New Principles for Market Analysis



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Senior housing of all types continues to form a strong growth industry, demonstrating that it outperforms all other real estate segments, particularly through the type of down market created by the recession. Nevertheless, new development, expansion or repositioning of existing communities warrants careful evaluation prior to undertaking the risks inherent in these activities and supports successful implementation.

The markets for senior living and supportive services have grown significantly more complex than they were even ten years ago. The number of new projects in most markets has been notable. And new developments shift away from standard service packages, and even if residents will receive services, have changed the way we characterize and quantify markets. Access to information and understanding options among older adults and their families has also increased significantly and will only continue to do so. And entirely new models for service access and delivery will also continue to emerge and evolve.

How do we evaluate opportunities for development in this sector before proceeding with development, and how do the market data affect the final product – services, fee structure, unit types and amenities? What data and methodologies are important in the financing sector, including investors, banks and other sources? How important is it to study the market before financing a project? And what are the elements of an accurate market analysis? This paper addresses all of these questions and more in the context of today's senior living environment.

Background

In 2008, a small group of senior housing industry professionals (Methodology Task Force) collaborated and published a White Paper entitled "Demand Terminology: Finding Common Ground." The purpose of the publication was to reach consensus on certain definitions for the basic terminology and methodology used in senior housing when conducting demand analyses for Independent Living units. Many in the industry considered this White Paper to be a very important document. By 2013, it was felt that much work was needed to update and expand the efforts of the Methodology Task Force and its membership needed to expand. It became important to look critical to today's seniors. Perhaps more critically, given the many changes in the senior hous'ing market during those years, it was essential to examine fundamental assumptions used in market analysis across various product types (Independent Living [IL], Assisted Living [AL] and Memory Care [MC]). Through a series of meetings and conference calls, the Methodology Task would focus one of the following topics:

- Data Sources
- Age and Income Qualifiers
- Competition
- Adult Child Households

I his publication contains the consensus of experienced, professional and highly respected analysts and incorporates commentary and recommendations on "Best Practices" in each area. Our work recognizes the importance of both quantitative and qualitative information and judgment based on experience as the context for the essential elements of a market study. In some instances, varying viewpoints highlighted the fact that differing methodologies exist when evaluating a market. However, the group built a consensus around the criteria used in market analysis. It has become critically important for decision-makers to understand the underlying assumptions in any study, how they are applied to the evaluation, and the strengths and weaknesses inherent in both the assumptions and the data sources.

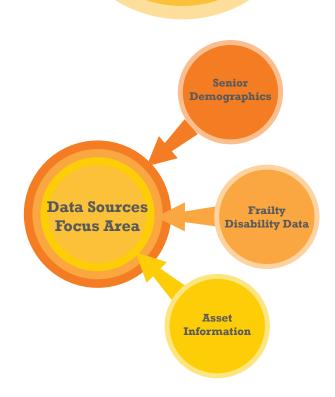


National Sources of Senior Demographics

The most widely accepted national data source in the senior living industry has historically been *The Nielsen Company* (formerly "Claritas"). At times, members have used ESRI as well. Another data source is Applied Geographic Solutions. Since the inception of the work of the Methodology Task Force, both *The Nielsen Company* and ESRI have begun providing population-based statistics for the base year 2010. Due to the limited nature of the 2010 US Census, household income data is not available for that year. However, estimates for household incomes are now being made by *The Nielsen Company* utilizing both results from the American Community Survey on a rolling annual basis, as well as local level data – ensuring improved data quality.

Considerable differences in the data estimates and projections reported by *The Nielsen Company* and *ESRI* have been found. Recently *NICMAP* announced that it no longer uses The Nielsen Company as its data provider and it is now using ESRI. This is primarily due to the fact that *NICMAP*'s larger clients prefer the *ESRI GIS* (mapping) system.

Both *The Nielsen Company* and *ESRI* provide subscribers with Vendor Accuracy Studies that provide detailed information as to the reliability and accuracy of their data estimation and projection processes and results. The study conducted by researchers and provided by *ESRI* compares demographic data from several unnamed vendors (including ESRI) to see which vendor more accurately predicted population and household data in 2010 when using 2000 Census data. A study provided by *The Nielsen Company* discusses the accuracy of *The Nielsen Company* data alone.





Sources of disability (ADL/ IADL) rates

Disability or frailty prevalence rates are typically used in the methodology for calculating the demand for Assisted Living and Memory Care. Several different rates to describe disability in the elderly are available and derived from different US Census publications. Sources report age cohorts and define "disability" vs.

Best Practices

The Nielsen Company remains the primary data source used and is recognized nationally by analysts, providers/ developers and the financial community. Why? Most analysts use ESRI as a secondary source for comparison purposes if something in The Nielsen Company data raises a concern. ESRI is also used if specifically requested by a client.

"needs assistance" differently, making it difficult to standardize the use of these rates from one firm to the next. Some of the less conservative (more generous) frailty rates are used by some firms based on an assumption that seniors are initially entering AL with minimal need for assistance in activities of daily living (ADLs) and instrumental activities of daily living (IADLs), while others routinely use more conservative assumptions. The severity and prevalence rates of dementia also vary by age group.

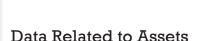
Tables A-1 and A-2 (found in the Appendix to this publication) contain sources for AL and ALZ (dementia) frailty data. Given the significant differences in the frailty rates applied by firms, all known data is presented in the tables in the Appendix.

Best Practices

There are significant differences in both the frailty rates and the dementia prevalence rates used in the AL and ALZ analyses. The most conservative AL analysis appears to use the lower frailty levels associated with people who have difficulties with ADLs and IADLs and who also indicated a need for assistance. The least conservative uses lower percentages of frailty and does qualify estimates based on a need for assistance. A third approach uses a percentage of those who need assistance with 4 or more ADLs (more consistent with a nursing home population and, therefore, very conservative). When choosing which to use, such factors as the type of care and the acuity the provider intends to offer can be taken into consideration as well as regulatory and licensure requirements of each state. This will make it critically important to understand how the competitive communities are positioning themselves in terms of the level of care they are providing. Another factor that can differentiate outcomes is whether the analyst considers only one-person households or includes a small percentage of two-person households to account for couples who wish to move to AL. A couple in which one partner requires less support than the other may require a less conservative approach.

In addition, while we have presented a variety of sources for the prevalence of dementia, they range in age of publication from 1987 to 2013. Given the growing number of publications referring to the increase in the prevalence of dementia in the elderly that is known to have occurred (and will continue as boomers age), we believe that analyzing MC separately, if done, should use data that is both current and applicable, breaking down households by age segment. The information from 1987 shown in the table in the Appendix for MC makes a point of discussing what percent of people with dementia will chose to move to an institution rather than remain at home. Undoubtedly, the percentage moving to a care facility has increased as we see higher occupancy rates at the significantly growing number of dedicated MC communities across the nation.

No matter which frailty or dementia statistics are used, the results of the quantitative analysis cannot be interpreted in a vacuum. A variety of factors need to be considered including occupancy, product positioning, age of facility and target market audience.



The Nielsen Company does not provide data related to client assets (aside from home value estimates and projections). However, ESRI and PMD Advisory Services provide net worth by age data.

Data Provider	Asset Information Available
Nielsen/Claritas	Home value estimates and projections
ESRI	Net worth by age
PMD	Net worth by age



Best Practices

Net worth data can be found at the Department of the Treasury and some information is available through the American Fact Finder 2. It is timeconsuming to extract useful data from these sources and neither source provides asset projections. Therefore, the methodology used in almost all cases to determine the depth of the market for IL, AL and MC relies on income data alone. Frequently, only homeowner households will be included in the IL analysis, particularly when an entrance fee product is being evaluated as a way of mitigating the issue of the lack of net worth data.



Our results are provided by level of care starting with Independent Living followed by Assisted Living and Memory Care Assisted Living.

INDEPENDENT LIVING

Age Qualifier

While the average age at entry seems to have been creeping up over the last several years from the mid to high 70s to the low 80s, the Methodology Task Force is recommending that we hold the minimum age of entry for Independent Living at age 75. The primary reason for this is that "average" reflects the fact that some entrants will be older and some younger.

Best Practices

It is recommended that the primary feasibility analysis be completed using the age 75 and older households. Depending on the purpose of the assessment (existing/new community, types of service programs/packages), a second analysis may be conducted as a sensitivity test using households ages 80 and older. It is recommended that the results of both analyses be presented to the client with a simple, clear explanation of the difference in the two methodologies.



Rent-to-Income Ratio

Typically market analysts have used a rent-to-income ratio of 60% for service enriched Independent Living products. The assumption that when taking into account the services received as part of the monthly fee the typical household would only require 40% to cover additional non-included expenses appears to be generally accepted. Based on historical results, this ratio seems to work. This ratio can fluctuate based on the number and quality of the services included in the monthly fee.

For instance, an age-qualified 55 and older community, which offers no or very few services in the monthly fee, or homeowners' association, fee would likely require a much lower rent-to-income ratio. Such a situation could require a rent-to-income ratio in the 35% to 50% range.

Best Practices

It is recommended that the rent-to-income ratio for an Independent Living product with a typical service package be approximately 60% – subject to the analyst's interpretation of the situation. Lower or higher rent-to-income ratios could be appropriate based on the proposed service package included in the monthly fee. As with all elements of the analysis, it is important to be transparent with the client and clear about the rationale utilized in setting the rent-to-income ratio.

Household Tenure (Own/Rent Status)

Owner Households – home ownership plays two roles when it comes to an Independent Living product. If the Independent Living product is based on an entrance fee product, historically market analysts have utilized the value of the home in calculating the ability of the household to be able to afford the entrance fee. In the case of a rental product, analysts have often used the proceeds from a home sale as a supplement (asset spend down) to the household's annual income.

Entrance Fee Product – typically, analysts have assumed based on experience and anecdotal reports that households choosing an entrance fee product tend to trade all or a large portion of home sale proceeds for the entrance fee. Therefore, in the determination of the qualified households for an entrance fee product, the sale of the home is considered to be an asset and an additional qualifier for paying these fees. Typically the analyst will estimate the number of age-, incomeand home-value qualified households to determine the portion of the qualified household base.

For instance, if a community is looking to build or fill Independent Living entrance fee residences with a typical service package, then the qualified household would be over the age of 75, have sufficient income to cover the monthly fee with a 40% cushion, and have a home value at or above the minimum entrance fee for a typical residence.

Best Practices

To determine home value for target households it is important to ensure that the estimated home value for age appropriate households in the market area is as accurate as possible. While all data vendors (e.g.: The Nielsen Company, ESRI, etc.) provide home value estimates it is important to check those values against actual Multiple Listing Service (MLS) sales data or by purchasing home value/sales information from another vendor such as Metro List. If there is a discrepancy between the home values as supplied by the data vendor and the MLS or other actual sales data, then the median home value and the distributions of households by home value used in the analysis need to be adjusted to account for that discrepancy when calculating the number of homeowners with qualified home values.

Rental Product – some analysts utilize the estimated interest on the net proceeds from an owner's home sale as a contribution to the household's annual income when making a determination of the annual income required to support the monthly fee.

For instance, if the median home value in the market area for a home owned by a household over the age of 75 is \$350,000, it is assumed that an owner household will sell or dispose of the home to move into the senior living community. Assuming that the typical age 75 and older household owns its property free and clear, then it is reasonable to assume that the homeowner would likely clear about 92% of the value of the home once Realtor fees and other expenses associated with the home sale are paid. This would yield net proceeds of about \$322,000. In today's market, if the homeowner were able to invest those proceeds at 1% this would yield an additional \$3,200 per year. While not a significant factor in today's economic environment, if interest rates increase to 4% to 5% then the contribution becomes significant again just as it was before the past recession.

ASSISTED LIVING

Age Qualifier

Although we know that the average age at entry for AL is in the 80s, the committee is recommending that analysts use a minimum age of entry for Assisted Living of age 75. Again, while the average age at entry is higher, some of the population ages 75-79 will utilize these services.

Best Practices

It is recommended that in an Assisted Living market analysis, the minimum age at entry be set at 75 assuming that need multipliers (different rates of incidence in limitations in activities of daily living) will be utilized in the demand analysis that reflect the variance in need levels based on age.



RENT-TO-INCOME RATIO AND TENURE

Many analysts have moved away from a rent-to-income ratio for Assisted Living. This shift seems to track back to the 2009 Overview of Assisted Living, which revealed a significant discrepancy between the median income of Assisted Living residents and the median fees that were being charged by providers. What has evolved is a two-tiered approach, which utilizes a minimum income amount for a one-person household and a second, lower income threshold for a one-person homeowner household. The second income threshold assumes that the owner household can sell the house and use those proceeds to supplement the lower income.

Minimum incomes utilized by analysts for Assisted Living have included \$25,000 and \$50,000 for non-owner, one-person households, and \$15,000 and \$25,000 for one-person owner households. Geographic location is also going to have a significant impact on this variable due to its effects on operating costs and fees.

It is important when using a minimum income approach to make certain there is some sense of realism in the income threshold that is utilized. For instance, if the proposed Assisted Living starting fee is \$4,000 per month, then the fee to the Assisted Living community (not including other personal expenses and incidentals) would be \$48,000 per year. If a modest amount was assumed for personal expenses and incidentals of \$750 per month, that would require an additional \$9,000 per year for a total of \$57,000. If the household resides in the Assisted Living community for a typical stay of 28 months, the stay (without additional Level of Care charges) would cost \$133,000. If a minimum annual income threshold was used in the analysis of \$25,000, then the household would be required to cover the additional cost of \$74,667 from assets, home proceed spend-down or other sources.

Best Practices

Assisted Living - in setting the minimum income threshold for non-owner households it is important to compare the age 75 and older median household income to the proposed minimum income threshold to be utilized in the analysis. It would be important not to deviate below the median, as this will increase the risk that the household may not be able to cover the cost of the fee. In determining the threshold for the owner households it is important to examine the median age 75 and older home value and/or net worth to evaluate if the net home sale proceeds and assets can provide sufficient supplemental funds to cover the annual cost of the Assisted Living fee. As with all elements of the analysis, it is important to be transparent with the client and clear about the assumptions utilized in setting the minimum income thresholds.

Minimum Income Approach

Non-owner	Owner
One-person Households	One-person Households
\$25,000 and \$50,000	\$15,000 and \$25,000

Starting fee is \$4,000/month (\$48,000/year)



Modest amount for personal/incidentals of \$750/month (\$9,000/year)

\$57,000/year



28 months (typical stay period)

\$130,000

If minimum income of \$25,000...
Then, additional cost of

\$74,667

Would need to be covered another way





Rent-to-Income Ratio and Tenure

As in the case of Assisted Living, many analysts have moved away from a rent-to-income ratio for Memory Care. As indicated previously, this shift seems to track back to the 2009 Overview of Assisted Living, which revealed a significant discrepancy between the median income of Assisted Living residents and the median fees that were being charged by providers. What has evolved in the case of dementia analysis is a similar two-tiered approach, which utilizes a minimum income amount for a one-person household and a second income threshold for one-person homeowner households. The second income threshold assumes that the owner household can sell the house and use those proceeds to supplement the lower income.

Minimum incomes utilized by analysts for Assisted Living have included \$30,000 and \$60,000 for non-owner one-person households, and \$15,000 and \$25,000 for one-person owner households.

As in the case of Assisted Living, it is even more important when using a minimum income approach for a dementia care analysis to make sure there is some sense of realism in the income threshold that is utilized because typically the dementia care rates are much higher than those for Assisted Living. For instance, if the proposed Assisted Living starting fee is \$6,000 per month, then the fee to the Assisted Living community (not including other personal expenses and incidentals) would be \$72,000 per year. If a modest amount is assumed for personal expenses and incidentals of \$750 per month, that would require an additional \$9,000 per year for a total of \$81,000. If the household resides in the dementia care community for a typical stay of 28 months, the stay (without additional Level of Care charges) would cost \$189,000. If a minimum annual income threshold was used in the analysis of \$35,000, then the household would be required to cover the additional cost of \$107,334 from assets, home proceed spend-down or other sources.

Best Practices

Dementia Care Assisted Living - in setting the minimum income threshold for non-owner households it is important to compare the age 75 and older median household income to the proposed minimum income threshold to be utilized in the analysis. It would be important not to deviate below the median, as this will increase the risk that the household may not be able to cover the cost of the fee. In determining the threshold for the owner households it is important to examine the median age 75 and older home value and or net worth to evaluate if the net home sale proceeds and assets can provide sufficient supplemental funds to cover the cost of the Assisted Living fee. As with all elements of the analysis, it is important to be transparent with the client and clear about the assumptions utilized in setting the minimum income thresholds.



The group addressed four primary focus areas related to competition.

DEFINING COMPETITION: "COMPARABLE" VS. "COMPETITIVE"

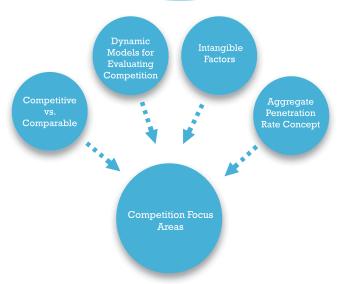
When analyzing the competitive environment for senior living services, retirement communities could be identified as "comparable" or "competitive."

A "comparable" community generally refers to one that offers similar levels of care and related services and programming and therefore may be a parallel choice for senior living. A "competitive" community is one that targets similar age- and income-qualified seniors for units that are available in the market because of correlative pricing, amenities, age of physical plant, quality of design, finishes and appearance.

As more senior living product is developed in a geographic area, while it may be considered a comparable option for seniors in the market, it can be misleading to include all units in the competitive unit count.

For example:

A CCRC that is significantly older than others and may offer accommodations that are generally smaller and/or less attractive. Finishes may be of lower quality, units do not have washers/dryers, balconies/patios are not available, etc. when compared to new communities. They may, therefore, not be as



competitive as CCRCs of approximately the same age. However, the CCRC is comparable because it offers similar levels of care in a health care continuum as well as security and assistance.

"Comparable" communities are those that are typically included in a feasibility study based on the conservative nature of the analysis.

A "competitive" community is one that targets similar ageand income-qualified seniors for units that are available in the market. "Competitive" units have a similar quality in terms of size of units, design, finishes, amenities, age of buildings or renovations to older buildings. Competitive units target a specific income group and consumer expectations for attractiveness and quality.

The differences between "competitive" and "comparable" units may be subjective, but they are also significant. "Comparable" communities cannot be ignored in a market evaluation because they are readily available viable options to seniors of similar age/income. However, "comparable" communities may be less attractive than a newly developed, state-of-the-art or innovative project that may have a stronger market draw.

The ability of communities to competitively draw market away from others may be further evaluated on a competitive basis in which available smaller studio and one-bedroom units in a market that have lower fees may be removed from the count of competitive units.

Distinguishing Levels of Living

Many Assisted Living providers advertise that they offer "Independent Living" and "Assisted Living." All units are licensed to serve as Assisted Living. Distinguishing factors include the amount of care and service that is provided to the resident and unit features (units with no ovens and where two to three meals are included in fees are not likely to be serving an independent population).

The challenge is to identify/quantify the number of "assisted" residents and "independent" residents, particularly in those communities that provide full kitchens and options for fewer than two meals/day.

Congregate or hybrid, IL/AL, IL Plus or Assisted Living "Light" facilities that include two to three meals daily in fees and usually do not provide full kitchens typically provide Assisted Living services through a home care agency.

Best Practices

The evolving market environment and a commitment to transparency requires that analysts adequately disclose the criteria/rationale categorizing a project as "competitive" rather than "comparable."

- Each consultant should adequately disclose the criteria for the basis of "comparable" vs. "competitive" to have transparency.
 Be clear on methodology, rationale and parameters for inclusion of competitive units.
- Responding to this challenge requires VISITING many more facilities to determine the degree to which they are "competitive," and establishing a strong rationale for the inclusion or exclusion of each.
- Gaining an understanding of a community's reputation and positioning within a market by soliciting feedback from area health care providers will create an appropriate context for evaluation.
- Creating an estimated demand/need based on all units in the market (high impact) and another with only the units deemed to be "comparable" (low impact) will provide a measure of the range of risk inherent in adding more units to the market.
- Consider providing demand/need estimates with and without "competitive" units and clearly document the number of units being withdrawn from the calculations and pricing.

Low Impact

High Impact

Estimated demand using only the units deemed to be competitive

Estimated demand/need based on all units in the market

Small Licensed Group Homes

In some markets these are emerging as competitive to Assisted Living and especially Memory Care because families of frail older adults want their relatives and staff to be in more immediate contact. In most places, if all group homes are counted as competition, the markets would be highly saturated. Previously we assumed that this type of accommodation was lower cost, had fewer amenities and served a lower-income population. Many accept(ed) Supplemental Security Income (SSI), which most "larger" and purpose-built Assisted Living facilities do not.

Best Practices

Identifying those that are comparably priced and have higher services that address the needs of the dementia population requires significant investigation through discussion and site visits to determine the quality of the environment.

Dynamic Models of Evaluating Competition

Analyzing Proximate Competitors

Communities/facilities/competition that fall outside of but immediately adjacent to or in close proximity to the edges of a defined market area are likely to be competing for some of the same market (overlapping market areas).

One option has been to assign a percentage of these units to the project market competition (increasing the number of competitive units) based on proximity to the edge of the market area. The percentages assigned are generally random and based on proximity as well as market and consultant dependent. Subjective judgment may consider facilities that are within a reasonable distance that offer

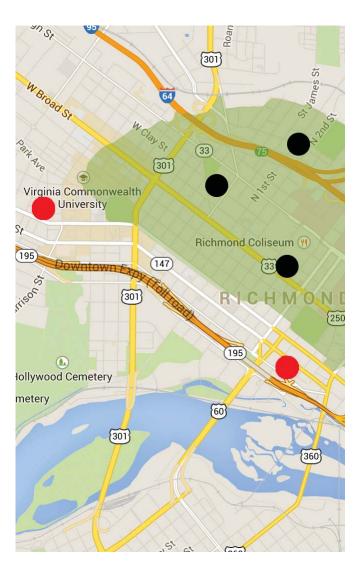
Best Practices

Transparency and adequate disclosure of methodology for "slicing" the competitive units for penetration rate purposes.

something that is unique or unusually attractive and conversely account for a client's ability to have an exceptional market draw.

Best Practices

- Contact with community is necessary to determine the percentage of residents that is receiving "Assisted Living" services. This percentage can change quickly and is dependent on the knowledge of a staff person who can provide accurate data.
- Disclosure is critical for adequate transparency and adds disclaimer that data risk and results can shift.
- Determine the target population for AL demand in a market by defining certain criteria (one or more ADLs may be appropriate to cover both AL and Congregate).





Defining Census Tracts

Identifying how residents of each Assisted Living facility are counted by the census: as households (Independent Living/units with separate entries and full kitchens) or as persons in group quarters/Assisted Living. There is some concern that there is not a consistent definition in the Census Bureau.

Best Practices

Check each individual project; verify the situation and definitions with the Census Bureau.

DEMOGRAPHIC INTERPRETATION AND DEMAND METHODOLOGY

Analysts can provide a discussion of shifts and changes in demographics as well as alerts to investors and providers, but there are no hard and fast rules for demand methodology. When conducting a demand analysis, the subgroup identified three intangible factors: stealing market share, brand equity value and the consideration of all forms of competitors. These factors play a role in the recommendations made to clients and investors regardless of the quantitative results of the demand calculation. Particularly confounding is a situation in which the quantitative results estimate a unit potential, however the market is determined to be highly competitive or even saturated.

The analyst must use his or her judgment when making recommendations (which should not be made upon quantitative results alone) and when comparing results to benchmarks.

- The market penetration rate is very market area sensitive (according to size).
- The use of a benchmark for "likely to move to formal care" doesn't account for the fact that providers can attract seniors to their products (it is a static notion) and increase the level of penetration in a market over time.
- The difference in frailty and prevalence rates makes it difficult to establish national benchmarks. It is reasonable to think that the least conservative approach should tolerate a high "gross market penetration" (GMP) rate to judge outcomes. The most conservative would tolerate a lower GMP.

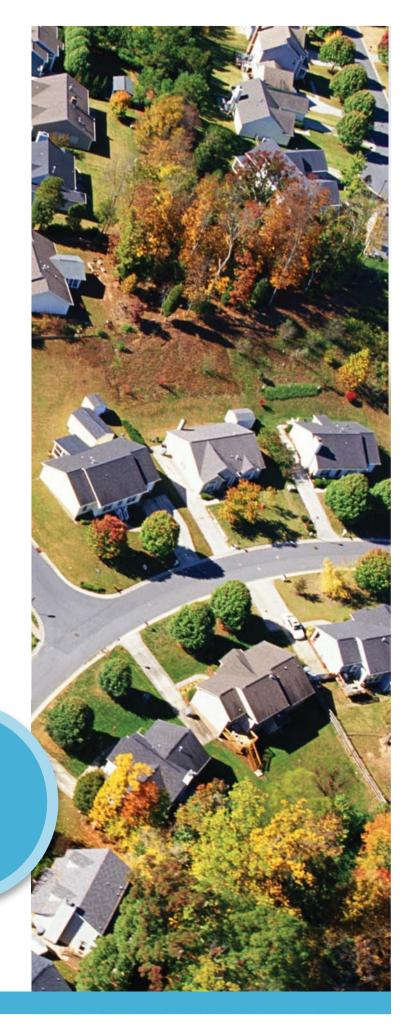
Suggested Alternate/Complementary Methodology – The Aggregate Penetration Rate:

The National Investment Center (*NIC*) provides estimates of aggregate penetration rates in a different way in the *NICMAP* product. Used to estimate the demand for all levels of care within a majority of providers of Independent Living, the aggregate penetration rate attempts to measure the general saturation of senior housing units in a market area among senior households regardless of income earnings. *NIC* calculates market penetration as the total inventory of senior living units at properties where Independent Living units comprise the largest share of inventory, divided by the total 75+ households (no income criteria). Results may be benchmarked against the Top 30 and Top 100 markets on *NICMAP*.

Aggregate Penetration Rate =

Total inventory of senior living at properties where IL units comprise the largest share of inventory

> Total 75+ Households (No income)





Anecdotal information has it that adult children play an increasing role in parental decisions about senior living communities. Is there some quantifiable factor that would translate the number of adult children in a Primary Market Area into some bonus of seniors who could be imported into the market, thereby improving analysts' abilities to estimate a market's capacity to absorb supplies of senior living accommodations?

Penetration and saturation calculations already factor in a percentage of people coming from beyond the PMA, and some of those people are drawn by their adult children. The assumption is that if the PMA can fill 75% of the residences the other 25% will come from somewhere. How important is it to know where people come from or why? How much does it matter whether the cause is the climate, the prices or the family?

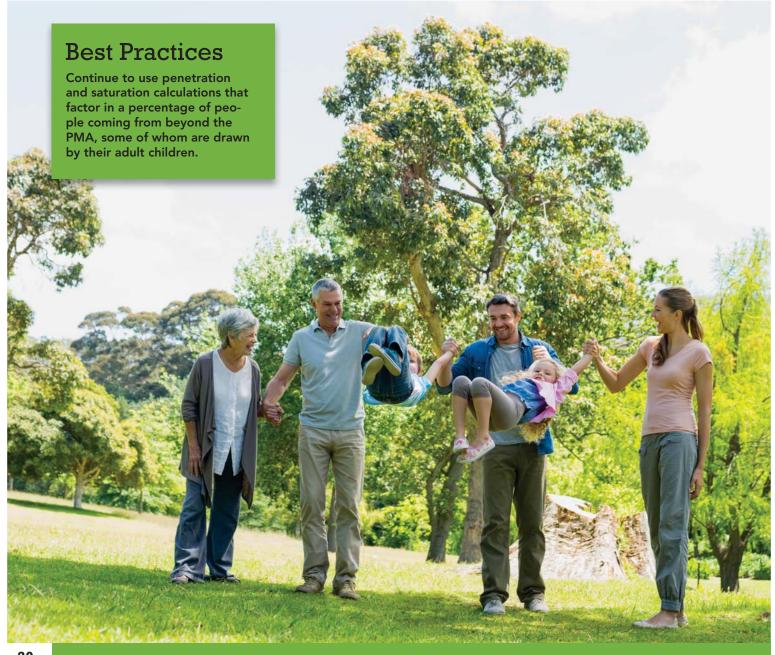
After considerable thought about the role of the adult child cohort when planning retirement community capacity, the group has reluctantly come to the conclusion that while the need and opportunity exist, the information is not available to produce relevant and trustworthy estimates, with some of the reasons for this conclusion in bullets below:

- We lack a reliable data connection between adult children and their parents.
- Family units are unstandardized and inconsistent.
- The only reliable numbers are national, not local.
- Retirement community definitions are unstandardized and inconsistent.
- PMAs are not the same.
- Parental relocation is often a two-step process.
- We don't know enough.

As important as adult children influencers are, what we don't know overwhelms what we think we do know. We simply cannot even count the actual data, much less extrapolate across distance and time.

- We can't define the adult children who would import their parents.
- We can't define which parents are likely to be relocated.
- We can't take things we don't know and allocate them usefully across three different kinds of retirement communities.





Appendix A Data Sources

Table A-1 Assisted Living Frailty Data

Data Source	Year of Publication	Data
Survey of Income and Program Participation (SIPP), Table D-1, Prevalence of Disability by Sex and Age – All Races: 2010, from the U.S. Census. This data is self-reported.	2010	Percent of those reporting that they are disabled by age cohort: 75 to 79 = 55.9% 80+ = 71% Brecht blends the rates to arrive at different age cohorts used in demand methodology. So, 75 to 84 = 60.8% 85+ = 70.6%
From the same publication as above: Americans with Disabilities 2010: Household Economic Studies, Current Population Reports by Matthew W. Brault Issued July 2012. From Figure 2: Disability Prevalence and the Need for Assistance by Age 2010.	2010	The "needs assistance" percentage is used: 75 to 79 = 15.4% 80 and over = 30.2%
Schafer, Robert. America's Elderly Population and Their Need for Supportive Services. Joint Center for Housing Studies, Harvard University (January, 1999). Table 14, pg. 45. The original source cited for this data is collected from the Assets and Health Dynamics Among the Oldest-Old (AHEAD) survey. This survey was commissioned by the National Institute on Aging (one of the National Institutes of Health), and was conducted by the Institute for Social Research at the University of Michigan between October 1993 and July 1994.		Remove the estimated nursing-eligible population from the mix by calculating the age 65+ population that would likely need assistance with four or more ADLs. These percentages are: age 65-74 = 0.94% age 75-84 = 3.6% age 85+ = 13.77%

Table A-2 Dementia Prevalence Rate Data

Data Source	Year of Publication	Data
Alzheimer Disease in the US Population - Prevalence Estimates Using the 2000 Census; Liesl Hebert, SCD, Paul A. Scherr, ScD, Julia L. Bienias, ScD, David A. Bennet, MD, Denis A. Evans, MD; Arch. Neurol. 2003; 60:119-1122.	2003	Percentage of age group in the total U.S. population by age cohort estimated to have dementia: 65-74 = 1.4% 75-84 = 18% 85+ = 43%
2013 Alzheimer's Disease Facts and Figures: Alzheimer's Association (data pulled from dozens of other sources as well).	2013 (an annual publication)	Includes both national and statewide data. Data is also broken out by race, gender and age grouping. Estimates for those w/Alzheimer's and other dementias: 4% under 65 13% 65-74 44% 75-84 38% 85+
Estimated Prevalence of Alzheimer's Disease in the United States" (Denis A. Evans, et al Harvard Medical School, The Milbank Quarterly, Vol. 68, No 2, 1990.	1990	Degree of Impairment by Age Age Mild Moderate Severe 65-74 14.3% 4.6% .03% 75-84 27.0% 14.3% 5.6% 85+ 28.6% 31.2% 19.6%
The percentage of the population with moderate to severe dementia is from "Alzheimer's Disease: Estimates of Prevalence in the United States. United States General Accounting Office, Report to the Secretary of Health and Human Services, January 1998. The reported source for the data presented in this report is an integration of prevalence rates from 18 studies in the literature and the U.S. Bureau of the Census population estimates in Statistical Abstract of the United States: 1996, Washington, D.C., 1996.	1998	Memory Care prevalence: 65-74 = 1.1% 75-84 = 3.6% 85+ = 24.2%

Table A-2 Dementia Prevalence Rate Data

Data Source	Year of Publication	Data
Source material from "Alzheimer's Association Fact Sheet". The reported source for the specifically- referenced data presented in this "Fact Sheet" is "Losing a Million Minds: Confronting the Tragedy of Alzheimer's Disease and Other Dementias". U.S. Congress Office of Technology Assessment; U.S. Government Printing Office, 1987; p. 14.	1987	Estimating Use of Institutional-Based Care: It is estimated that approximately two-thirds of the care given to people with Alzheimer's disease is provided by families. Therefore, it is assumed that the probable utilization rate for institutional-based care (residential through skilled nursing) is 33%.



Data Sources

Best Practices

Sources of disability (ADL/IADL) rates

- The Nielsen Company remains the primary data source used and
 is recognized nationally by analysts, providers/developers and the
 financial community. Why? Most analysts use ESRI as a secondary
 source for comparison purposes if something in The Nielsen
 Company data raises a concern. ESRI is also used if specifically
 requested by a client.
- There are significant differences in both the frailty rates and the dementia prevalence rates used in the AL and ALZ analyses. The most conservative AL analysis appears to use the lower frailty levels associated with people who have difficulties with ADLs and IADLs and who also indicated a need for assistance. The least conservative uses lower percentages of frailty and does qualify estimates based on a need for assistance. A third approach uses a percentage of those who need assistance with 4 or more ADLs (more consistent with a nursing home population and, therefore, very conservative). When choosing which to use, such factors as the type of care and the acuity the provider intends to offer can be taken into consideration as well as regulatory and licensure requirements of each state. This will make it critically important to understand how the competitive communities are positioning themselves in terms of the level of care they are providing. Another factor that can differentiate outcomes is whether the analyst considers only one-person households or includes a small percentage of two-person households to account for couples who wish to move to AL. A couple in which one partner requires less support than the other may require a less conservative approach.

In addition, while we have presented a variety of sources for the prevalence of dementia, they range in age of publication from 1987 to 2013. Given the growing number of publications referring to the increase in the prevalence of dementia in the elderly that is known to have occurred (and will continue as boomers age), we believe that analyzing MC separately, if done, should use data that is both current and applicable, breaking down households by age segment. The information from 1987 shown in the table in the Appendix for MC makes a point of discussing what percent of people with dementia will chose to move to an institution rather than remain at home. Undoubtedly, the percentage moving to a care facility has increased as we see higher occupancy rates at the significantly growing number of dedicated MC communities across the nation.

No matter which frailty or dementia statistics are used, the results of the quantitative analysis cannot be interpreted in a vacuum. A variety of factors need to be considered including occupancy, product positioning, age of facility and target market audience.

Data Related to Assets

Net worth data can be found at the Department of the Treasury and some information is available through the American Fact Finder 2. It is time-consuming to extract useful data from these sources and neither source provides asset projections. Therefore, the methodology used in almost all cases to determine the depth of the market for IL, AL and MC relies on income data alone. Frequently, only homeowner households will be included in the IL analysis, particularly when an entrance fee product is being evaluated as a way of mitigating the issue of the lack of net worth data.

Age and Income Qualifier

Best Practices

INDEPENDENT LIVING

Age Qualifier

• It is recommended that the primary feasibility analysis be completed using the age 75 and older households. Depending on the purpose of the assessment (existing/new community, types of service programs/packages), a second analysis may be conducted as a sensitivity test using households ages 80 and older. It is recommended that the results of both analyses be presented to the client with a simple, clear explanation of the difference in the two methodologies.

Rent-to-Income Ratio

It is recommended that the rent-to-income ratio for an Independent Living product with a typical service package be approximately 60% – subject to the analyst's interpretation of the situation. Lower or higher rent-to-income ratios could be appropriate based on the proposed service package included in the monthly fee. As with all elements of the analysis, it is important to be transparent with the client and clear about the rationale utilized in setting the rent-to-income ratio.

Household Tenure (Own/Rent Status)

- To determine home value for target households it is important to ensure that the estimated home value for age appropriate households in the market area is as accurate as possible. While all data vendors (e.g.: The Nielsen Company, ESRI, etc.) provide home value estimates it is important to check those values against actual Multiple Listing Service (MLS) sales data or by purchasing home value/sales information from another vendor such as Metro List. If there is a discrepancy between the home values as supplied by the data vendor and the MLS or other actual sales data, then the median home value and the distributions of households by home value used in the analysis need to be adjusted to account for that discrepancy when calculating the number of homeowners with qualified home values.
- If interest rates improve and increase above 4%, it would be important to utilize the additional income generated from the investment of home sale proceeds in qualifying households for a rental product.

Age and Income Qualifier

Best Practices ASSISTED LIVING

Age Qualifier

 It is recommended that in an Assisted Living market analysis, the minimum age at entry be set at 75 assuming that need multipliers (different rates of incidence in limitations in activities of daily living) will be utilized in the demand analysis that reflect the variance in need levels based on age.

Rent-to-Income Ratio and Tenure

Assisted Living - in setting the minimum income threshold for non-owner households it is important to compare the age 75 and older median household income to the proposed minimum income threshold to be utilized in the analysis. It would be important not to deviate below the median, as this will increase the risk that the household may not be able to cover the cost of the fee. In determining the threshold for the owner households it is important to examine the median age 75 and older home value and/or net worth to evaluate if the net home sale proceeds and assets can provide sufficient supplemental funds to cover the annual cost of the Assisted Living fee. As with all elements of the analysis, it is important to be transparent with the client and clear about the assumptions utilized in setting the minimum income thresholds.

MEMORY CARE ASSISTED LIVING

Age Qualifier

 It is recommended that in a dementia care Assisted Living market analysis, the minimum age at entry be set at 75 assuming that need multipliers will be utilized in the demand analysis that reflect the variance in need levels based on age.

Rent-to-Income Ratio and Tenure

Dementia Care Assisted Living - in setting the minimum income threshold for non-owner households it is important to compare the age 75 and older median household income to the proposed minimum income threshold to be utilized in the analysis. It would be important not to deviate below the median, as this will increase the risk that the household may not be able to cover the cost of the fee. In determining the threshold for the owner households it is important to examine the median age 75 and older home value and or net worth to evaluate if the net home sale proceeds and assets can provide sufficient supplemental funds to cover the cost of the Assisted Living fee. As with all elements of the analysis, it is important to be transparent with the client and clear about the assumptions utilized in setting the minimum income thresholds.

Competition

Best Practices

DEMOGRAPHIC INTERPRETATION AND DEMAND METHODOLOGY

The analyst must use his or her judgment when making recommendations (which should not be made upon quantitative results alone) and when comparing results to benchmarks.

- The market penetration rate is very market area sensitive (according to size).
- The use of a benchmark for "likely to move to formal care" doesn't account for the fact that providers
 can attract seniors to their products (it is a static notion) and increase the level of penetration in a
 market over time.
- The difference in frailty and prevalence rates makes it difficult to establish national benchmarks. It is reasonable to think that the least conservative approach should tolerate a high "gross market penetration" (GMP) rate to judge outcomes. The most conservative would tolerate a lower GMP.

Small Licensed Group Homes

• Identifying those that are comparably priced and have higher services that address the needs of the dementia population requires significant investigation through discussion and site visits to determine the quality of the environment.

Analyzing Proximate Competitors

• Transparency and adequate disclosure of methodology for "slicing" the competitive units for penetration rate purposes.

Defining Census Tracts

• Check each individual project; verify the situation and definitions with the Census Bureau.

Competition

Best Practices

Distinguishing Levels of Living

The evolving market environment and a commitment to transparency requires that analysts adequately disclose the criteria/rationale categorizing a project as "competitive" rather than "comparable."

- Each consultant should adequately disclose the criteria for the basis of "comparable" vs. "competitive" to have transparency. Be clear on methodology, rationale and parameters for inclusion of competitive units.
- Responding to this challenge requires VISITING many more facilities to determine the degree to which they are
 "competitive," and establishing a strong rationale for the inclusion or exclusion of each.
- Gaining an understanding of a community's reputation and positioning within a market by soliciting feedback from area health care providers will create an appropriate context for evaluation.
- Creating an estimated demand/need based on all units in the market (high impact) and another with only the
 units deemed to be "comparable" (low impact) will provide a measure of the range of risk inherent in adding
 more units to the market.
- Consider providing demand/need estimates with and without "competitive" units and clearly document the number of units being withdrawn from the calculations and pricing.

Analyzing Proximate Competitors

- Contact with community is necessary to determine the percentage of residents that is receiving "Assisted Living" services. This percentage can change quickly and is dependent on the knowledge of a staff person who can provide accurate data.
- Disclosure is critical for adequate transparency and adds disclaimer that data risk and results can shift.
- Determine the target population for AL demand in a market by defining certain criteria (one or more ADLs may be appropriate to cover both AL and Congregate).

Adult Child Households

Best Practices

• Continue to use penetration and saturation calculations that factor in a percentage of people coming from beyond the PMA, some of whom are drawn by their adult children.