of the seventy-four communities included in the study, the delivery system is summarized in the chart below:

Health Care Delivery System	Number of CCRCs
Independent/Assisted/Skilled	45
Independent/Skilled	27
Independent/Assisted	2
Total	74

Due to limited number of communities in the Independent/Assisted Living category, the two communities have been eliminated from the study leaving a total of seventy-two communities.

In developing the analysis of the data, it was determined that the three level category (Independent/Assisted/Skilled) had different results based on the number of available assisted living beds and would result in different life expectancies by level of care. In other words, some communities had much different nursing transfer experience due to the lack of availability of assisted living beds. We defined these communities as Low Assisted Living where available assisted living units constituted 10% or less of the available independent living units. Based on this definition, the study resulted in a distribution of communities as summarized in the following chart:

Health Care Delivery System	Number of CCRCs
Independent/Assisted/Skilled	35
Independent/Low Assisted/Skilled	10
Independent/Skilled	27
Total	72

CCRC Health Care Guarantee

CCRCs also vary by the health care guarantee provided to the resident through the residential contract. Under the Extensive contract, also known as the Comprehensive contract, the nursing monthly service fee ("MSF") is either identical to the residential fee charged while in independent living or set to a fixed target, generally either a studio or one-bedroom rate. Under this arrangement, the costs of nursing care far exceed the MSF collected under the contract. Under the Rental and Fee-for-Service ("FFS") contract, the nursing monthly service fee is set according to the actual costs of providing the nursing care, with generally no discounts. Under the Rental contract, no entrance fee is collected, whereas under the FFS contract an entrance fee is collected. Under the Modified contract, the benefit to the resident can range from a discount off the FFS rates or a limited number of free nursing days per year or lifetime. While some communities in the industry offer more than one of these contracts, all of the seventy-two participating communities offered only one type of health care guarantee during the study period as summarized in the chart below:

Health Care Guarantee	Number of CCRCs
Rental Contract	9
Fee-for-Service Contract	23
Modified Contract	12
Extensive Contract	28
Equity Contract	0
Total	72

There were no facilities that offered equity contracts in this study. Two facilities offered multiple types of contracts, however each facility's residents primarily accepted one contract. Residents were analyzed based on their contract type selected, not by the general contract type of their facility.

Medical Screening Issues

After collection of the resident data, an effort was made to include medical screening standards in the analysis of the data. A survey was sent to the seventy-two participating facilities to determine the level of physical and cognitive impairment that would preclude a prospective resident from entering a facility. We received twenty completed surveys from participating facilities.

For this relatively small sample size of twenty CCRCs it was noted that the communities with extensive contracts had higher health care utilization regardless of the screening level. Therefore, it is possible that the impact of no financial barrier under the extensive contract is a more determining variable than initial medical screening. However it should be noted that the expected pattern of health care utilization within medical screening levels did not occur.

VERIFICATION OF DATA

The staff of AF&R collected resident data in on-site visits to each facility with follow-up communication to address any data inconsistencies that became evident in subsequent analysis.

Our data collection team, by reviewing individual resident files, found significant differences between the individual resident records and the databases kept by management and used in other studies of this nature. The problem arose from varying definitions of permanent and temporary stays at the observed facilities. The researchers attempted to mitigate this problem by collecting the data by hand, and redefining permanent stays to any stay over ninety days, or when the independent living unit was released, whichever was shorter. The effect of correcting these databases has been to increase the mortality and transfer rates that have been reported to management based on prior analyses. In particular, we found some researchers ignored "temporary" transfers and therefore understated the morbidity rates since many "temporary transfers" never return to independent living. Correction of this data was a time consuming process.

Permanent transfer rates were calculated in one direction. Residents were only considered to move permanently from a lower level of care to a higher level of care. Frequent transfers between levels of care, often viewed as two-way rates, were considered temporary stays in the health center.

After the residents' census data were completely collected from the seventy-two CCRCs, each facility was categorized by geographical region, delivery system and contract type.

The participating facilities were categorized utilizing the following categories:

- **Type of Facility**

  Three level – Independent, Assisted and Skilled
  Three level – Independent, Low Assisted and Skilled
  Two level – Independent and Skilled

- **Type of Contract**

  Extensive
  Modified
  Fee-for-Service
  Rental

- **Region**

  Region 1 through 5 as defined by the Health Care Financing Administration. This information can be found in Appendix B.

A summary of the exposure of each participating facility can be found in Appendix A. In an effort to fully represent all types of facilities and regions of the country in the final rates, the participating facilities were compared to the CCRC universe based on the number of independent living units in each category, as listed above. Appendix B summarizes the location of each facility by geographical region.

A sampling factor was applied to each participating facility, with an average sampling factor of 1.0, such that the participating facilities would accurately reflect the CCRC universe. In developing the sampling factors, in addition to mapping the participating facilities to the CCRC universe, the sampling weights were developed such that the difference of the sum of the weights and the sum of the square of the weights was minimized, which created

$$\Sigma w_i = \Sigma w_i^2 = n, \qquad \text{(Potthoff)}$$

This test ensures that the chi-square test on the projected decrement rates will be unbiased. The historical data was aggregated on select periods one, two, three, four and ultimate. The observed select factors were calculated as well as the Coefficient of Variation for each age and select period for each decrement. Based on this data, assumed select factors were developed for each decrement. Applying the assumed select factors to the data set and aggregating the results provided an ultimate data set used to develop the trended rates.

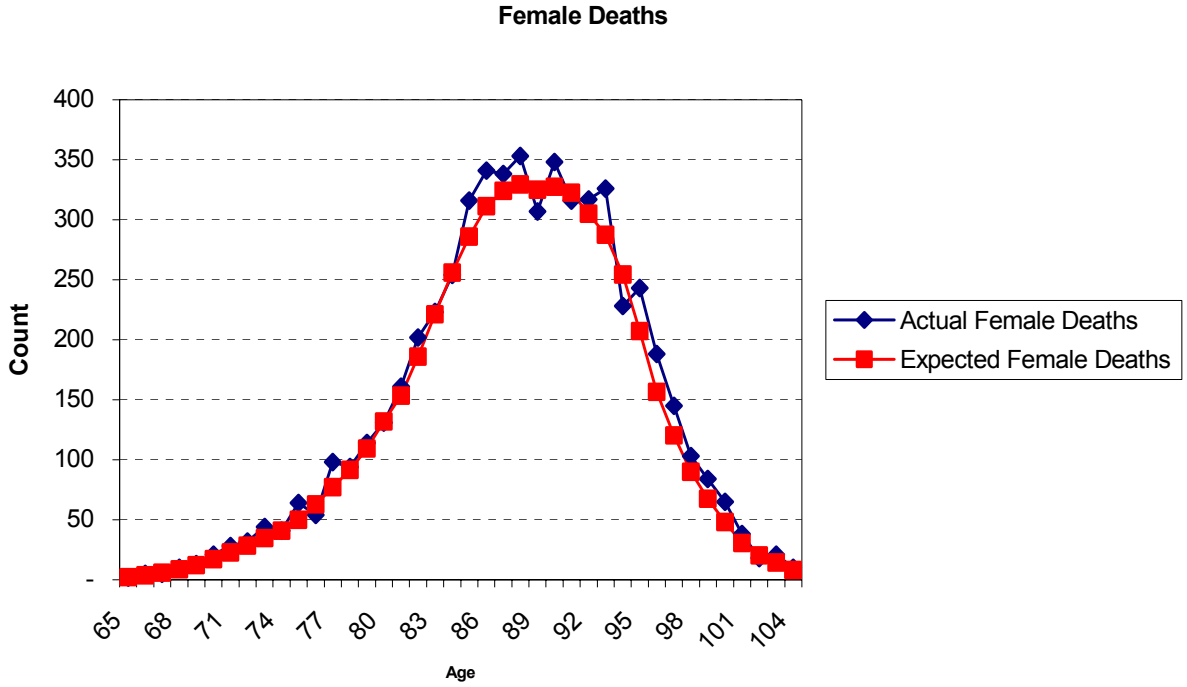
The ultimate data set was grouped in five-year age bands, and then extrapolated using the LaGrange interpolation over the age ranges where the data was credible. The interpolated function was then smoothed using the Whittaker-Henderson method, which smoothes values by minimizing the function:

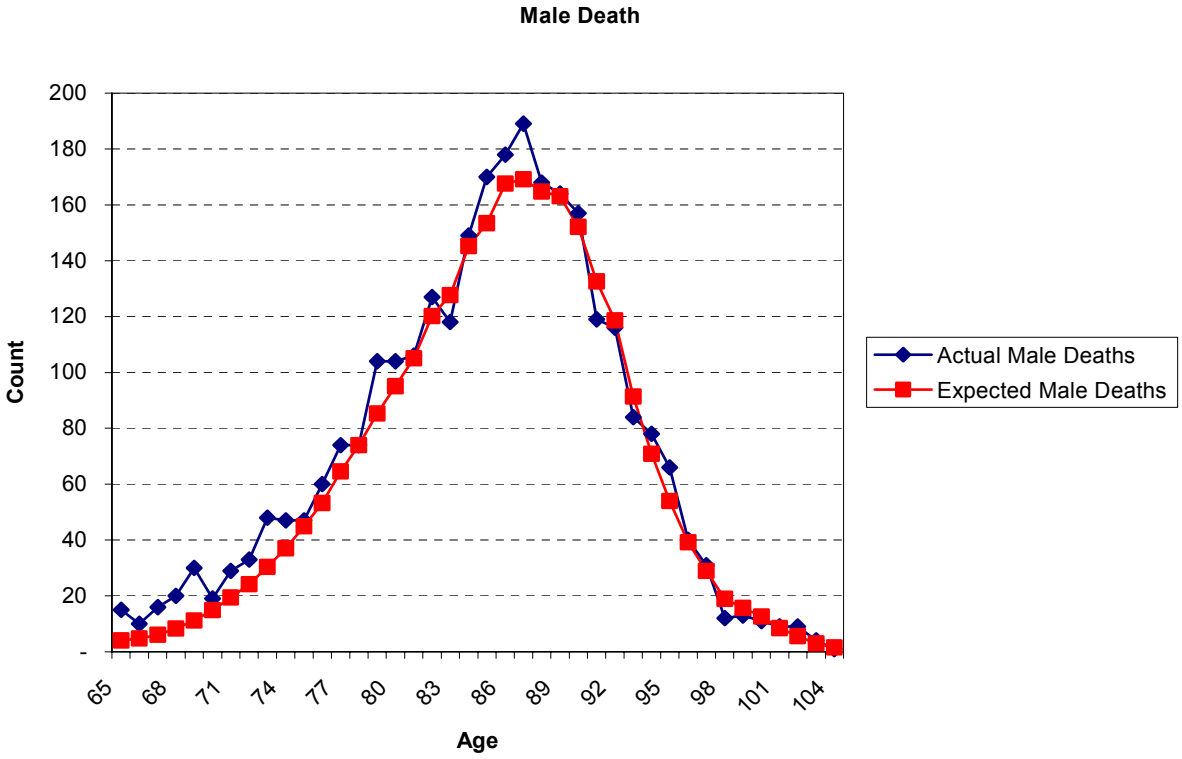
$$\Sigma w_t(q_t - q_t'')^2 + k\Sigma (\Delta^3 q_t)^2$$

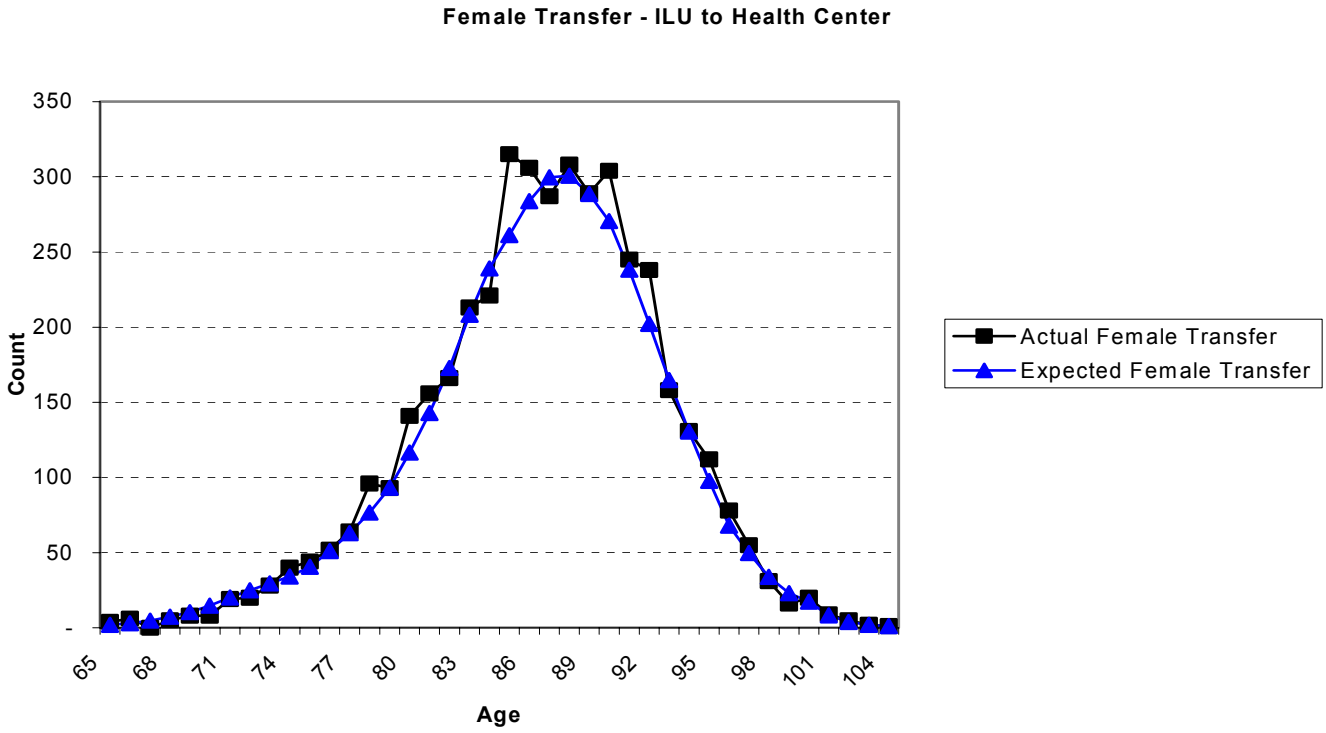
where k is the relative importance given the smoothness and w_t is the exposure at each age. The Whittaker-Henderson method was applied where the data was credible. Due to the low exposure levels at the low and high end of the age range, the raw rates of mortality and morbidity needed to be smoothed using a different methodology.

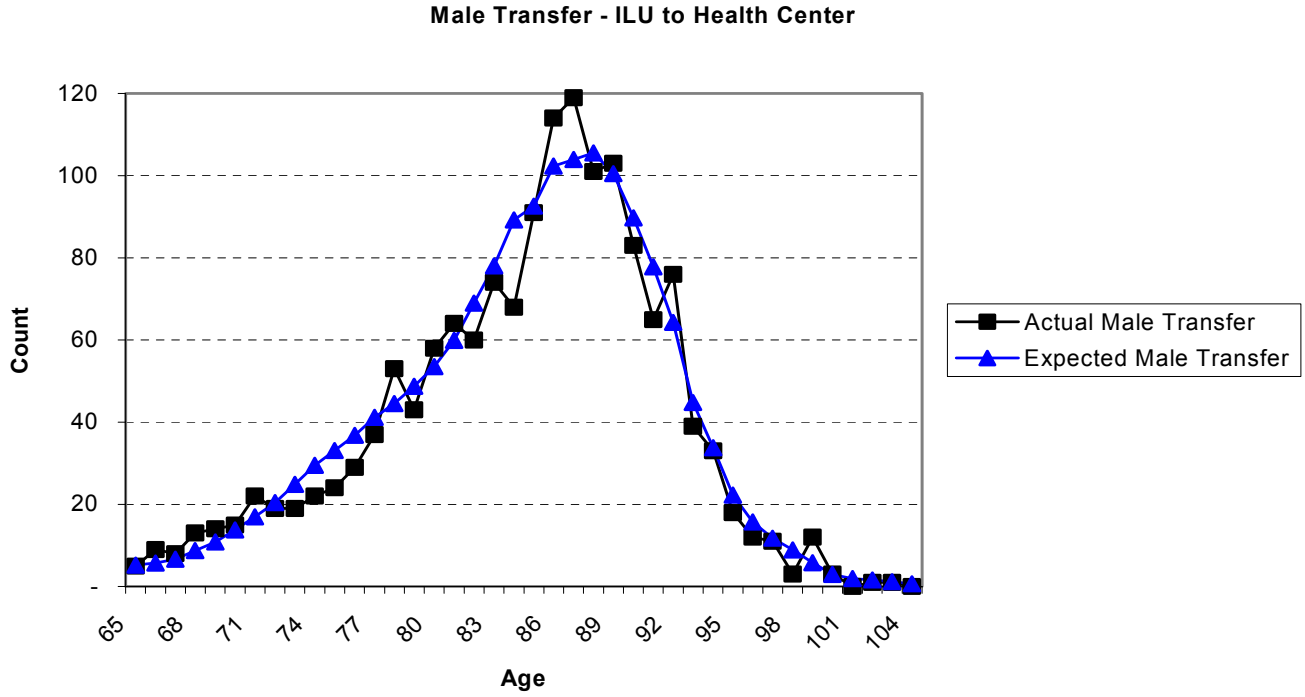
For the mortality rates, a ratio was developed for the rates developed by the Whittaker-Henderson method in the central ages compared to the 1983A Table. A polynomial was fit to this ratio and used to project the ratio for the lower age bands. At the upper age bands, the researchers applied the methodology found in the Life Tables for the US Social Security Area. For the morbidity rates, the same methodology was used utilizing the 1980 Railroad Retirement Board table.

To test the reasonableness of the final smoothed rates for each decrement, a Chi-Square test was performed by multiplying the exposures at each age by the final mortality rates for the corresponding age and comparing these expected values to the actual. The smoothed rates were found to be an acceptable approximation of the actual rates. The charts on the following pages illustrate the closeness of the final smoothed rates with the actual deaths at all levels of care and transfers from independent living into health care (both assisted and skilled care).


Female Deaths
Count
400
350
300
250
200
150
100
50
-
65
68
71
74
77
80
83
86
89
92
95
98
101
104
Age
Actual Female Deaths
Expected Female Deaths


Male Death
Count
200
180
160
140
120
100
80
60
40
20
-
65
68
71
74
77
80
83
86
89
92
95
98
101
104
Age
Actual Male Deaths
Expected Male Deaths


Female Transfer - ILU to Health Center
Count
Age
Actual Female Transfer
Expected Female Transfer


Male Transfer - ILU to Health Center
Count
Age
Actual Male Transfer
Expected Male Transfer

RESULTS

A. Decrement Rates

1. Mortality Rates

For the data collected, it appears that the effect of "selection" may be less than most researchers have reported in the past. That is, the mortality rates of new communities and residents initially moving into an older community are not significantly better than those of residents who have resided there five years or longer.

The select factors were chosen based on the combinations of Facility Types and Contract Types and sorted by the age categories of less than 85 ("Age <85") and ages over 85 ("Age 85+"). In all cases ultimate value equals 1.

ILU Mortality

All Facility Types & All Contract Types – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
0.90	0.90	0.95	1.00	0.95	0.95	0.95	1.00

ALU Mortality

Independent/Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05

Independent/Low Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
5.00	3.00	1.50	1.00	5.00	3.00	1.50	1.00

SNF Mortality

Independent/Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
1.20	1.00	1.00	1.00	1.20	1.00	1.00	1.00

Independent/Low Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
1.50	1.05	1.00	1.00	1.50	1.05	1.00	1.00

Independent/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
1.05	1.00	1.00	1.00	1.05	1.00	1.00	1.00

Applying the assumed select factors to the raw data resulted in an ultimate data set used to develop the mortality factors. The research team observed no significant differences in the mortality rates between the Extensive, Modified and Fee-for-Service contracts. Residents of Rental communities exhibited higher mortality at all levels of care. When analyzing the rates by type of facility and level of care, it is important to note that one rate can not be viewed in isolation, but the interaction of the rates as seen in the Life Expectancy Tables must be realized.

Mortality Rates
Independent/Assisted/Skilled

	Female Residents			Male Residents		
Age	ILU	ALU	SNF	ILU	ALU	SNF
65	0.0101	0.0379	0.1588	0.0118	0.1055	0.3281
70	0.0161	0.0472	0.1891	0.0339	0.1123	0.3628
75	0.0225	0.0589	0.2195	0.0413	0.1232	0.4012
80	0.0346	0.0734	0.2498	0.0654	0.1408	0.4436
85	0.0467	0.1116	0.3009	0.0916	0.1723	0.4850
90	0.0623	0.1378	0.3390	0.1125	0.2313	0.5590
95	0.0909	0.1845	0.3800	0.1489	0.3005	0.5912

Mortality Rates
Independent/Low Assisted/Skilled

	Female Residents			Male Residents		
Age	**ILU**	**ALU**	**SNF**	**ILU**	**ALU**	**SNF**
65	0.0053	0.0041	0.1640	0.0109	0.0044	0.2678
70	0.0085	0.0065	0.1810	0.0182	0.0072	0.3024
75	0.0146	0.0112	0.1999	0.0298	0.0119	0.3328
80	0.0263	0.0202	0.2207	0.0486	0.0193	0.3572
85	0.0398	0.0298	0.2436	0.0708	0.0308	0.3737
90	0.0628	0.0495	0.2906	0.1058	0.0457	0.4062
95	0.1083	0.0647	0.3227	0.1495	0.0693	0.4426

Mortality Rates
Independent/Skilled

	Female Residents		Male Residents	
Age	**ILU**	**SNF**	**ILU**	**SNF**
65	0.0208	0.1266	0.0592	0.3181
70	0.0309	0.1330	0.0614	0.3301
75	0.0335	0.1508	0.0635	0.3378
80	0.0339	0.1842	0.0758	0.3430
85	0.0404	0.2504	0.0956	0.4050
90	0.0596	0.2774	0.1291	0.4798
95	0.1080	0.3625	0.1824	0.5530

2. Morbidity Rates

For the data collected, it appears that the effect of "selection" may be less than most researchers have reported in the past. That is, the morbidity rates (transfer rates) of new communities and residents initially moving into an older community are not significantly better than those of residents who have resided there five years or longer.

The select factors were also chosen based on the combinations of Facility Types and Contract Types and sorted by the age categories of less than 85 ("Age <85") and ages over 85 ("Age 85+"). In all cases ultimate value equals 1.

ILU Transfer to ALU

Independent/Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
1.00	1.00	1.00	1.00	0.80	0.80	0.80	0.80

Independent/Low Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
0.60	0.70	0.80	0.90	0.60	0.70	0.80	0.90

ILU Transfer to SNF

Independent/Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
0.90	1.00	1.00	1.00	0.90	1.00	1.00	1.00

Independent/Low Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
0.75	0.80	0.85	0.90	0.60	0.70	0.80	0.90

Independent/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
0.90	0.90	0.95	0.95	0.75	0.80	0.90	1.00

ALU Transfer to SNF

Independent/Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
4.00	3.00	2.50	2.00	2.00	1.75	1.50	1.25

Independent/Low Assisted/Skilled – All Contract Types							
Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
1.00	1.00	1.00	1.00	3.00	2.50	2.00	1.50

Applying the assumed select factors to the raw data resulted in an ultimate data set used to develop the morbidity factors. The research team observed no significant differences in the morbidity rates between the Extensive, Modified and Fee-for-Service contracts. Residents of Rental communities exhibited higher morbidity to all levels of care. When analyzing the rates by type of facility and level of care, it is important to note than one rate can not be viewed in isolation, but the interaction of the rates as seen in the Life Expectancy Tables must be recognized.

Morbidity Rates
Independent/Assisted/Skilled

	Female Residents			Male Residents		
Age	ILU to ALU	ILU to SNF	ALU to SNF	ILU to ALU	ILU to SNF	ALU to SNF
65	0.0096	0.0032	0.1101	0.0103	0.0079	0.0997
70	0.0121	0.0072	0.1161	0.0130	0.0100	0.1022
75	0.0142	0.0124	0.1221	0.0152	0.0240	0.1048
80	0.0223	0.0255	0.1276	0.0208	0.0228	0.1075
85	0.0682	0.0405	0.2030	0.0447	0.0556	0.2505
90	0.1232	0.0715	0.2681	0.1051	0.0906	0.2842
95	0.1726	0.1282	0.2952	0.1695	0.1201	0.3026

Morbidity Rates
Independent/Low Assisted/Skilled

	Female Residents			Male Residents		
Age	ILU to ALU	ILU to SNF	ALU to SNF	ILU to ALU	ILU to SNF	ALU to SNF
65	0.0085	0.0116	0.3800	0.0065	0.0130	0.5500
70	0.0131	0.0146	0.3583	0.0082	0.0185	0.4650
75	0.0189	0.0172	0.3365	0.0096	0.0248	0.4200
80	0.0319	0.0235	0.3148	0.0143	0.0385	0.3500
85	0.0503	0.0498	0.2500	0.0339	0.0770	0.2650
90	0.0761	0.0941	0.1750	0.0668	0.1243	0.2150
95	0.1020	0.1508	0.2100	0.1080	0.1703	0.2850

Morbidity Rates
Independent/Skilled

	Female Residents	Male Residents
Age	ILU to SNF	ILU to SNF
65	0.0168	0.0352
70	0.0240	0.0442
75	0.0320	0.0520
80	0.0430	0.0643
85	0.0793	0.0880
90	0.1353	0.1178
95	0.2156	0.1632

3. Withdrawal Rates

For the data collected, it appears there is significant selection at the early durations for withdrawal. Rental contracts, with no financial barrier to withdrawal, experience much higher withdrawal rates than the other contracts.

The select factors were chosen based on the combinations of Facility Types and Contract Types and sorted by the age categories of less than 85 ("Age <85") and ages over 85 ("Age 85+"). In all cases ultimate value equals 1.

Extensive Contracts

Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
5.00	2.00	2.00	1.50	4.00	3.00	2.00	2.00

Modified Contracts

Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
5.00	3.00	2.00	1.50	6.00	4.00	3.00	1.50

Fee-for-Service Contracts

Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
3.00	2.00	1.50	1.00	6.00	4.00	3.00	1.00

Rental Contracts

Age <85				Age 85+			
Select 1	Select 2	Select 3	Select 4	Select 1	Select 2	Select 3	Select 4
8.00	4.00	3.00	2.00	4.00	3.00	2.00	1.50

B. Variability by Facility

The research team found significant differences in the voluntary withdrawal rates between the contract types. The Rental rates, with no financial barrier to voluntary withdrawal had the highest rate. Additionally, the Fee-for-Service contract, with no health care guarantee, had higher voluntary withdrawal rates than the Extensive contract. Overall, the Independent/Assisted/Skilled ("IAS") facilities had a voluntary withdrawal rate of 1.15%, the Independent/Low Assisted/Skilled ("ILAS") had a voluntary withdrawal rate of .39% and the Independent/Skilled ("IS") facilities had a voluntary withdrawal rate of 3.47%. These differences are largely explained by the varying contract mix in the groups, where ILAS has no Fee-for-Service or Rental facilities and the IS facilities have a significant Rental population.

Considerable variability was found from facility to facility. See Appendix C for a complete summary of how the facilities varied from the mean. At the extremes, the independent living mortality rate at one facility was over thirteen times that of another. These results highlight a significance of utilizing facility history in a valuation of any existing facility.

C. Length of Stay

A length of stay analysis was performed for every individual who completed a stay in either assisted living or skilled nursing during the study period. The results of the analysis can be found in Appendices D and E. The Appendices show the mean length of stay, as well as the 25th, 50th and 75th percentiles.

While fewer people transfer to assisted living in the ILAS facilities than in the IAS facilities, the length of stays for those individuals who transferred were not significantly different.

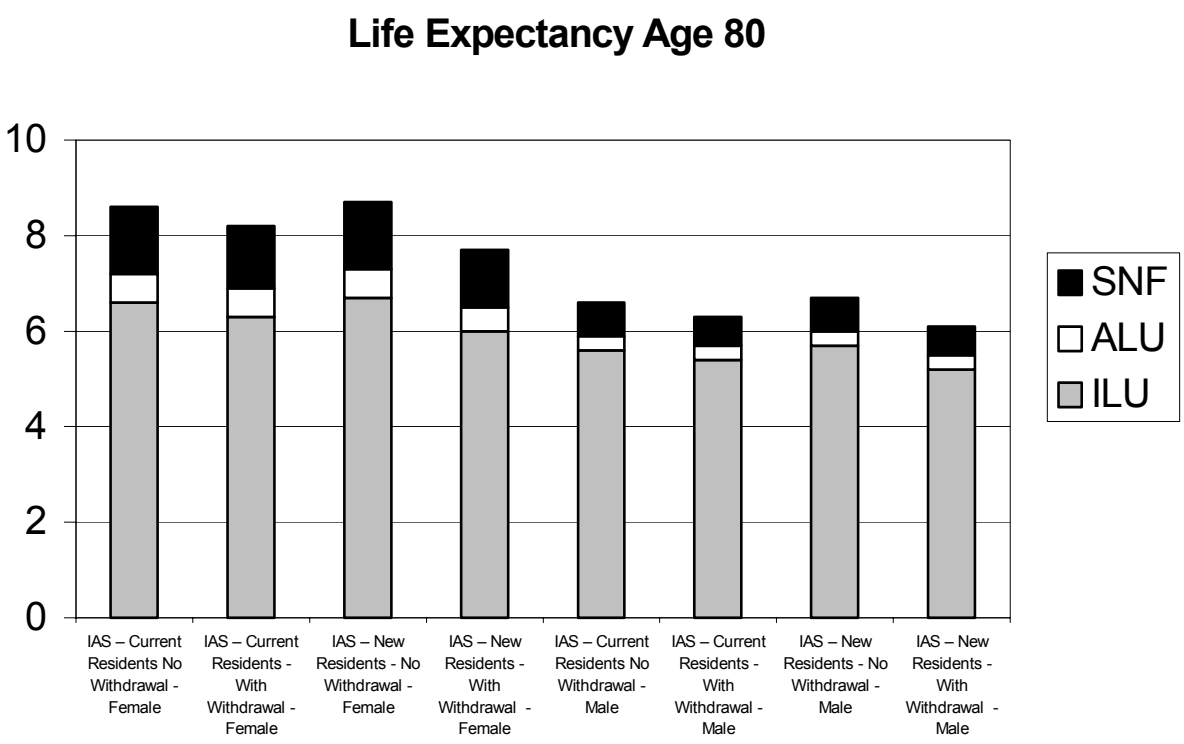
Length of Stays for residents Age 80 - 84

	Female				Male			
	Mean	25th Percentile	50th Percentile	75th Percentile	Mean	25th Percentile	50th Percentile	75th Percentile
	Assisted Living Days							
IAS Ext.	957	274	606	1,371	656	84	415	1,057
IAS Mod.	697	158	434	1,111	587	163	560	914
IAS FFS	910	238	658	1,389	675	181	482	793
IAS Rental	527	55	427	1,050	308	36	308	579
ILAS Ext.	727	293	608	1,418	718	280	387	1,317
ILAS Mod.	500	85	202	650	552	482	552	622
	Skilled Nursing Days							
IAS Ext.	1,310	335	991	1,893	753	242	496	1,091
IAS Mod.	1,145	329	890	1,526	702	164	607	1,162
IAS FFS	959	167	549	1,353	569	83	318	788
IAS Rental	753	242	496	1,091	747	127	486	1,498
ILAS Ext.	1,522	452	1,206	2,187	628	71	524	1,038
ILAS Mod.	1,257	317	847	1,898	738	33	370	1,317
IS Ext.	1,156	442	902	1,623	1,195	478	821	1,774
IS FFS	1,184	371	875	1,816	845	183	812	1,074
IS Rental	1,509	289	1,241	2,438	985	268	676	1,423

D. Life Expectancies

In developing life expectancy tables, it was important to look at the rate with and without withdrawal as well as with and without select factors. The ultimate rates without select factors provide life expectancies for current residents of CCRCs who have resided at the facility for over five years. This is useful information for CCRC managements. The life expectancies with select factors project new residents entering a CCRC. The life expectancies with withdrawal rates represent the contract life expectancy, or the expected length of time a resident will have a contract with the facility, while the life expectancies without withdrawal rates represent a true life expectancy.

A summary of the life expectancy for a resident age 80 is found below. The life expectancies are shown with and without withdrawal and with and without select factors.



A common benchmark in the industry has been to compare CCRC residents with annuitant buyers, thus utilizing the 1983A table as a standard mortality table. In 1996, Hal Barney presented the results from 80 CCRCs in California in the Transactions. The results of this study indicated that CCRC residents had shorter life expectancies than annuitant buyers. At the time, Hal Barney demonstrated the life expectancies developed for California CCRCs were much closer to the 1990 Life Tables for the United States Social Security Area. Additionally, there are a number of data issues with the California study that would suggest that the ultimate life expectancy for CCRC residents should be less than what is presented in the California study.

- The California study did not look at ultimate data, but grouped all select periods together. This understates the ultimate mortality rate.

- The California study did not look at level of care information, since it was not available. Especially in the case of a new facility, which would not have a lot of health care utilization, this would understate the ultimate mortality rate.

Below is a summary of the Independent/Assisted/Skilled Facility ultimate life expectancies without withdrawal as compared to the 1983A table as well as the 1996 California CCRC table and the 1990 Life Tables for the United States Social Security Area.

Independent/Assisted/Skilled Facility Ultimate Life Expectancies								
	This Report	1990 US SSA	1996 Calif. Study	1983A	This Report	1990 US SSA	1996 Calif. Study	1983A
Age	Female	Female	Female	Female	Male	Male	Male	Male
65	17.2	18.8	18.8	22.0	13.9	14.8	16.2	18.6
70	14.0	15.2	15.6	17.9	10.8	11.8	13.6	15.0
75	11.2	12.0	12.6	14.0	8.6	9.1	10.8	11.7
80	8.6	9.1	9.6	10.6	6.6	7.0	8.2	9.0
85	6.7	6.6	7.0	7.8	4.9	5.2	6.1	6.8
90	5.1	4.7	4.8	5.6	3.9	3.9	4.6	5.0
95	4.0	3.3	3.3	4.1	3.3	2.9	3.4	3.4

Life expectancies for all three facility types can be found in Appendices F through H. In each table, the expected length of time in each level of care is provided. While there was not a significant difference between facility type and contract type in overall life expectancy, there was considerable variability on a facility-by-facility basis. Some facilities had over twice the life expectancy of other facilities.

E. Medical Screening Standards

After collection of the resident data, an effort was made to include medical screening standards in the analysis of the data. A survey was sent to the seventy-two participating facilities to determine the level of physical and cognitive impairment that would preclude a prospective resident from entering a facility.

Specifically, facilities were asked whether partial or complete assistance needed in activities of daily living would preclude admittance to their facility. Additionally, facilities were asked to identify what levels of cognitive impairment would be allowed to be admitted to independent living, assisted living and skilled nursing.

We received twenty completed surveys from participating facilities. The facilities were aggregated based on the level of medical screening standards performed for new CCRC applicants. Those facilities allowing no more than partial assistance in one activity of daily living were labeled as high screening facilities. Facilities allowing no more than partial assistance in three or complete assistance in one activities of daily living were labeled as medium screening facilities. All other facilities were labeled as low screening facilities.

The researchers anticipated that higher levels of medical screening would result in measurable differences in health care utilization. However, the data did not support this conclusion as shown in the chart below.

Medical Screening	Percentage of time in Health Care Female Age 78
High Screening	21.1%
Medium Screening	14.6%
Low Screening	16.7%

For this relatively small sample size of twenty CCRCs, it was noted that the communities with extensive contracts had higher health care utilization regardless of the screening level. Therefore, it is possible that the impact of no financial barrier under the extensive contract is a more determining variable than initial medical screening. However, it should be noted that the expected pattern of health care utilization within medical screening levels did not occur.

E. Percent of Time in Health Care

An additional analysis performed was an analysis of the Percent of Time in the Health Care for each individual facility. This analysis summarized the length of stay for residents from their transfer from either assisted living or skilled nursing until they exited that level of care due to transfer, withdrawal or death. The most notable conclusions are:

1. The Extensive contract holders tend to spend less time on average in the health care center;

2. The residents of IS communities spend more time in Skilled Nursing, however, less overall time in the health care center; and

3. The residents of ILAS communities spend less time on average in assisted living and skilled nursing than residents of IAS communities.

Appendix A

Participating Facilities

Facility	State	Region	Total Qx Exposure	Facility	State	Region	Total Qx Exposure
A	CA	5	**864.9**	AK	CA	5	**1,834.6**
B	DC	1	**51.1**	AL	FL	2	**1,118.4**
C	PA	1	**1,473.6**	AM	NC	2	**1,787.5**
D	IL	3	**3,580.8**	AN	NH	1	**716.0**
E	MD	2	**1,956.9**	AO	FL	2	**864.8**
F	NJ	1	**2,760.1**	AP	NE	4	**88.9**
G	PA	1	**1,771.6**	AQ	TX	4	**2,646.4**
H	PA	1	**836.5**	AR	PA	1	**2,747.1**
I	PA	1	**380.3**	AS	PA	1	**475.6**
J	CA	5	**1,143.1**	AT	DE	1	**317.8**
K	OR	5	**1,088.4**	AU	MO	4	**962.1**
L	PA	1	**2,068.2**	AV	AZ	5	**1,006.3**
M	NJ	1	**1,399.1**	AW	IL	3	**1,407.1**
N	FL	2	**2,124.1**	AX	IL	3	**521.5**
O	NJ	1	**634.3**	AY	CA	5	**578.3**
P	NH	1	**1,766.3**	AZ	DC	1	**339.1**
Q	FL	2	**2,054.8**	BA	NC	2	**934.2**
R	FL	2	**2,377.6**	BB	PA	1	**1,330.6**
S	IA	4	**1,357.2**	BC	OH	3	**1,908.9**
T	CA	5	**678.9**	BD	OH	3	**167.0**
U	NC	2	**1,343.1**	BE	NC	2	**966.4**
V	PA	1	**1,770.7**	BF	VA	2	**490.4**
W	PA	1	**1,777.8**	BG	KS	4	**725.3**
X	FL	2	**954.3**	BH	NJ	1	**1,740.3**
Y	PA	1	**1,655.1**	BI	PA	1	**1,132.2**
Z	AZ	5	**2,565.5**	BJ	IL	3	**122.4**
AA	MD	2	**586.5**	BK	FL	2	**1,149.7**
AB	NC	2	**923.5**	BL	LA	4	**832.0**
AC	CA	5	**1,095.9**	BM	CA	5	**1,070.7**
AD	OR	5	**3,270.1**	BN	PA	1	**280.5**
AE	TX	4	**1,307.4**	BO	TX	4	**1,670.7**
AF	MA	1	**1,039.7**	BP	OH	3	**1,346.3**
AG	FL	2	**1,697.3**	BQ	CA	5	**255.1**
AH	MN	4	**1,075.6**	BR	DC	1	**7,421.0**
AI	WI	3	**902.0**	BS	OH	3	**731.9**
AJ	WI	3	**450.6**	BT	TX	4	**1,326.8**

Appendix B

Geographical Regions

Region 1		Region 2		Region 3		Region 4		Region 5	
Connecticut	CT	Florida	FL	Illinois	IL	Alabama	AL	Arizona	AZ
Delaware	DE	Georgia	GA	Indiana	IN	Arkansas	AR	California	CA
District of Columbia	DC	Kentucky	KY	Michigan	MI	Iowa	IA	Colorado	CO
Maine	ME	Maryland	MD	Ohio	OH	Kansas	KS	Idaho	ID
Massachusetts	MA	North Carolina	NC	Wisconsin	WI	Louisiana	LA	Montana	MT
New Hampshire	NH	South Carolina	SC			Minnesota	MN	Nevada	NV
New Jersey	NJ	Tennessee	TN			Mississippi	MS	New Mexico	NM
New York	NY	Virginia	VA			Missouri	MO	Oregon	OR
Pennsylvania	PA	West Virginia	WV			Nebraska	NE	Utah	UT
Rhode Island	RI					North Dakota	ND	Washington	WA
Vermont	VT					Oklahoma	OK	Wyoming	WY
						South Dakota	SD		
						Texas	TX		

Appendix C

Participating Facility Summary - Percent of Base Rate

Extensive

Facility	Unisex Aggregate ILU Rate Mortality	Morbidity	Withdrawal
A	102.8%	115.7%	465.2%
B	40.4%	196.8%	1.5%
C	197.8%	121.7%	122.7%
D	58.2%	57.4%	94.2%
E	175.8%	94.8%	76.8%
F	103.5%	63.8%	4.5%
G	103.5%	83.5%	72.6%
H	49.0%	58.7%	3.8%
I	79.8%	64.3%	3.1%
J	69.4%	46.8%	10.2%
K	54.0%	37.4%	3.8%
L	160.8%	171.2%	95.0%
M	135.9%	90.1%	63.6%
N	147.5%	109.6%	53.0%
O	118.1%	94.0%	62.5%
P	147.6%	65.1%	143.6%
Q	79.9%	49.1%	132.6%
R	78.9%	41.1%	14.2%
S	156.5%	65.3%	7.9%
T	68.7%	172.8%	18.4%
U	159.9%	123.5%	158.7%
V	85.9%	93.2%	21.2%
W	119.6%	88.6%	33.5%
X	40.4%	107.5%	23.9%
Y	102.3%	123.9%	60.5%
Z	99.8%	53.7%	3.0%
AA	57.2%	94.0%	3.5%
AB	133.6%	57.9%	1.5%

Appendix C

Participating Facility Summary - Percent of Base Rate *(continued)*

Modified

AC	62.2%	79.6%	72.5%
AD	49.2%	38.3%	96.4%
AE	101.2%	64.0%	148.6%
AF	109.6%	60.5%	31.5%
AG	119.1%	156.4%	95.2%
AH	73.1%	134.9%	43.4%
AI	178.3%	139.2%	48.5%
AJ	91.4%	119.3%	19.6%
AK	96.0%	68.2%	66.5%
AL	83.4%	64.1%	157.4%
AM	64.3%	162.2%	45.4%
AN	71.9%	79.0%	51.5%

Fee-for-Service

AO	88.9%	197.8%	260.1%
AP	43.4%	135.6%	6.2%
AQ	115.1%	73.1%	42.7%
AR	120.7%	102.9%	65.6%
AS	67.3%	42.2%	62.1%
AT	67.6%	44.7%	6.2%
AU	47.0%	44.3%	52.3%
AV	148.2%	172.8%	662.1%
AW	55.9%	95.1%	32.6%
AX	43.4%	37.3%	6.7%
AY	61.3%	155.3%	158.0%
AZ	65.9%	145.4%	45.8%
BA	128.5%	147.9%	121.3%
BB	101.2%	83.4%	69.3%
BC	42.6%	37.3%	97.3%
BD	76.7%	72.7%	25.6%
BE	92.6%	98.2%	85.5%
BF	174.0%	198.3%	220.7%
BG	33.7%	29.5%	99.7%
BH	43.8%	51.9%	6.7%
BI	76.9%	122.9%	52.9%
BJ	20.6%	24.8%	19.3%
BK	92.6%	121.5%	37.6%

Appendix C

Participating Facility Summary - Percent of Base Rate *(continued)*

		Rental	
BL	203.3%	320.4%	161.5%
BM	145.1%	239.9%	65.7%
BN	274.9%	482.0%	51.2%
BO	163.2%	146.9%	285.1%
BP	75.6%	48.3%	11.7%
BQ	197.4%	260.9%	368.1%
BR	138.1%	162.6%	150.0%
BS	154.7%	164.5%	95.5%
BT	73.8%	185.0%	20.3%

Appendix D

The following tables show the mean length of stay in days in ALU for both female and male by Contract Types, as well as the 25th, 50th and 75th percentiles.

Independent/Assisted/Skilled

	Female				Male			
	Mean	25th Percentile	50th Percentile	75th Percentile	Mean	25th Percentile	50th Percentile	75th Percentile
Extensive								
70-74	798	219	339	1,004	444	68	286	974
75-79	1,053	236	838	1,217	766	271	550	1,186
80-84	957	274	606	1,371	656	84	415	1,057
85-89	882	267	623	1,253	519	121	314	838
90-94	732	305	554	1,016	550	137	450	816
95-99	591	156	393	874	905	236	513	1,167
Modified								
70-74	706	142	235	1,740	815	149	815	1,481
75-79	708	140	295	1,162	374	53	188	657
80-84	697	158	434	1,111	587	163	560	914
85-89	635	215	514	944	484	113	391	707
90-94	486	182	338	694	506	128	543	676
95-99	453	123	445	780	733	220	856	1,124
Fee-for-Service								
70-74	1,550	673	1,238	1,784	241	121	201	401
75-79	1,097	263	696	1,726	714	118	472	712
80-84	910	238	658	1,389	675	181	482	793
85-89	737	204	561	1,108	689	203	447	843
90-94	610	169	433	975	537	183	283	716
95-99	569	278	404	783	335	105	191	513
Rental								
70-74	571	228	571	914	N/A	N/A	N/A	N/A
75-79	1,196	24	1,196	2,368	N/A	N/A	N/A	N/A
80-84	527	55	427	1,050	308	36	308	579
85-89	682	192	442	767	235	74	151	421
90-94	652	215	520	953	197	82	197	312
95-99	508	89	363	963	N/A	N/A	N/A	N/A

Appendix D

Independent/Low Assisted/Skilled

	Female				Male			
	Mean	25th Percentile	50th Percentile	75th Percentile	Mean	25th Percentile	50th Percentile	75th Percentile
Extensive								
70-74	324	324	324	324	N/A	N/A	N/A	N/A
75-79	373	97	231	880	746	303	650	1,256
80-84	727	293	608	1,418	718	280	387	1,317
85-89	612	171	423	768	737	291	422	906
90-94	446	175	324	538	576	342	479	866
95-99	349	114	333	362	507	295	362	1,057
Modified								
70-74	2,269	2,269	2,269	2,269	N/A	N/A	N/A	N/A
75-79	1,154	416	1,125	1,452	921	341	984	1,413
80-84	500	85	202	650	552	482	552	622
85-89	536	127	368	763	482	123	342	782
90-94	504	205	586	840	464	28	420	715
95-99	663	200	824	979	39	39	39	39

Appendix E

The following tables show the mean length of stay in days in SNF for both female and male by Contract Types, as well as the 25th, 50th and 75th percentiles.

Independent/Assisted/Skilled

	Female				Male			
	Mean	25th Percentile	50th Percentile	75th Percentile	Mean	25th Percentile	50th Percentile	75th Percentile
Extensive								
70-74	991	87	713	1,641	719	40	453	1,521
75-79	1,324	320	1,014	2,201	779	229	617	1,075
80-84	1,310	335	991	1,893	753	242	496	1,091
85-89	1,014	259	768	1,306	521	100	264	775
90-94	805	180	573	1,121	629	114	494	860
95-99	867	180	675	1,330	678	125	409	1,230
Modified								
70-74	1,988	453	1,687	3,107	871	354	630	824
75-79	1,717	543	1,384	2,459	987	183	866	1,455
80-84	1,145	329	890	1,526	702	164	607	1,162
85-89	1,052	266	756	1,586	614	113	456	789
90-94	1,019	332	770	1,569	392	79	215	711
95-99	679	107	417	1,328	652	587	618	649
Fee-for-Service								
70-74	888	125	861	1,665	508	91	261	712
75-79	953	37	141	2,242	488	41	271	1,029
80-84	959	167	549	1,353	569	83	318	788
85-89	924	139	653	1,392	624	180	367	1,052
90-94	843	174	454	861	427	53	275	625
95-99	790	74	833	1,275	395	61	107	777
Rental								
70-74	719	40	453	1,521	N/A	N/A	N/A	N/A
75-79	779	229	617	1,075	218	218	218	218
80-84	753	242	496	1,091	747	127	486	1,498
85-89	521	100	264	775	333	25	199	494
90-94	629	114	494	860	351	8	50	604
95-99	678	125	409	1,230	517	517	517	517

Appendix E

Independent/Low Assisted/Skilled

	Female				Male			
	Mean	25th Percentile	50th Percentile	75th Percentile	Mean	25th Percentile	50th Percentile	75th Percentile
Extensive								
70-74	1,542	332	914	3,326	784	289	606	1,444
75-79	1,230	532	1,533	1,568	756	183	604	1,297
80-84	1,522	452	1,206	2,187	628	71	524	1,038
85-89	927	189	628	1,467	657	199	465	1,007
90-94	872	89	568	1,360	465	93	313	598
95-99	679	101	575	1,098	547	131	352	770
Modified								
70-74	2,666	111	3,383	4,504	657	63	657	1,251
75-79	963	286	723	1,178	728	28	436	1,159
80-84	1,257	317	847	1,898	738	33	370	1,317
85-89	751	140	472	1,135	539	148	383	918
90-94	812	146	587	1,279	480	42	131	574
95-99	929	298	685	1,464	513	12	159	1,368

Appendix E

Independent/Skilled

	Female				Male			
	Mean	25th Percentile	50th Percentile	75th Percentile	Mean	25th Percentile	50th Percentile	75th Percentile
Extensive								
70-74	839	356	666	878	1,149	301	829	2,158
75-79	1,239	275	915	2,014	1,085	468	576	1,958
80-84	1,156	442	902	1,623	1,195	478	821	1,774
85-89	928	354	775	1,429	648	210	427	875
90-94	778	254	668	1,122	627	146	399	909
95-99	791	246	548	1,201	304	91	158	495
Fee-for-Service								
70-74	1,457	255	1,352	2,968	1,173	555	1,205	1,759
75-79	1,096	192	767	1,541	642	177	454	1,089
80-84	1,184	371	875	1,816	845	183	812	1,074
85-89	860	123	487	1,180	921	312	763	1,472
90-94	900	152	698	1,118	563	93	406	840
95-99	784	268	565	1,183	187	31	263	268
Rental								
70-74	1,728	244	1,094	2,980	1,100	127	619	1,808
75-79	1,221	254	858	2,045	937	136	579	1,274
80-84	1,509	289	1,241	2,438	985	268	676	1,423
85-89	1,138	264	852	1,723	803	277	562	1,116
90-94	936	212	758	1,401	829	167	585	1,223
95-99	854	253	578	1,003	450	261	354	655

Appendix F

Ultimate Independent Living Life Expectancy in Years by Level of Care

Independent/Assisted/Skilled – Current Residents No Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	15.2	0.6	1.4	17.2	12.7	0.4	0.8	13.9
70	12.0	0.6	1.4	14.0	9.8	0.3	0.7	10.8
75	9.2	0.6	1.4	11.2	7.6	0.3	0.7	8.6
80	6.6	0.6	1.4	8.6	5.6	0.3	0.7	6.6
85	4.6	0.7	1.4	6.7	3.9	0.3	0.7	4.9
90	3.2	0.6	1.3	5.1	2.8	0.4	0.7	3.9
95	2.4	0.4	1.2	4.0	2.2	0.4	0.7	3.3
100	1.9	0.4	1.0	3.3	1.8	0.4	0.7	2.9

Ultimate Independent Living Contract Life Expectancy in Years by Level of Care

Independent/Assisted/Skilled – Current Residents - With Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	13.6	0.5	1.2	15.3	11.6	0.3	0.7	12.6
70	11.0	0.5	1.2	12.7	9.1	0.3	0.7	10.1
75	8.6	0.5	1.3	10.4	7.2	0.3	0.6	8.1
80	6.3	0.6	1.3	8.2	5.4	0.3	0.6	6.3
85	4.4	0.6	1.3	6.3	3.8	0.3	0.7	4.8
90	3.1	0.6	1.3	5.0	2.7	0.4	0.7	3.8
95	2.3	0.5	1.1	3.9	2.1	0.4	0.7	3.2
100	1.9	0.5	0.9	3.3	1.8	0.4	0.6	2.8

Appendix F

New Entrant Life Expectancy in Years by Level of Care

Independent/Assisted/Skilled – New Residents - No Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	15.2	0.6	1.4	17.2	12.8	0.4	0.8	14.0
70	12.1	0.6	1.4	14.1	9.9	0.3	0.7	10.9
75	9.3	0.6	1.4	11.3	7.7	0.3	0.7	8.7
80	6.7	0.6	1.4	8.7	5.7	0.3	0.7	6.7
85	4.8	0.6	1.4	6.8	4.0	0.3	0.7	5.0
90	3.5	0.5	1.3	5.3	3.0	0.3	0.7	4.0
95	2.6	0.4	1.2	4.2	2.4	0.3	0.7	3.4
100	2.0	0.3	1.0	3.3	2.0	0.3	0.6	2.9

New Entrant Contract Life Expectancy in Years by Level of Care

Independent/Assisted/Skilled – New Residents - With Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	12.8	0.5	1.1	14.4	10.9	0.3	0.6	11.8
70	10.4	0.5	1.2	12.1	8.6	0.3	0.6	9.5
75	8.2	0.5	1.2	9.9	6.9	0.3	0.6	7.8
80	6.0	0.5	1.2	7.7	5.2	0.3	0.6	6.1
85	4.3	0.5	1.2	6.0	3.6	0.3	0.6	4.5
90	3.2	0.5	1.2	4.9	2.7	0.3	0.6	3.6
95	2.4	0.4	1.1	3.9	2.2	0.3	0.6	3.1
100	1.9	0.3	0.9	3.1	1.9	0.3	0.6	2.8

Appendix G

Ultimate Independent Living Life Expectancy in Years by Level of Care

Independent/Low Assisted/Skilled – Current Residents No Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	15.2	0.7	1.7	17.6	13.6	0.3	1.1	15.0
70	12.2	0.7	1.6	14.5	10.8	0.3	1.0	12.1
75	9.5	0.6	1.5	11.6	8.2	0.3	1.0	9.5
80	6.9	0.5	1.5	8.9	5.9	0.3	1.0	7.2
85	4.9	0.4	1.4	6.7	4.0	0.2	1.0	5.2
90	3.5	0.3	1.2	5.0	2.9	0.2	0.9	4.0
95	2.6	0.3	1.0	3.9	2.2	0.2	0.7	3.1
100	2.2	0.2	0.7	3.1	1.8	0.2	0.6	2.6

Ultimate Independent Living Contract Life Expectancy in Years by Level of Care

Independent/Low Assisted/Skilled – Current Residents - With Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	14.6	0.7	1.6	16.9	13.1	0.3	1.0	14.4
70	11.8	0.6	1.6	14.0	10.5	0.3	1.0	11.8
75	9.2	0.6	1.5	11.3	8.1	0.3	0.9	9.3
80	6.8	0.5	1.4	8.7	5.8	0.2	0.9	6.9
85	4.8	0.4	1.4	6.6	4.0	0.2	1.0	5.2
90	3.4	0.3	1.2	4.9	2.9	0.2	0.9	4.0
95	2.6	0.3	1.0	3.9	2.2	0.2	0.7	3.1
100	2.2	0.2	0.7	3.1	1.8	0.2	0.6	2.6

Appendix G

New Entrant Life Expectancy in Years by Level of Care

Independent/Low Assisted/Skilled – New Residents - No Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	15.5	0.7	1.7	17.9	13.8	0.3	1.1	15.2
70	12.5	0.7	1.6	14.8	11.0	0.3	1.0	12.3
75	9.8	0.6	1.5	11.9	8.5	0.3	1.0	9.8
80	7.3	0.5	1.4	9.2	6.2	0.2	1.0	7.4
85	5.3	0.4	1.3	7.0	4.4	0.2	0.9	5.5
90	3.9	0.3	1.2	5.4	3.3	0.2	0.8	4.3
95	3.0	0.2	0.9	4.1	2.6	0.2	0.6	3.4
100	2.6	0.2	0.6	3.4	2.2	0.2	0.5	2.9

New Entrant Contract Life Expectancy in Years by Level of Care

Independent/Low Assisted/Skilled – New Residents - With Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	14.5	0.6	1.6	16.7	13.0	0.3	1.0	14.3
70	11.8	0.6	1.5	13.9	10.5	0.3	0.9	11.7
75	9.3	0.6	1.4	11.3	8.1	0.2	0.9	9.2
80	7.0	0.5	1.4	8.9	6.0	0.2	0.9	7.1
85	5.1	0.4	1.3	6.8	4.3	0.2	0.9	5.4
90	3.8	0.3	1.1	5.2	3.2	0.2	0.8	4.2
95	3.0	0.2	0.9	4.1	2.5	0.2	0.6	3.3
100	2.5	0.2	0.6	3.3	2.1	0.2	0.5	2.8

Appendix H

Ultimate Independent Living Life Expectancy in Years by Level of Care

Independent/Skilled – Current Residents - No Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	13.6	0.0	1.7	15.3	8.6	0.0	1.0	9.6
70	11.4	0.0	1.7	13.1	7.6	0.0	1.0	8.6
75	9.5	0.0	1.8	11.3	6.6	0.0	1.0	7.6
80	7.5	0.0	1.8	9.3	5.5	0.0	0.9	6.4
85	5.4	0.0	1.7	7.1	4.3	0.0	0.9	5.2
90	3.8	0.0	1.6	5.4	3.3	0.0	0.7	4.0
95	2.5	0.0	1.3	3.8	2.5	0.0	0.6	3.1
100	1.9	0.0	1.1	3.0	2.1	0.0	0.5	2.6

Ultimate Independent Living Contract Life Expectancy in Years by Level of Care

Independent/Skilled – Current Residents - With Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	10.0	0.0	1.1	11.1	6.8	0.0	0.8	7.6
70	8.7	0.0	1.2	9.9	6.2	0.0	0.8	7.0
75	7.6	0.0	1.3	8.9	5.6	0.0	0.8	6.4
80	6.3	0.0	1.4	7.7	4.7	0.0	0.8	5.5
85	4.7	0.0	1.5	6.2	3.8	0.0	0.7	4.5
90	3.4	0.0	1.4	4.8	3.0	0.0	0.7	3.7
95	2.4	0.0	1.2	3.6	2.3	0.0	0.6	2.9
100	1.8	0.0	1.1	2.9	2.0	0.0	0.5	2.5

Appendix H

New Entrant Life Expectancy in Years by Level of Care

Independent/Skilled – New Residents - No Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	13.7	0.0	1.7	15.4	8.7	0.0	1.0	9.7
70	11.5	0.0	1.7	13.2	7.8	0.0	1.0	8.8
75	9.7	0.0	1.8	11.5	6.8	0.0	1.0	7.8
80	7.6	0.0	1.8	9.4	5.6	0.0	0.9	6.5
85	5.6	0.0	1.7	7.3	4.5	0.0	0.8	5.3
90	4.0	0.0	1.5	5.5	3.5	0.0	0.7	4.2
95	2.8	0.0	1.2	4.0	2.7	0.0	0.6	3.3
100	2.1	0.0	1.0	3.1	2.3	0.0	0.4	2.7

New Entrant Contract Life Expectancy in Years by Level of Care

Independent/Skilled – New Residents - With Withdrawal

	Female Residents				Male Residents			
Age	ILU	ALU	SNF	Total	ILU	ALU	SNF	Total
65	7.6	0.0	0.8	8.4	5.3	0.0	0.6	5.9
70	6.7	0.0	0.9	7.6	4.9	0.0	0.6	5.5
75	5.9	0.0	0.9	6.8	4.4	0.0	0.6	5.0
80	4.9	0.0	1.0	5.9	3.8	0.0	0.6	4.4
85	4.0	0.0	1.1	5.1	3.3	0.0	0.6	3.9
90	3.0	0.0	1.1	4.1	2.7	0.0	0.5	3.2
95	2.2	0.0	0.9	3.1	2.2	0.0	0.4	2.6
100	1.8	0.0	0.8	2.6	1.9	0.0	0.3	2.2