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Abstract: For Australian seniors living independently there is a variety of specialised accommodation, of which the most prevalent is the Deferred Management Fee (DMF) retirement village regulated under State legislation. Previous studies have attempted to quantify the total number of villages in Australia, the types of owners/operators and estimated the number of residents. To date there has been little Australia wide analysis of retirement village residents to quantify this population group and measure whether they differ from residents in the surrounding locality and between regions. Australia's ageing population brings the requirement for age-appropriate accommodation therefore identifying how residents are utilising the existing retirement village product is of benefit to strategic decision makers, planners, property developers and village operators.

This paper correlates individual villages with small area 2011 ABS Census data to build up a picture of Australian retirement village residents. Village residents are shown to be less likely to need assistance with core activities than seniors (aged 65+) in general. Residents in retirement villages are not wealthy, the majority are full or part pensioners only a small proportion are self-funded retirees. Retirement village living encourages social connectedness, as a higher proportion of residents engage in volunteering than seniors overall. There is regional variation between states, village residents in the ACT are shown to be noticeably wealthier when compared to retirement village residents in other States.

#### Introduction

Australian seniors are offered a range of accommodation options; for those that are capable of living independently the choice includes staying in their own home, relocating (downsizing) within the general community, mobile home parks and specialised retirement villages. Within Australia the most prevalent type of retirement village is the DMF model, furthermore there is also a rental model which is focused on affordable seniors' accommodation. To date there is little published information on the demographics of retirement village residents and whether they differ from seniors residing in other forms of accommodation.

With regard to specialised seniors accommodation the literature to date has focused on the number of seniors and the anticipated potentials from the numbers of ageing "baby boomers" coupled with the necessities and computations in undertaking demographic-based market research (Suchman & Becker 2001, Brecht 2002).

Australian Operators (listed and unlisted) with reporting requirements have published some information on current residents in their villages. Listed operators report the average age and length of stay of villages that they own or manage (Stockland 2013, Stockland 2012, FKP 2013, FKP 2012).

Australian-based social and health care researchers have studied the health and well-being aspects of retirement village residents including the reported health and satisfaction with aspects of retirement village living (Gardner 2005); the level of leisure physical activity (Miller & Buys 2007); reasons for moving to a retirement village (Stimpson and McCrea 2004); requirement for assistance around the home (Buys 2000); and financial aspects of moving to a retirement village (Finn et al 2011). In most instances this research was based on a geographically constrained sample of retirement village residents (within the State) or of an individual village.

There has been little Australia wide analysis of the demographics of retirement village residents and whether they differ from seniors in the surrounding community. This paper addresses this gap in research.

### **Methodology & Data Veracity**

Over 2,000 operational DMF<sup>1</sup> retirement villages have been identified and information has been compiled. The sources used in this compilation included: information from operators (electronic, physical and personal communication); State Government information on registered villages; third party information providers (government and private); RP Data; Local Government Planning approvals; and physical inspection. Individual villages were then correlated with Australian Bureau of Statistics (ABS) SA1<sup>2</sup> data for the 2011 Census. The Place of Enumeration data series was utilised; this classifies dwelling location including retirement villages. This data series counts individuals where they were on the night of the Census (9 August 2011).

Information on retirement villages was analysed at the individual village level plus at the aggregate state level for identified villages.

In order to ensure veracity only those villages which could be accurately matched with SA1 data (both population and number of dwellings) were included in the analysis. Data for individual villages was rejected for the following reasons.

- Inability to separate adjacent villages operated/owned by different entities
- Where the ABS data did not match known information on the village, including both the total population and the number of dwellings
- Where residents in Residential Aged Care Facilities co-located with retirement villages were recorded as retirement village residents
- Villages that included both DMF units and rental (affordable) units.

Small villages of <10 units were not included in individual village analysis however in selected instances they were included in aggregate analysis.

The majority of villages comprised Independent Living Units (ILUs). Where villages included Serviced Apartments these villages were separated for selected parts of the analysis.

Larger villages that straddled more than one SA1 area were incorporated into the analysis.

In the process of compiling this information and matching SA1 data with individual villages a number of inaccuracies within the ABS Census data was noted, including the following.

- Manufactured Home Parks recorded as retirement villages (27 parks with 5,600 residents).
- Residential Aged Care Facilities recorded as retirement villages, particularly low care (28 facilities with 1,000 residents).
- Residential estates recorded as retirement villages

Approximately 30% of all operational retirement villages identified were not recorded as retirement villages by the ABS Census. A summary of the total number of villages used in this analysis is contained in Table 1.

Table 1: Total number of villages used in this analysis by state

	NSW	QLD	ACT	VIC	SA	TAS	WA	Australia
Operational DMF villages identified	585	298	26	404	427	60	205	2,005
Villages used in this analysis	373	208	19	225	153	20	122	1,120
% of total operational retirement villages	64%	70%	73%	56%	36%	33%	60%	56%

The errors and omissions within the ABS Census data is an area of concern particularly in States where the data is below 50% veracity. This matter has been brought to the attention of the relevant personnel at ABS who responded that it ultimately comes down to how Census collectors record dwellings (Best 2013, pers. comm. 11 July 2013).

<sup>&</sup>lt;sup>1</sup> Information on rental (affordable) villages was compiled separately.

<sup>&</sup>lt;sup>2</sup> ABS data was accessed using a subscription service.

Furthermore some municipalities in the more populous States were noted for particularly poor ABS Census data retirement village coverage, these included Wollongong in NSW with 10 villages. This is an issue particularly for operators with a regional focus.

### Age of Residents

The age of residents is recorded at the ABS Census; this allows the average age of residents on a village basis to be calculated plus the average age of all village residents. These average ages were calculated for residents aged 55 and older. Chart 1 comprises a histogram of the average resident age by retirement village for Australia.

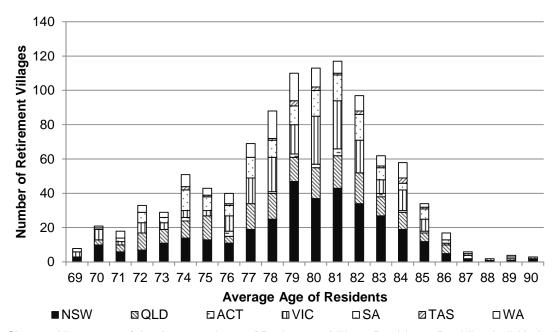


Chart 1: Histogram of the Average Ages of Retirement Village Residents Residing in ILUs in Australia, excluding outliers of 2.5 standard deviations from the un-weighted mean<sup>3</sup>, (n=1,023 villages).

The unweighted average age by village (ILUs only) for residents was 79.39 years, the standard deviation was 4.33, the youngest village average age observed was 61.6 and the oldest village average age observed was 90.7.

The village average age was then correlated with other village specific factors including the age of the (physical) village; this is summarised in Table 2.

Table 2: Correlations with the average age of residents by village

		Standard Deviation	Correlation Coefficient r	n <sup>4</sup>
Age of Village Calendar year of first occupancy	1994	10.67	-0.407	447 villages

<sup>&</sup>lt;sup>3</sup> The average age was calculated based on the age for all individual residents; this utilises (numerically) small samples therefore the ABS census data was downloaded separately 3 times and the average of this information was utilised. To mitigate against greater emphasis being given to outliers a cut off of 2.5 standard deviations from the un-weighted mean was utilised.

<sup>&</sup>lt;sup>4</sup> Different information has not been verified for all villages therefore the total number is less than the number of villages for which ABS data has been verified.

This relationship of village age with average age of village residents indicates that the earlier the date of first occupancy the older average age of village residents. This reinforces industry opinion that "the older the village the older the residents"; the industry rationale for this is, that after completion residents will age in place and in turn these older residents will attract a similar demographic.

The analysis at the individual village level gives equal weight to smaller villages as to larger villages (up to 863 ILUs); therefore the average age across all village residents in ILUs only by state and across Australia was calculated, this is contained in Table 3.

Table 3: Aggregate average ages for retirement village residents (ILUs only) by State

State	NSW	VIC	QLD	SA	WA	TAS	ACT	Australia
Average Age	79.7	78.8	78.2	77.8	77.9	80.5	80.4	78.7
n	29,246	17,324	20,085	11,115	13,495	1,128	1,217	93,610

The average age for all Australian retirement village residents (ILUs only) was 78.7; the variation between individual states was small with the difference between maximum and minimum of 2.7 years. This appears to indicate that there is little difference in age profile of retirement village residents between States, notwithstanding that the two smallest States had the oldest village residents.

When residents in Serviced Apartments were included in the analysis the average age across all Australian villages increased to 79.0 years (n = 103,136). While the average ages also increased for each State there was no difference in the relative positions. A difference in average age was noted for different operator types, with residents in not for profit villages having an average age of 80.2 years (n = 37,897) and residents in for profit villages having an average age of 78.3 years (n = 56,073).

The individual village and aggregate average ages are in keeping with the reported metrics. Listed operator FKP Property Group (FKP) reported for their 76 owned and managed villages average ages of residents of between 82.4 years (FY11) 82.8 years (HY13) (FKP Property Group 2012 & 2013). Of these 76 villages 41 included Serviced Apartments which have shown a tendency towards an older demographic.

Stockland reported average ages across their established villages of 80.7 years (FY11) and 80.8 (FY12) (Stockland 2012 & 2013). This did not include residents in their 26 villages under development which given the relationship between village age and resident age could be expected to reduce the average age.

### **Need for Assistance**

ABS census data records whether individuals need assistance in one or more of the three core activity areas of self-care, mobility and communication due to disability, chronic health condition or old age. This does not automatically mean that residents who state that they need assistance are receiving formal assistance (CACP, HACC). This data was analysed both at the individual village level and at the aggregate State and Australian level.

A single village had the highest proportion of residents needing assistance with core activities (needing assistance) with 77% of all residents (outer suburban Western Australia, co-located with residential aged care). In contrast 255 villages (across all States) had 0% residents needing assistance. The unweighted proportion of village residents needing assistance average (all units) was 16%, the standard deviation was 12.6%, this indicates significant variability in this metric.

The relationship between the percentage of residents needing assistance at the village level was analysed with regard to other village specific factors; this contained in Table 4.

Table 4: Correlations with the proportion of village residents needing assistance

	Mean $\widetilde{x}$	Standard Deviation	Correlation Coefficient r	n
Seniors in the municipality aged 65 and older needing assistance	19%	3.5%	-0.013	1,120 villages
Average age of village residents (all units)	79.39	4.33	0.282	1,106 villages

There is no discernible relationship between the proportion of village residents needing assistance and that of seniors in the municipality. There was a slightly stronger (but still weak) relationship between the average age of village residents and the need for assistance.

The proportion of retirement village residents needing assistance was calculated at the State level, also the proportion of seniors aged 65 and over living in the municipalities of these analysed retirement villages (263 municipalities) was compiled at the aggregate level and is contained in Table 5. Across all Australian retirement village residents 17.1% need assistance; New South Wales, Victoria, South Australia and Western Australia all have lower proportions than this. At the municipal level 19.2% of seniors need assistance; however Queensland, the ACT and Western Australia have proportions lower than this.

Table 5: Proportion of retirement village residents and seniors in the municipalities of those retirement villages needing assistance with core activities by State

	R	etirement Village		Municipal 65 and older			
	Has need for assistance	Does not have need for assistance	n (residents)	Has need for assistance	Does not have need for assistance	n (seniors)	
NSW	16.8%	83.2%	28,205	19.7%	80.3%	862,313	
QLD	19.4%	80.6%	23,500	17.6%	82.4%	519,581	
ACT	20.8%	79.2%	1,359	16.6%	83.4%	35,274	
VIC	16.5%	83.5%	20,695	20.5%	79.5%	625,426	
SA	14.8%	85.2%	9,864	19.9%	80.1%	215,250	
TAS	23.2%	76.8%	1,149	20.2%	79.8%	43,842	
WA	15.4%	84.6%	12,252	16.9%	83.1%	214,706	
Australia	17.1%	82.9%	97,024	19.2%	80.8%	2,516,392	

On average proportionally fewer Australian village residents need assistance than seniors overall; however in QLD, ACT and TAS this was reversed and again the smaller states ACT and TAS showed the greatest variation (1.4 and 2.2 standard deviations respectively from the weighted mean). This is relevant in that any survey based on smaller geographical areas may need to clarify the extent of local differences.

This lower requirement for assistance appears to be contradicted by one survey of retirement village residents where respondents stated that the ability to receive healthcare/assistance was an important factor in choosing to relocate to a village. "Health reasons" or "required more assistance" were noted as the most important for 23% of respondents and important for 35% of respondents in a survey of village residents undertaken in 2001 (Stimpson and McCrea 2004). While the wording of the question is different and likely to result in a different response, there appears to be a perceived "insurance" context in the choice to move to a village with the perception that assistance, if needed, may be more readily accessed.

While retirement village residents overall reported a lower need for assistance, this does not automatically equal that they have better health outcomes. Retirement village residents' self-reported health was lower and need for assistance was greater when compared to community-based seniors in a survey of village residents and community-based seniors located in south-east Queensland (Miller &

Buys 2007). Three states, QLD, ACT and TAS, had a greater proportion of retirement village residents reporting a need for assistance than seniors overall (Table 5).

Overall retirement village residents have a lesser need for assistance with core activities. Further research is required to determine not only the reasons for this but also the regional variations observed, particularly the smaller states.

### **Providing Unpaid Assistance**

The ABS census records whether retirement village residents provided unpaid care, help or assistance to family members or others; this includes recipients of Carer Allowance/Payment but excludes work done through volunteering.

This was calculated at the village level and similar to the proportion of residents needing assistance there was a wide range in this variable.

A single village had the highest proportion of residents providing unpaid assistance with 56% of all residents (inner metropolitan, not for profit operator). In contrast 250 villages (across all States) had 0% residents providing unpaid assistance. The unweighted average of the proportion of village residents providing unpaid assistance (all units) was 12%; the standard deviation was 8.6%. Again this shows a notable level of variability in this metric.

The relationship between the proportion of residents needing assistance at the village level was analysed with regard to other village specific factors; this contained in Table 6.

Table 6: Correlations with the proportion of village residents providing unpaid assistance

	$\begin{array}{c} \textbf{Mean} \\ \widetilde{x} \end{array}$	Standard Deviation	Correlation Coefficient r	n
Retirement village residents needing assistance	16%	12.6%	-0.082	1,120 villages
Seniors in the municipality aged 65 and older providing unpaid assistance	12%	0.9%	0.084	1,120 villages

There is virtually no relationship between the proportion of village residents needing assistance and those providing assistance. This could lead to the assumption that village residents are accessing paid assistance, however more research is needed. There is also a negligible relationship between retirement village residents and seniors overall in the municipality providing unpaid assistance. This could indicate that village specific factors have a greater impact than those of the general community.

Again the aggregate total for all village residents was calculated to State level, this is summarised in Table 7.

Table 7: Proportion of retirement village residents providing unpaid assistance by State

		Provides unpaid assistance	No unpaid assistance provided	n
Retirement Village	NSW	13.0%	87.0%	25,520 residents
Retirement Village	QLD	13.4%	86.6%	21,120 residents
Retirement Village	ACT	14.6%	85.4%	1,243 residents
Retirement Village	VIC	12.7%	87.3%	18,437 residents
Retirement Village	SA	12.3%	87.7%	8,973 residents
Retirement Village	TAS	13.6%	86.4%	1,045 residents
Retirement Village	WA	12.1%	87.9%	11,108 residents
Retirement Village	Australia	12.9%	87.1%	87,446 residents
Municipal 65 and older	Australia	12.5%	87.5%	2,316,968 seniors

Again there is a notable difference between village residents in the ACT and those elsewhere in Australia (2.3 standard deviations from the weighted mean) the reason for this difference requires further research.

More residents and seniors need assistance than provide assistance; this may indicate the shortfall is being supplied by professional service providers.

### Are Village Residents Wealthier?

The ABS Census records the total personal weekly income that an individual usually receives. This was cross referenced with the Australian old age pension as at the Census date (9 August 2011). Retirement village residents were then divided into three groups depending on whether a person resident was receiving all or part of the age pension or was a self funded retiree, Table 8 contains a description of these three groups plus income levels.

Table 8: Classification of retirement village residents by level of income and description

Classification	Weekly Income	Annual Income	Description
Pensioner	\$1-399	\$1-\$20,799	An individual (either single or as part of a couple) on full government age pension
Part Pensioner	\$400-\$799	\$20,800- \$41,599	An individual (either single or as part of a couple) partially on a government age pension plus additional income
Self Funded	\$800+	41,600+	Self Funded retiree

These income levels were obtained for 1,069 villages and of these 60 villages comprised residents who were 100% pensioners. At the other end of the spectrum a village in Elizabeth Bay (NSW) comprised 84% self funded retirees. There were three other villages where self funded retirees comprised over 70% of residents; these were located in Hughes (ACT), Greenwich (NSW) and Hawthorn East (VIC).

The unweighted average of the percentage of village residents that are full pensioners was 57%; the standard deviation was 18.7%. This metric was then analysed with regard to seniors in the municipality; this is contained in Table 9.

Table 9: Correlation with the proportion of retirement village residents that are full pensioners

	$\mathbf{Mean} \\ \widetilde{x}$	Standard Deviation	Correlation Coefficient r	n
Seniors in the municipality aged 65 and over that are full pensioners	56%	10.3%	0.412	1,069 villages

There is a strong correlation with the income levels of residents in retirement villages with those in the surrounding community; this would indicate that villages reflect the nearby catchment area.

The unweighted average of the percentage of village residents that are self-funded retirees was 9%; the standard deviation was 12.5%, which indicates variability in this statistic. This metric was then analysed with regard to seniors in the municipality; this is contained in Table 10.

Table 10: Correlation with the proportion of retirement village residents that are self-funded retirees

	$\mathbf{Mean} \\ \widetilde{x}$	Standard Deviation	Correlation Coefficient	n
Seniors in the municipality aged 65 and over that are self-funded retirees	13%	7.4%	0.487	1,069 villages

This is a marginally stronger relationship than that for full pensioners and again would indicate that income levels of retirement village residents reflect those of the surrounding catchment area. This is important for developers of retirement villages particularly in lower socio-economic locations anticipating pricing more in line with wealthier localities.

Aggregate figures for all retirement village residents were compiled on a State basis, these are summarised in Chart 2.

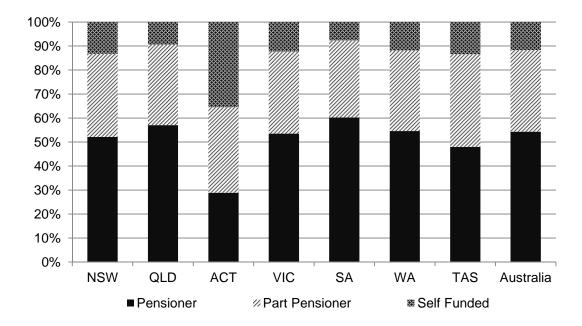


Chart 2: Income levels of retirement village residents by State; n = 92,868

Retirement village residents are not wealthy; across Australia, and in the majority of States, more than 50% of village residents are pensioners. Furthermore approximately one third comprise part pensioners.

The aggregate figures at a State level for both retirement village residents and community-based seniors are contained in Table 11.

Table 11: Income levels of retirement village residents and seniors in the surrounding community of those retirement villages by State

	Ret	irement Villaç	ts	Seniors age	ed 65 and ove municip		ment village	
	Pensioner	Part	Self	n	Pensioner	Part	Self	n
		Pensioner	Funded			Pensioner	Funded	
NSW	52%	35%	13.3%	26,960	58.2%	29.1%	12.7%	836,779
QLD	57%	34%	9.3%	22,405	58.3%	30.6%	11.1%	451,708
ACT	29%	36%	35.4%	1,346	38.1%	33.2%	28.7%	7,631
VIC	54%	34%	12.3%	19,778	58.4%	29.8%	11.8%	610,168
SA	60%	32%	7.6%	9,506	58.7%	30.4%	10.9%	192,863
WA	55%	34%	11.8%	11,756	56.0%	30.5%	13.4%	162,117
TAS	48%	39%	13.4%	1,117	58.8%	30.7%	10.6%	96,461
Australia	54%	34%	11.7%	92,868	58.1%	29.9%	12.0%	2,357,727

Retirees in the ACT, both village residents and overall, are notably wealthier than anywhere else in Australia. Anecdotal reasons for this include the greater prevalence of former public servants who are eligible for attractive superannuation packages; further research is clearly needed. This has implications in that surveys based on this location may not be directly applicable to other parts of Australia.

Village residents in QLD and SA were somewhat poorer than other parts of Australia, with smaller proportions of self-funded retirees and greater proportions of full pensioners; this was not evident in community-based seniors in these States.

Overall there are more full pensioners living in the community than in retirement villages, if rental retirement villages (which comprise social/affordable housing) were included in the retirement village sample this situation may reverse.

The financial aspects of retirement and accommodation choices are of significant importance to all seniors. Increases in costs coupled with a limited ability to change income levels are an area of concern particularly for retirement village residents on both the full and part pension (Finn et al 2010).

#### **Social Connectivity**

Much of the promotion of retirement villages emphasises the ability of residents to be connected with the village and the surrounding community; the degree of this is of a residents choosing. This social connectivity can be measured by the types of activities that retirement village residents engage in, including volunteering.

The ABS census records data on voluntary work for an organisation or group. This information was compiled for village residents and 85 villages had no residents that engaged in volunteering; at the other extreme there were 35 villages where more than 50% of the residents engaged in volunteering. The unweighted average of the proportion of village residents that engage in volunteering was 24%; the standard deviation was 12.7%.

The proportion of seniors who engage in volunteering was calculated at the aggregate level on a State basis along with seniors aged 65 and over in municipalities containing retirement villages. This is contained in Table 12.

Table 12: Proportion of retirement village residents and seniors that engage in volunteering

		Engage in volunteering	Do not engage in volunteering	n
Retirement Village	NSW	25.6%	74.4%	26,150 residents
Retirement Village	QLD	21.6%	78.4%	21,557 residents
Retirement Village	ACT	26.4%	73.6%	1,288 residents
Retirement Village	VIC	24.5%	75.5%	18,870 residents
Retirement Village	SA	27.2%	72.8%	9,167 residents
Retirement Village	WA	24.5%	75.5%	11,370 residents
Retirement Village	TAS	24.6%	75.4%	1,070 residents
Retirement Village	Australia	24.4%	75.6%	89,472 residents
Municipal 65 and older	Australia	19.4%	80.6%	2,355,459 seniors

The proportion of retirement village residents that engage in volunteering is greater than for seniors in the surrounding community; this applies across all States. Whether this connectivity is between village residents or with the outside community has not been determined.

There have been some studies into the relationship between volunteering and health outcomes (Onyx & Warburton 2003, McDonald 1996) however little relationship at the village level was noted between the proportion of volunteers and proportion of residents needing assistance. The relationship may well be at the individual rather than the group level.

#### **Conclusion and Further Research**

The differences between retirement village residents and seniors in the surrounding community are subtle. Village residents are less likely to need assistance with core activities than seniors overall in their surrounding municipality; whether this can be attributed to the quality of village life or villages attracting a specific type of resident is a subject of further research.

While studies have shown that the residents and seniors have a perception of a greater ability to access care within a retirement village setting their actual requirement is not correspondingly greater. There may be a perceived "insurance" factor in residents' decision to locate to a village which is not backed up with a real requirement.

Retirement village residents are not wealthy; the majority are either fully or partially reliant on the age pension. Notwithstanding some wealthy enclaves, few retirement village residents are self-funded retirees. While retirement villages comprise age segregated estates it is difficult to classify them as ghettos as seniors overall are less wealthy with a slightly higher proportion of full pensioners in comparison to village residents.

The wealth of village residents has implications for village operators as it can be anticipated that the majority of residents will be in some way reliant on age pension and will be sensitive to costs that increase at greater rates than this.

The wealth of village residents has a positive correlation with the wealth of seniors living in the municipality.

Retirement village residents are more connected in that they are more likely to engage in volunteering than seniors in the surrounding community, however the data does not specify whether this connection is within the retirement village or with the general community. Further research is required to clarify whether greater level of volunteering stems from the move to the retirement village or whether retirement village living encourages a particular resident type.

Retirement village residents (and seniors) in the ACT are noticeably different than other parts of Australia in that they are significantly wealthier. This has implications in that any study of residents/seniors in this State may not be directly pertinent to other parts of Australia.

This analysis is based on ABS census data; therefore it carries the implicit assumption that respondents to the census are truthful in completing the census forms.

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