

ATTENTION: Assisted Living & Memory Care Providers

How Good are Your Measures of Need? Your Future Success Depends on Them!

Each year, the nation's population gets a little older and as Baby Boomers continue to reach retirement in vast numbers, the median age will continue to tick upward. Thanks to innovations in healthcare, they are living longer, too. On that account, the demand for services catering to the mature population is set to explode. Yet more and more seniors are choosing to age in place for as long as possible, such that when it comes time for them to move into senior housing, they will be older and frailer. With that said, senior housing will be driven by need all the more, with a greater number of residents having limitations with activities of daily living (LADL) and/or cognitive impairment. However, estimating and projecting need for this population presents challenges, requiring age-specific demographics and the application of disability and dementia need multipliers. And not only are these populations in flux and varied throughout the country, but the basis of their multipliers is also changing. Oftentimes, though, when considering development, acquisition, and/or repositioning opportunities, providers of assisted living and memory care rely on national (rather than local) indicators, with many being out-of-date or ill-suited for their market areas. This can result in inaccurate demand projections, which, in turn, can lead to poor decision-making and unfortunate outcomes. Indeed, this is troubling for those providing services to the LADL and cognitively impaired populations. To address these concerns, this white paper explores the significance of assisted living and memory care multipliers, focusing on the frequency of updates and applications for lower levels of geography.

Multipliers & Data Limitations

Need multipliers for disability and dementia are percentages applied to age-specific household counts, which yield estimates of households with disabled and demented members requiring specialized care and/or housing. Indeed, multipliers are crucial in the analysis of housing demand for assisted living and memory care. Despite their importance, however, some of the richest datasets are available only for select geographies (e.g., at the national, state, and PUMA¹ levels). Yet need-based groups vary not only throughout the country, but also by market, submarket, and even by neighborhood (see insert for sample variations). Furthermore, there are limitations in the data, making it difficult to differentiate between disabled and demented populations and between populations and households. Specifically, while the Census Bureau can be used to assess rates of LADL, it does not provide estimated rates of dementia.

It is also a concern that much of the widely available data now have larger sampling errors than before, due to the Census Bureau's move to small annual samples. So, what was once available through its Decennial Census, a large-sample snapshot of the entire population, is now only available via the Bureau's American Community Survey, which is conducted annually, but based on much smaller samples. Therefore, analysts can no longer anchor their estimates in large decennial estimates, associated with small sampling errors, and, instead, must look to multiyear rolling averages of smaller samples.

¹ PUMAs, or Public Use Microdata Areas, are designated by the Census Bureau, with each encompassing a set of contiguous census tracts and, in less densely populated areas, groupings of entire counties. Each area within the U.S. is accounted for in a PUMA and each area within a PUMA is similar socioeconomically. Typically, though, a market area from which a senior living community draws is not analogous to a PUMA, but instead, crosses PUMA boundaries, reflecting a slice of a PUMA or a compilation of PUMA parts.

Enhancing Multiplier Reliability

In a perfect world, assisted living stakeholders would base their decisions on up-to-date estimates of households with ADL limitations (but without cognitive impairment), while memory care specialists would rely on current numbers for households with demented adults, who, almost inevitably, have ADL limitations as well. The estimates would be specific to their geographic market areas, too. However, with much of the required data being unavailable or prone to errors, it has become ever more challenging to develop good estimates. Yet your community's success depends on it! On that account, how do owners, operators, developers, and analysts overcome these limitations to obtain reasonably accurate, localized portrayals of assisted living and memory care demand?

While analysts have relied on national measures for years, only a handful of senior living consultants has taken strides to revise their methodologies to account for the new reliance on the American Community Survey (ACS) in lieu of the Decennial Census. PMD Advisory Services is one such group and in fact, the company has partnered with University of Cincinnati Professor Emeritus of Psychology, Steven Howe, to build a statistical model to exploit microdata from the ACS to develop geographically-specific multipliers. In short, the model generates the probabilities a household member has LADL with and without dementia.

In developing the five-step statistical model, Dr. Howe (also PMD's Vice President Analytics) looked to three primary sources of data, namely the Census Bureau's American Community Survey for information on ADL limitations and both the National Health & Aging Trends Study and Alzheimer's Association for prevalence rates of dementia. Using all three data sources, the model determines the likelihood a given household has a disabled and/or demented adult member. More specifically, it uses a prediction formula to estimate the probability that each household contains one or more members with dementia. These household-level estimates are then aggregated across households to produce rates of disability and dementia within five separate age cohorts. (Disability is defined as at least two self-reported limitations of activities of daily living.) In other words, it creates a profile of dementia by age and assigns probabilities of dementia among those with and without ADL limitations. Person-specific needs are then combined into probabilities of need by one or more household members, such that two needs are quantified, namely the percentage of household members 65 years of age or older **with** LADL but **without** dementia (i.e., assisted living demand) and separately, the percentage **with** LADL **and** dementia (i.e., memory care demand). Significantly, with these probabilities in place, estimates of dementia among households with ADL limitations can be derived from frequently produced household data (through the American Community Survey) and they can be estimated not only for larger geographies, but also at the market area level. Simply put, PMD's model addresses and overcomes each of the limitations outlined above, resulting in a more reliable assessment of assisted living and memory care housing demand.

The Upshot of Sound Multipliers

Dr. Howe's methodology overcomes the shortcomings of publicly available need-based data and importantly, his model now feeds into PMD's longstanding Senior Market Profile (SMP)² reports. Indeed, the benefits are clear, such as improved timeliness and specificity of the data, resulting in more accurate measures of need by age.

And, notes PMD's Vice President Demographic Research, Monica Morgal, because the model converts population data into household data, the measures align well with PMD's income by age breakdowns of households, a key feature of its SMP and an important input into the calculation of housing demand. It further allows for estimates and projections of dementia to be directly derived from the Census Bureau's American Community Survey, a source that, on its own, does not provide rates of cognitive impairment. Finally, and perhaps most importantly, it enables a detailed, need-based analysis at the market area level, too. So, rather than relying on national information, PMD is able to help assisted living and memory care professionals evaluate opportunities by neighborhood and for each

The table below shows need multipliers for nine actual market areas in nine different states researched by PMD in 2018. In addition to the total number of age 75 and older households, also presented are the estimated number of age 75 and older households with need for assistance with two or more activities of daily living (2+ LADLs) and the number of age 75 and older households with need for assistance with two or more activities of daily living with dementia, including Alzheimer's disease, (2+ LADLs with Dementia). The estimated numbers in these two groups are the result of applying the PUMA level need multipliers for the PUMA geography in each market area. A market area descriptor (e.g., CDP or Census Designated Place, MSA or Metropolitan Statistical Area, CSA or Consolidated Statistical Area), instead of the specific city or town name, is used to identify the type of market area. Particularly striking is the variation in need throughout the country. For example, in the market area PMD defined around a California city, the multiplier for households with 2+LADLs is 22.6%, compared to the market area analyzed for a town in a New York MSA where 16.6% of households age 75 and older are estimated to have 2+LADLs. Similarly, the same California city market area has the highest level of 2+ LADLs with dementia at 20.6%, compared to a market area defined for a principal city in Florida, where only 12.2% of households are estimated to have one or more persons with 2+LADLs and dementia.

Extracted Data from Senior Market Profile Reports Prepared for PMD Market Analyses						
2018 Age 75 and Older Households						
Market Area Descriptor	State	Total	2+ LADLs		2+ LADLs with Dementia	
			Number	Percent	Number	Percent
CDP in MSA	TX	6,253	1,147	18.3%	1,199	19.2%
Principal City in MSA	IN	15,239	2,633	17.3%	2,265	14.9%
Borough in MSA	PA	10,975	2,004	18.3%	1,607	14.6%
City in MSA	UT	5,681	1,018	17.9%	819	14.4%
Town in MSA	NY	10,832	1,798	16.6%	1,492	13.8%
Principal City in MSA	FL	45,192	7,192	15.9%	5,504	12.2%
City in MSA	CA	12,365	2,800	22.6%	2,548	20.6%
Rural community	OH	3,385	636	18.8%	441	13.0%
City in CSA	IL	10,647	2,056	19.3%	1,306	12.3%

While these data illustrate multipliers for age 75 and over households, PMD's SMP² reports utilize multipliers for five separate age cohorts, allowing for more accurate measures of demand for assisted living and memory care beds.

² PMD's Senior Market Profile is a detailed tabulation of demographic and economic data for the 65 and over age group living within a uniquely defined geographic market area. First released in 1990 and recently enhanced with data from StratoDem Analytics, it provides profiles of senior populations and households for five separate age cohorts, up to 85-plus, with breakdowns by income, home value, and net worth. And because Dr. Howe's need multipliers feed directly into StratoDem Analytics' current year estimates and five-year projections of households by age and income, PMD's SMP now includes breakdowns of seniors by age with LADL and/or dementia, too.

type of care. When considering a new assisted living or memory care community, an expansion of an existing portfolio, an acquisition, or a change in unit mix, having this degree of knowledge brings about prudent decision-making.

Taking Steps Toward Better Multipliers & Better Decision-Making

Knowledge is power and indeed, it would be shortsighted to invest in assisted living and memory care opportunities without a complete understanding of the local market. While age breakdowns of households and income within the target market are key inputs in the calculation of overall senior housing demand, assisted living and memory care demand require further analysis of ADL limitations and dementia prevalence within those households. And having information on just ADL limitations leads to an incomplete analysis, as dementia data must not only be used for estimates of memory care demand, but must also be deducted from LADL groups to determine stand-alone assisted living demand. The ability to evaluate projects on a neighborhood by neighborhood, site by site basis is crucial, too, as statistics reflecting larger geographies are often unsuitable. The bottom line: good multipliers are essential to good decision-making. On that account, PMD Advisory Services is putting good multipliers to work and its Senior Market Profile reports, available at the market area level, account for both LADL and dementia in its household counts by age and by income.

PMD, a leader in senior housing market research with more than 35 years of experience, offers a complete menu of support services to aid clients in critical decision-making throughout the planning process. And its tried and trusted SMP has been the go-to report for countless decision makers. In fact, PMD's Morgal produces as many as 200 SMP reports per year. To order a Senior Market Profile or to inquire further about it and other PMD products and services, contact Monica at (859) 689-9420, Monical.Morgal@PMDAS.com.