

## **Funding and financing of aged care**

### **Richard Cumpston**

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### **Summary**

This is a submission to the Royal Commission into Aged Care Quality and Safety, made on behalf of consumers. It addresses part 12 of the submissions by Peter Gray QC on 4 March 2020.

There should be an evidence-based funding classification model for residential care, based on independent assessment. The form of the model should be based on expert advice, and may not necessarily be a case-mix model. The reliability of the independent assessments should be validated.

Loadings for higher costs in rural, regional and remote areas should be evidence-based. To give regional providers equal profitability to metropolitan, viability supplement payments in 17-18 may have needed to increase by about \$120m.

Closure rates have been high, and quality sometimes poor, in very remote areas. Funding arrangements designed to suit local needs are needed.

Reporting of income and expenses at the service level would provide helpful data, but acquittal of care funding would be an unfortunate reversion to the litigious CAM system.

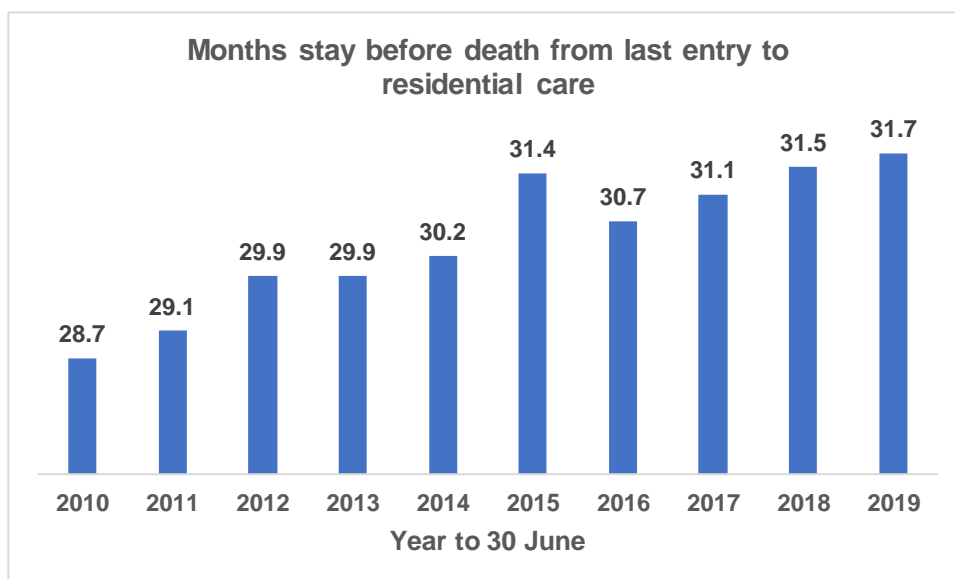
## **1. Evidence-based classification models for residential care**

### **1.1 Why the Aged Care Funding Instrument should be replaced**

ACFI has applied to all permanent residential care assessments since 20 March 2008. In his submission, Mr Gray said

*"ACFI is probably no longer fit for purpose in light of increased acuity of people entering aged care. The fact that reassessment for different funding classification is a function exercised by providers, and the structure of its domains may generate distortions and perverse incentives". [1 p67]*

There is little evidence to support the claim that the care needs of people entering residential care are increasing. Based on de-identified ACFI records supplied by the Australian Institute of Health and Welfare under data request R1920\_3539, average stays before death have marginally increased since the introduction of ACFI:



There is however strong evidence to show that ACFI assessments by providers allowed substantial fraud, initially by for-profit providers, but then followed by other providers. Part of the problem was that the ACFI documents were of poor quality. In *DLW Health Services Pty Ltd v Secretary, Department of Social Services [2016] FCAFC 108* the Court noted that the documents were riddled with ambiguous, uncertain and inconsistent language, and contained significant ambiguities. The Court recommended that the documents be reviewed to make them more readily understandable.

Regardless of the quality of the documentation, allowing providers to make their own funding assessments is inherently flawed.

## 1.2 Need for expert advice on form of classification model

The University of Wollongong collected care times and made external functional assessments for 1655 residents [2 p39]. This allowed a classification and regression tree analysis to be done, allocating residents into 13 classes, and estimating the relative payment level for each class.

It is far from clear that assigning residents to payment classes will prove to be the best basis for a funding system. A range of methods should be used to find the funding model most closely relating payments to functional assessments.

Of the 13 payment classes proposed by the University, 10 rely on complex “compounding factors”. For example

*“The not mobile branch has five classes and splits on function and pressure sore risk, along with compounding factors for the lower branches. The compounding factors in the not mobile branch include the Braden total, AM-FIM eat, AM-FIM transfer, disruptiveness, falls in the last 12 months, obesity flag, daily injections, and complex wound management.”* [2 p37]

It is hard to see the 13 classes as being meaningful to providers or regulators. In spite of this complexity, only 50% of the variance in the cost of individual care is explained by the model [2 p41]. If there is no need to assign residents to classes, then a robust payment system can be designed using a wide range of calculation methods. Payments more closely related to the underlying costs of caring for individual residents should be feasible.

Casemix payments defined by diagnostic related groups were suggested for US hospitals in 1980 [3], and subsequently adopted in Australia. Version 9 of the Australian Refined Diagnostic Related Groups model for admitted hospital patients, with 399 classes, was proposed in 2016 [4]. While casemix methods were state of the art in 1980, many other data analysis methods have since been developed.

Residential aged care providers are generally smaller than hospitals, residents tend to stay much longer, and providers can often choose which applicants to admit. There is thus less ability to average out, and a strong need for payments matching the costs of care for each resident.

Persons requiring a lot of individual care may find themselves at risk in the proposed system. For example, extreme obesity may sometimes, depending on many other factors, cause an increase in the calculated payments. Taking into account the chances of getting the increase, and the heavy costs of care for the condition, many providers may decide not to admit such a person.

### **1.3 Validation of reliability of independent assessments**

An important finding by the University is that external assessments are feasible:

*“Study One assessments were completed by a team of registered nurses with at least five years’ experience in the aged care sector. Overall, the overwhelming finding emerging from Study One was that the RUCS Assessment Tool can effectively be completed by suitably qualified external assessors, generally in less than one hour.” [2 p42]*

These assessments were completed face to face with the resident, or by observation of the resident, contact with family and/or friend carers, gathering information from facility staff or other sources, such as notes and documents [5 p24]. Although information was recorded on the number of minutes data was obtained from each source for each resident, no analysis of these time records has been published. Information obtained from staff, notes or documents could potentially be biased towards revenue maximisation. The reliability of the assessments should be validated by comparing assessments of the same person made by different sets of assessors.

### **1.4 Availability of data for independent analysis**

The Resident Classification Scale was used from 1997 to March 2008, and ACFI has been used for the 12 years since. If the proposed funding model remains in place for 10 years, it will determine the recipients of at least \$120 billion. All possible steps should be taken to ensure that the funding model is robust enough to support such large payments.

One low-cost step would be to make all the data available for independent analysis. This is a routine requirement by reputable scientific publications, and helps guard against fraud or error. Importantly, public availability of data allows persons with many different skills to contribute to the solution of difficult problems.

The identity of residents should be kept confidential. Demographic details, such as sex and age-band of each resident, could be made available without breaching confidentiality. Demographic details and functional assessments are available from the Australian Institute of Health and Welfare for every ACFI ever made, and similar availability should apply for residents assessed in the University of Wollongong studies.

A request under the Freedom of Information Act 1982 for the data collected by the University of Wollongong, appropriately de-identified, was refused on the grounds that the data were “not in the Department’s actual or constructive possession”. A request for the five regression equations fitted to the data was refused on the grounds that their disclosure would have a substantial adverse effect on the proper and efficient conduct of the operations of the Department.

## **1.5 Engagement of consultant with strong expertise in data algorithms**

Breiman et al published their well-known book on classification and regression trees in 1984 [6], and software to derive these trees soon became widely available. But plummeting costs of data storage and processing power, and open software, have seen the recent development of many new ways to use big data [7 p12-19].

Stephenson recommends the use of algorithm specialists who

*“can leverage the modelling and data processing libraries to rapidly experiment with a variety of diverse models ... they might compare results from a statistical regression vs results from a support vector machine vs results from a decision tree, quickly determining the most promising model for future development”* [7 p165].

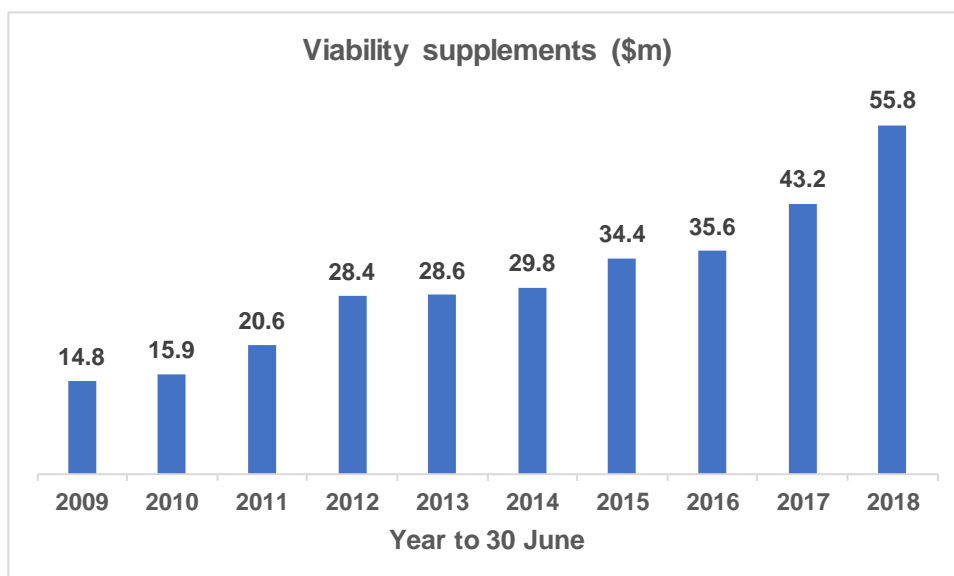
## **2. Loadings for higher costs in rural, regional and remote areas**

### **2.1 Viability supplements**

The Productivity Commission said in 1999 [8 p81-82]

*“...the Commission considers that current special needs funding arrangements are inadequate. Payments under the viability scheme (\$6 million a year), together with capital support for remote area services (\$10 million a year) account for only around one-half of one per cent of total Commonwealth support for residential aged care. Apart from the intrinsic cost disadvantages that come from smallness and remoteness, some of these services must undertake a wider range of functions than services in the major population centres. The current subsidy regime makes little or no allowance for the costs of these extra functions.”*

As shown by the annual Reports on the Operation of the Aged care Act 1997 [13], viability supplements from 2008-09 on have been



Viability supplements of \$55.8m in 2017-18 were about 0.3% of the total revenue of \$18,066m of residential aged care providers [9 p73]. In 2017-18 the viability supplement provided around \$10,000 per resident per year for residential care facilities in remote and very remote areas [9 p71]. Based on the numbers of operational places in 2.3, this suggests that about \$13m was paid in viability supplements to remote and very remote areas.

The maximum viability supplement per day increased from \$6.36 in 2017-18 to \$8.39 in 18-19, a 32% increase [9 p136].

## 2.2 Numbers of residential aged care facilities

Year	Numbers of residential aged care facilities at 30 June							Total
	mmm=1	mmm=2	mmm=3	mmm=4	mmm=5	mmm=6	mmm=7	
2003	1834	226	234	187	382	40	25	2928
2004	1830	222	234	184	380	38	22	2910
2005	1832	225	238	189	384	37	25	2930
2006	1830	225	239	192	379	39	25	2929
2007	1785	222	236	190	377	38	25	2873
2008	1757	222	230	185	374	35	25	2828
2009	1727	217	229	181	369	35	25	2783
2010	1719	217	227	181	370	35	25	2774
2011	1710	219	227	181	364	35	24	2760
2012	1684	210	223	184	365	37	21	2724
2013	1675	211	226	185	366	35	20	2718
2014	1662	206	223	184	361	34	18	2688
2015	1656	204	223	184	362	36	16	2681
2016	1644	210	223	183	359	34	16	2669
2017	1648	210	222	182	360	34	16	2672
2018	1672	214	221	182	357	36	13	2695
2019	1687	220	227	182	356	35	12	2719
Change	-8%	-3%	-3%	-3%	-7%	-13%	-52%	-7%

These numbers are from service lists published annually by the Department of Health [10]. Facilities have been subdivided by location using the Modified Monash Model [11]. This model, developed by Monash University, is used by the Department of Health in determining

incentives to attract doctors to rural areas. The codes range from 1 for cities to 6 for remote and 7 for very remote.

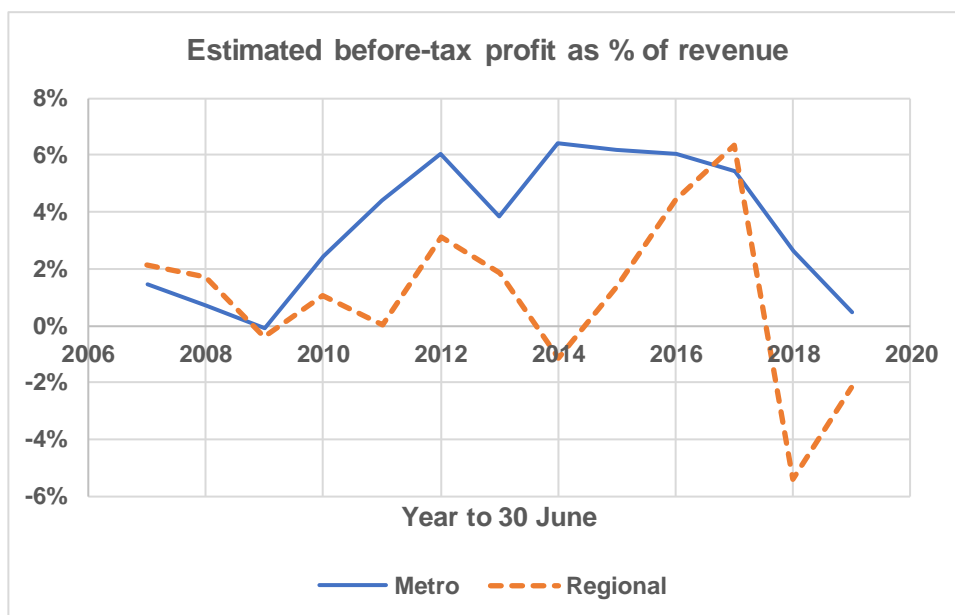
While there have been declines from 2003 to 2019 in the numbers of facilities in all regions, many hostels and nursing homes have amalgamated, and new homes have tended to be larger.

### 2.3 Numbers of operational places

Year	Numbers of operational places at 30 June							Total
	mmm=1	mmm=2	mmm=3	mmm=4	mmm=5	mmm=6	mmm=7	
2003	103992	12174	12058	8411	10514	925	473	148547
2004	107493	12604	12602	8872	10977	931	484	153963
2005	111065	12760	13061	9281	11346	914	474	158901
2006	114244	13325	13469	9562	11443	959	466	163468
2007	116621	13639	13948	9812	11572	1012	466	167070
2008	119902	14025	14401	10179	11838	1021	466	171832
2009	122354	14376	14674	10229	12096	1030	466	175225
2010	125604	14684	15069	10481	12425	1030	456	179749
2011	126729	14863	15351	10714	12370	1020	456	181503
2012	128427	15130	15719	11047	12600	1106	385	184414
2013	129574	15349	16123	11154	12644	1032	402	186278
2014	131677	15446	16570	11371	12792	1044	383	189283
2015	133844	15771	16880	11337	13091	1138	309	192370
2016	135931	16753	17138	11376	13234	1084	309	195825
2017	140104	16973	17293	11608	13318	1084	309	200689
2018	145130	17778	17513	11863	13453	1136	269	207142
2019	149108	18928	18419	12091	13577	1157	257	213537
Change	43%	55%	53%	44%	29%	25%	-46%	44%
Places per home at 30 June 2019								
	88	86	81	66	38	33	21	79

Very remote areas have had a fall of 48% in the numbers of operational places, and their average size of 21 places is now only about a quarter of those in city and near-city areas.

## 2.4 Lower profits of regional providers



These before-tax profit rates are from de-identified financial data for each provider available on the Department of Health’s website up to 14-15 [12], and since available through Freedom of Information requests. To help de-identify providers, all revenue and expense figures are shown as per resident figures, rather than totals. A size band is shown for each provider, with the ninth band being for providers with 500+ residents. For each of the bands below the highest, the average number of residents was here assumed to be in the middle of the band. The average number of residents in the highest band was chosen so as to balance with total resident numbers, as shown by the annual Report on the Operation of the Aged Care Act 1997 [13]. These crude assumptions about the numbers of residents in each band for each provider may explain some of the high variability in estimated profit.

Providers appear to be identified as “regional” only if they have no metropolitan facilities. Based on the assumed residents for each size band, “regional” providers accounted for about 18.2% of residents in 18-19. This is a little lower than to the 21.3% of operational places in Monash regions 3 to 7 at 30 June 2019.

## 2.5 Subsidy increases needed to give regional providers equal profitability

Revenue data prior to 2010-11 would have been partly based on pre-ACFI assessments, and may thus have shown less distinction between metropolitan and rural providers. The average profit rate for metropolitan providers from 2010-11 to 2018-19 was 4.4%, and the average for regional providers was 1.0%. This suggests that about a 3.4% increase in revenue was needed to bring regional providers to the same level of profitability. ACFI subsidies were 60% of provider revenue [9 p73], so that a 5.7% increase in ACFI subsidies to regional providers appears needed to give them the same profitability.

Assuming that regional providers accounted for 19.5% of residents in 17-18, a 5.7% increase in their ACFI subsidies would have cost about

$$10812 * .195 * .057 \quad \text{ie about } \$120\text{m.}$$

Access to the residential care financial returns of each provider, and details of present viability supplement payments, would be needed to make better estimates.

## 2.6 Service closures in Monash regions 5, 6 and 7

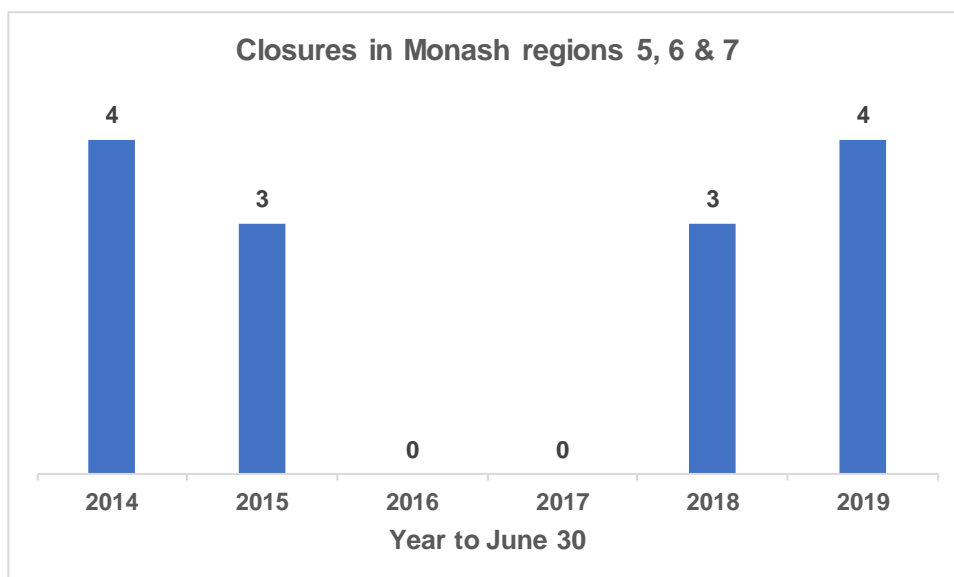
suburb	state	beds	provider	closed	mmm
Toora	VIC	30	Prom Country Aged Care Inc	13-14	5
Kyneton	VIC	28	Kyneton District Health Service	13-14	5
Pingelly	WA	7	Pingelly Aged Persons Hostel Inc	13-14	5
Mallala	SA	25	Mallala Community Hospital Inc	14-15	5
Stanthorpe	QLD	44	Stanthorpe Convalescent Home Pty Ltd	14-15	5
Bonalbo	NSW	15	The Uniting Church in Australia Property Trust (NSW)	18-19	5
Wellington	NSW	46	Orana Gardens Ltd	18-19	5
Murchison	VIC	40	Murchison Community Care Inc	19-20	5
Collinsville	QLD	12	D & R Community Services Pty Ltd	14-15	6
Kununurra	WA	10	Western Australian Government	18-19	6
Tennant Creek	NT	19	Uniting Church in Australia Frontier Services	13-14	7
Gununa	QLD	15	North and West Remote Health Limited	17-18	7
Normanton	QLD	15	North and West Remote Health Limited	17-18	7
Doomadgee	QLD	10	North and West Remote Health Limited	17-18	7
Cunnamulla	QLD	12	Churches of Christ in Queensland	18-19	7

All but one of the above closures were identified by comparing the service lists at each 30 June from 2013 to 2019. The exception was the service run by Murchison Community Care Inc, which ceased operation in February 2020 (Sarah Martin, The Guardian, 17 February 2020). Comparing service lists is not always a reliable method of identifying closures, as service names, addresses, suburbs and provider names can all change without a service closing. Checks were placed on the above table by looking at contemporary media reports, and at homes currently shown on MyAgedCare.

The services in Monash region 7 in Gununa, Normanton and Doomadgee in Queensland were taken over in 15-16 from D & R Community Services Pty Ltd by North and West Remote Health Limited, who ceased to operate them in 17-18. D & R Community Services Pty Ltd went into liquidation on 7 June 2016, and the guarantee fund had to refund three deposits in respect of its service in Collinsville [14 p58].



## 2.7 Zero closures in 15-16 and 16-17 linked to profitability?



From the table in 2.6, there were no closures in Monash regions 5 to 7 in 2015-16 and 2016-17, when regional providers made profits of about 4.5% and 6.3% of revenue (see 2.4). While there are uncertainties in these data, it does seem that closures are more likely when profits are low or negative.

## 2.8 Closure rates in Monash regions 5, 6 and 7

Monash region	Closures 1/7/13-30/6/19	Mean number homes	Closure rate pa
5	7	361	0.3%
6	2	36	0.9%
7	5	16	5.2%

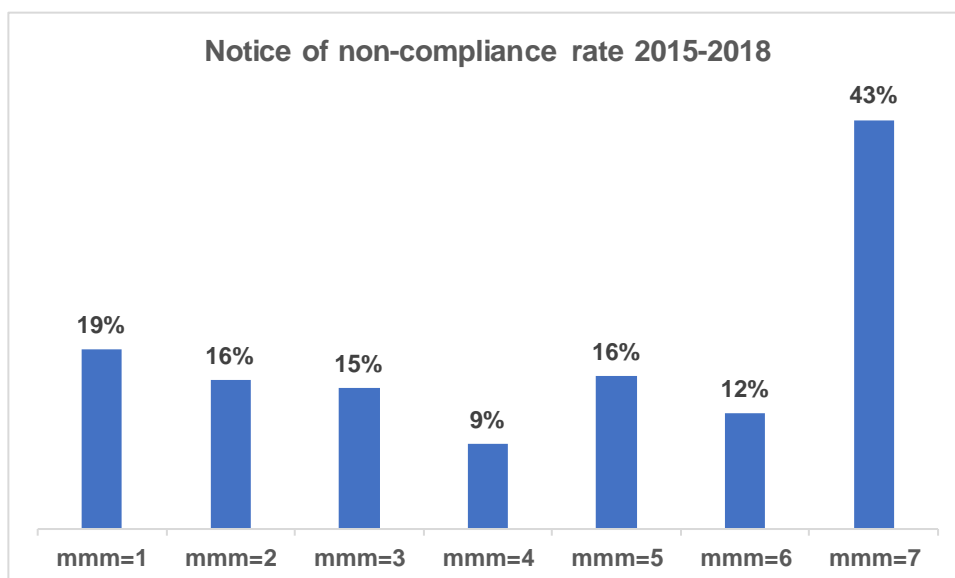
## 3. Funding of care in very remote areas

### 3.1 Occupancy rates

Region	Occupancy rate		
	16-17	17-18	18-19
Major cities	91.4%	90.0%	88.9%
Inner regional	92.7%	91.4%	91.1%
Outer regional	92.2%	90.8%	90.0%
Remote	91.7%	88.4%	87.6%
Very remote	77.4%	77.1%	71.9%
<b>All areas</b>	<b>91.8%</b>	<b>90.3%</b>	<b>89.4%</b>

These occupancy rates are from Aged Care Data Snapshots [15]. Regions are based on the ABS Australian Statistical Geography Standard (ASGS 2016).

### 3.2 Notices of non-compliance



Notice of non-compliance rates were derived by dividing the numbers of non-compliance events in calendar years 2015 to 2018 by the numbers of homes in those years. For-profit homes have significantly higher rates of non-compliance events than not-for-profits [16], and this is likely to be responsible for the generally lower rates moving from Monash region 1 to 4. The non-compliance rate of 43% per annum in Monash region 7 is much higher than for any other region.

### 3.3 Aged Care Allocation Round 2018-19

Monash region	Allocations of places	Places	Allocations of grants	Grants \$m
1	120	8000	0	0.0
2	36	1445	1	2.8
3	34	1938	3	8.1
4	24	1112	3	7.2
5	43	764	19	36.9
6	3	17	2	4.9
<b>Total</b>	<b>260</b>	<b>13276</b>	<b>28</b>	<b>60.0</b>

The above totals were derived from the results of the 2018-19 Aged Care Allocation Round [17]. Monash regions 6 and 7 are clearly unattractive to investors.

### 3.4 Multi-purpose services

Monash region	Homes	Places	Average places
5	108	2139	20
6	39	654	17
7	32	383	12
<b>Total</b>	<b>179</b>	<b>3176</b>	<b>18</b>

The Productivity Commission noted in 2011 [18 p269] that

*“There were 129 Multi-Purpose Services in June 2010 with 3102 aged care places. These services co-locate health (including acute) and aged care services in one place and provide economies of scale and scope which enable services to be provided that would otherwise not be feasible to provide. In addition, MPS are able to offer health professionals a peer support environment and greater opportunities to undertake professional development.”*

The figures in the above table, from the 30 June 2019 service list, show that the numbers of multi-purpose services have increased by 39%, while the number of aged care places has only increased by 2%.

### 3.5 ATSI facilities

Monash region	Homes	Places	Average places
1	4	87	22
2	1	0	0
3	1	30	30
4	1	32	32
5	1	8	8
6	1	18	18
7	26	299	12
<b>Total</b>	<b>35</b>	<b>474</b>	<b>14</b>

The 30 June 2019 service list included 35 services described as “National Aboriginal and Torres Strait Islander Aged Care Program”.

The National Aboriginal and Torres Strait Islander Flexible Aged Care Program [19] *“funds residential and home care services that are:*

- *flexible*
- *culturally appropriate*
- *acceptable to and accessible by the community.”*

### 3.6 Residential care services in very remote regions at 30 June 2018

Type	Homes	Places	Average places
RACF	12	257	21
MPS	32	383	12
ATSI	26	299	12
<b>Total</b>	<b>70</b>	<b>939</b>	<b>13</b>

The Productivity Commission [18 p265] said in 2011

*“The Commission considers that providers delivering service in rural and remote locations and to all Indigenous people should be actively supported before remedial intervention is required. Such support requires flexible, long-term funding models that are aimed at ensuring the sustainability of service delivery and the building of capacity to enable local people to be engaged in the management and staffing of such services over time. The use*

*of partial or full block funding models can allow infrastructure to be developed and staff retained where service use is variable.”*

Mr Gray [1, p68] suggested

*“In cases of very thin markets, providers may receive guaranteed base funding in return for provider of last resort obligations.”*

This submission has shown that residential aged care services in very remote areas are often unprofitable, have high non-compliance rates and high closure rates. An immediate step the Commission could recommend would be much higher viability supplements.

But the provision of aged care in very remote areas has many economic and cultural difficulties, and no simple long-term solution is likely. As the Productivity Commission recommended, flexible, long-term funding models are needed. Detailed study is needed of the lessons that can be learned from the three different funding models currently in use.

#### **4. Reporting and acquittal of expenses at the service level**

##### **4.1 Proposed reporting and acquittal of expenses at the service level**

Mr Gray [1 p68] submitted

*“...a form of reporting and acquittal of aggregated care funding at the service level (that is for expenses on all care provided in a particular period at a particular residential aged care facility would be appropriate to ensure that there are incentives in place for the funding to be spent on care”.*

While reporting of income and expenses at the service level would provide helpful data, acquittal of care funding would be an unfortunate reversion to the litigious CAM system discarded in September 1997.

##### **4.2 Value of reporting revenue and expenses at the service level**

As far as I know, revenues and expenses are only reported by providers for all their residential operations combined, rather than separately for each service. This makes it difficult to determine the revenue and cost implications of operating services in different regions. For example, this makes it difficult to determine fair viability supplements for services of different sizes, operating in different regions. Most providers with more than one residential service should be able to split local revenue and expenses by service, even if there is some doubt about the appropriate split of investment revenue and head office expenses.

##### **4.3 Litigious CAM system prior to Aged Care Act 1997**

*“...nursing homes are required to provide evidence that the CAM funding that they received from the Commonwealth was spent on the personal and nursing care of their residents, and not used for non-care related expenses or kept as profit.” [20 p95]*

*“...at 30 June 1994 27 homes were under investigation by the Australian Federal Police for fraudulent misuse of CAM funds, with an estimated value of \$4,627,000.” [20 p100]*

#### 4.4 Need for reasonable profits and net assets

The Commonwealth relies on not-for-profit organisations and for-profit companies to deliver aged care, but it does not provide any financial guarantees to them. They need to have sufficient net assets to be able to withstand unexpected periods of adversity (such as COVID-19). They need to earn reasonable rates of return on these net assets. How large net assets should be in relation to liabilities, and what are reasonable rates of return, are questions likely to be considered by the Commission in its hearings on the funding and financing of aged care.

#### Glossary

ACFI	Aged care Funding Instrument
ATSI	Aboriginal and Torres Strait Islanders
mmm	Modified Monash Model
MPS	Multi-Purpose Service
RACF	Residential Aged Care Facility

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