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Alternative Aged Care Assessment, Classification System and Funding Models Final Report

Volume Two: Attachments to the Report

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Background to aged care reform and current funding arrangements

A critical success factor for a future funding system is the 'fit' of the proposed model within the national aged care sector context. This section of the report provides the background to the current funding arrangements and an overview of the aged care reform agenda.

The legislative and administrative basis for residential aged care subsidy

The *Aged Care Act 1997 (Section 41-3)* defines residential aged care as being personal care or nursing care, or both personal care and nursing care, that:

(a) is provided to a person in a residential facility in which the person is also provided with accommodation that includes:
- appropriate staffing to meet the nursing and personal care needs of the person;
- meals and cleaning services;
- furnishings, furniture and equipment for the provision of that care and accommodation; and

(b) meets any other requirements specified in the Subsidy Principles.

The basic subsidy amount per resident per day is 'the amount determined by the Minister by legislative instrument', currently the Aged Care Funding Instrument (ACFI). Residential aged care subsidies are paid to approved providers of residential care to *contribute to the costs of providing care* to residents in a manner that *meets its accreditation requirement (Aged Care Act 1997, section 42-1(1)c).*

The Quality of Care Principles 2014 are made under the *Aged Care Act 1997*. The purpose of these principles are to specify the care and services that an approved provider of residential aged care (and Home Care Packages) must provide and other responsibilities of approved providers relating to quality of care. An approved provider must provide the care or service specified in the Quality of Care Principles 2014 to any care recipient who needs it. For some services, residents may be required to pay additional fees, depending on their ACFI (care dependency) level and their financial (pension) status.

Eligibility for residential aged care

A person must meet all the eligibility criteria in order to be approved by an ACAT as eligible to receive residential care. An ACAT carries out an assessment to determine that a person who is applying for residential care:

- has a condition of frailty and disability (with physical, medical, social or psychological needs requiring continuing personal care), and
- those needs cannot be met more appropriately through non-residential care services; and there is evidence of:
  - a medical condition;
  - absence or loss of physical functions;
  - absence or loss of cognitive function;
  - absence or loss of social functioning, and

- the person's life or health would be at significant risk if the person did not receive residential care.

Sources of evidence that the ACAT uses to determine eligibility include:

- medical diagnosis;
- assessment of capacity to perform daily living tasks;
- evidence of behavioural dysfunction, and
- information provided by the person, a carer, family, friends or others.

ACATs consider both the type and intensity of services required by the client in determining the appropriateness of care.

An ACAT assessment can provide some of the required evidence for the ACFI.

Background to residential aged care funding

Care Aggregate Model / Standard Aggregate Model

Prior to the *Aged Care Act, 1997*, the Commonwealth government funded nursing homes through three payment components:

- Care Aggregated Module (CAM): These funds were provided to pay for the nursing and personal care of residents. CAM funding was provided at different levels for different residents based on the level of care each resident requires. Residents were classified according to their care needs using the Resident Classification Instrument.
- Standard Aggregated Module (SAM): This funding was provided for non-nursing care costs, such as food, administration, and building maintenance. SAM funding was a uniform grant, with all nursing homes receiving SAM at the same rate. Unlike CAM, any unspent SAM funds were kept by the operator as profit or surplus. This provided an incentive for operators to reduce SAM costs, so that they could increase their surplus.
- Other Cost Reimbursed Expenditure (OCRE): These funds were provided to reimburse staff related costs such as superannuation, workers' compensation and payroll tax. Nursing homes in each State received OCRE at a rate based on the average costs of these staff-related expenses in their State.

During the following decade, further revisions to Commonwealth aged care policy and legislation were implemented through the passage of the *Aged Care Act 1997*.

Resident Classification Scale

With the establishment of the *Aged Care Act 1997* came a new eight-category Resident Classification Scale (RCS) that measured resident dependency across both low care (formerly hostels) and high care (nursing homes) settings. This was designed to provide for 'ageing-in-place' whereby low care residents would be able to remain living in their facility when their dependency increases, rather than the former requirement for them to move to higher level care facility. The RCS determined the amount of money that service providers would receive for each resident ranging from RCS1 being the top level of former nursing home funding band to RCS8 which was the lowest former hostel level.

The RCS included questions about residents' intensity of care needs across activities of daily living, behaviours, medication, nursing, therapy, and 'other'. Each question had four possible responses with weightings ranging from 0 to 14.61. The sum of the weights gave an overall score for each resident which was then allocated to a category on the RCS. The level of funding was set based on the RCS category derived for each resident.

Aged Care Funding Instrument (ACFI)

Between 2002 and 2005, in response to concerns about the perceived administrative burden resulting from the administrative and documentation requirements of the RCS, and a lack of accountability to the Australian Government, four reviews were held which culminated in a project to develop and implement the Aged Care Funding Instrument (ACFI). The ACFI replaced the RCS in 2008.

The ACFI contains three domains: activities of daily living, behavioural needs, and complex health care. The residents are classified to their level of need in each domain — no need, low, medium or high.

The ACFI developers argued that:

> *"The domains are appropriate for measuring the average cost of care in longer stay environments and allow a case-type description of residents. ……. The ACFI allows description of individuals into clinically meaningful categories, such as low personal care needs, moderate behaviour care needs and low health/nursing care needs and this case type will then have an associated funding allocation"(Rosewarne 2007).*

Recent aged care policy reform

Productivity Commission Inquiry

The ensuing decades since the *Aged Care Act 1997* has seen a number of iterative funding and planning policy changes to respond to emerging challenges within the sector. The Productivity Commission report '*Caring for Older Australians*' (2011) included a raft of recommendations designed to reform the aged care sector to better align with contemporary needs and interests, including funding pressures. Many of these were extensions of the issues acknowledged within previous policy reviews and included detailed consideration of the major cost components in aged care such as care provision, everyday living expenses and accommodation.

Recommendations included redressing the controls over bed licenses introduced during the eighties, and increasing options for consumers to financially contribute to their care and accommodation needs. Parallel to this was the recognition that consumers should have greater control and choice over how, where and by whom their care needs are met. This included options for greater opportunities for engagement and re-ablement to be available as a routine part of living in residential settings, and appropriate resourcing and skills to support end-of-life needs and provide palliative care. Recommendations also sought to ensure vulnerable and/or special needs groups were appropriately provided for.

Living Longer, Living Better

In response to the Productivity Commission report, the Government introduced and legislated through changes to the Aged Care Act, 1997, a set of reforms called *"Living Longer, Living*

Better" in 2013. It changed the rules concerning entry contributions and ongoing fees. Entry contributions could be a fully refundable lump sum (such as an accommodation bond), a rental style payment or a combination of both.

Residents will be means tested to determine ongoing fees which consist of:

- Basic daily fee of 85% of the single basic pension;
- A care fee, and
- An accommodation payment.

There are maximum annual and lifetime caps for fees in place.

The Aged Care Roadmap

The Aged Care Roadmap, developed by the Aged Care Sector Committee in 2016, outlines 'what is required to realise a sustainable, consumer-led aged care market, where consumers have increased choice and control of what care and support they receive, as well as where, how and when they receive it'.

Key concepts contained in the Roadmap relating to aged care assessment and funding are:

- Assessment should be independent of service providers and address assessment of eligibility, care needs, means and maximum funding level. (This should consider time limited and on-going needs, and include physical, medical needs and emotional well-being);
- A single aged care and support system that is market based and consumer driven with access based on assessed need;
- Sustainable aged care sector financing arrangements where the market determines price, those that contribute to their care do, and government continues to acts as a 'safety net' and when there is insufficient market response;
- Care and support will be available on an episodic, short term early intervention/restorative, and ongoing basis;
- Government will no longer regulate the number or distribution of services;
- Dementia care is integrated as core business throughout the aged care system;
- Seamless movement between home based and residential care with true consumer choice of care and provider across the spectrum, and
- The distinction between care at home and residential care should be removed, creating a single aged care system — agnostic as to where the care is received.

In addition, the Roadmap addresses diversity of need, proactive planning by consumers and greater consumer choice 'driving quality and innovation' and 'increased competition'.

The Aged Care Funding Instrument-based funding system

In the current Aged Care Funding Instrument (ACFI) system a person can only be a new permanent resident of a residential aged care facility (RACF) after an independent assessment by an Aged Care Assessment Team (ACAT). The ACAT is external to the care home and approves applications for residential care on behalf of the Secretary of DoH under the Aged Care Act 1997. On entry to the RACF, the ACFI is completed by RACF staff and this initial

assessment results in the resident being classified on each ACFI domain to one of four levels of need – nil, low, medium or high need. There are protocols for reassessment if the resident is returning from a hospital admission or if the person's care needs change.

The ACFI uses assessment information, rather than care plan or care provided information, to determine resident funding in order to reduce the amount of time required for documentation.

The evidence required to support certain ratings is specified and assessors must identify the *source materials* in each case. As one example, the ACFI has a question on 'Depression' where the care need is defined as 'depressive symptoms' that are rated as none, mild, moderate or severe. The ACFI appraisal evidence that can be used to support this rating is specified as either a Depression Assessment Summary, the Cornell Scale for Depression, the Depression Checklist or a diagnosis, with a clinical report being accepted to provide supporting evidence.

Copies of these source materials need to be stored as part of the 'ACFI Appraisal Pack' that may later be subject to audit by the Commonwealth. This Appraisal Pack is the completed record of the resident's ACFI appraisal or reappraisal including all the evidence specified for inclusion.

Additive payments based on three domains

The core of the design of the current residential aged care funding model is that each resident is funded at a basic daily subsidy rate based on their 'usual' needs in each of the three ACFI domains. The current rates are shown in Table 1 in the Main Report.

There are also a range of subsidies and supplements available. These include, for example, an oxygen supplement, enteral feeding supplements and supplements for veterans and homeless residents. Some of these supplements (such as those just listed) relate to the needs of individual residents. Others address structural issues such as the geographic isolation of some care homes. While these subsidies are an important feature of the overall design of the aged care funding system, they are supplementary rather than the core model.

Budget responses to growth in ACFI subsidies

In recent years there have been several occasions where expenditure for aged care has significantly outgrown projections, resulting in the introduction by government of savings measures applied to the sector.

The first of these occurred in the 2012-13 budget, which saw a reduction of payments under ACFI by $1.6 billion over five years. This followed analysis of claims trends which saw growth occur at twice the rate of wages. '(G)iven that ACFI subsidies make up around 70 per cent of provider revenue and wages make up around 70 per cent of provider costs' the then Minister for Aged Care noted at the time, 'there is clearly a disjoint between care subsidies and the cost of care.' *(Butler, 2012)*

The following year saw the cessation of the short-lived Dementia Severe Behaviour Supplement due to demand far outstripping initial projections. The supplement was expected to support an estimated 2,000 people who experience severe and extreme behaviours and psychological symptoms associated with dementia, however, more than 25,000 people were receiving the supplement within its first year. This resulted in an almost tenfold projected expenditure increase from initial estimate of $11.7 million to $110 million.

The most recent budgetary measure occurred in 2016-17 due to higher than anticipated claiming under the Complex Health Care domain of the ACFI tool, and in turn provided the impetus for this current review of aged care assessment, classification and funding systems.

These changes have not been welcomed by the aged care sector and have resulted in a climate of increased tension between providers and the government, and this was referred to in the public statements accompanying the latest measure:

> *the Government recognises concerns within the industry and families of care recipients regarding the measures and is engaging with the sector, principally through the Aged Care Sector Committee, to discuss alternative approaches to the announced reforms to ACFI which achieves the same savings profile(Department of Health 2016).*

In summary, The ACFI has not been successful at anticipating and responding to the incentives it creates relating to provider claiming patterns. This has resulted in budget uncertainty for the Commonwealth and funding uncertainty for aged care providers.

Appendix Two

Environmental context scan and stakeholder consultations

A national context scan was conducted to supplement the data provided by the Department and information obtained from the literature review. The purpose of this was to identify the current issues and priorities identified by key stakeholders regarding assessment, classification and funding of aged care and activities included a desktop review of relevant websites as well as targeted key stakeholder consultations.

The purpose of the website reviews was to identify reports, submissions and policy statements of key stakeholder groups that could inform the project, and included the following organisations: Alzheimer's Australia, Uniting Care Australia, Aged Care Services Australia (ACSA), Leading Aged Services Australia (LASA), The Guild, Speech Pathologists (SPA) Association, Australian and New Zealand Association of Geriatric Medicine (ANZSGM), Royal Australian College of General Practitioners (RACGP), and Australian College of Nursing (ACN).

Several high level discussions with key stakeholders were held during October-November 2016 to clarify observations and expectations regarding alternative assessment, classification system and funding models for aged care. Interviews have been held with representatives of the following groups:

- Peak aged care and consumer organisations: Leading Aged Services Australia (LASA), Aged and Community Services Australia (ACSA); The Guild; Council on the Ageing (COTA) and National Aged Care Alliance (NACA);
- Aged Care providers: Uniting (NSW); Presbyterian Care; Catholic Health Care, and
- Government appointed Advisory Groups: Aged Care Sector Committee; ACFI Review Group.

An overview of residential aged care in Australia

At 30th June, 2015 there were 172,045 people in permanent residential aged care. Of these, 1,483 were indigenous. There were 2,681 aged care residential facilities across Australia with a total of 192,370 beds (approximately 20,000 of these beds were used for respite care). 59% of these facilities were operated by not for profit organisations, 32% by private owners and 9% by government.

Residents' average age is 85. 52% of permanent residents had a diagnosis of dementia. In the 2014/15 year, 55,605 residents died, almost one third of places. The length of stay profile of residents who left care is shown in Table .

Table 5 Average length of stay of residents

Length of stay	Percentage of separations
<1 month	6
1–3 months	8.4
3–6 months	8.7
6–12 months	3.6
1–2 years	16.4

Length of stay	Percentage of separations
2–5 years	30.3
≥5 years	18.8

Findings of environmental context scan and stakeholder consultations

This section presents a thematic analysis of results from consultations undertaken with key aged care sector stakeholders and the Commonwealth Department of Health (DoH). Also included in this section are the results of a scan of the relevant aged care sector policy statements. It includes limitations of the current system, impacts of market forces and consumer direction, and the role of assessment in determining care needs.

The initial project stakeholder workshop with DoH in November, 2016 was an important step in clarifying the scope of the project. DoH confirmed that although this project is focussed on a review of the assessment tools, classification and funding models for residential aged care it should also consider the assessment and re-assessment processes, validation systems and alignment of residential aged care systems with directions the Aged Care Roadmap. The meeting also clarified that a refined residential aged care system would need to take into account broader cross portfolio system impacts of any proposed changes, including intended and potential unintended consequences outside of the aged care sector.

Financial sustainability and predictability

There was unanimous agreement from all who participated in consultations that the current funding arrangements require significant attention, ranging from a series of refinements to a wholesale overhaul. The limitations of the current arrangements were wide-ranging, but in the main relate to the need for predictable and sustainable financial operating environments.

For DoH, the immediate political problem is to address 'budget blowouts' with a longer term need to redesign the funding system into a more sustainable and predictable model. The recent budgetary measures have been introduced due to claims under ACFI having significantly overshot forward estimates, with no alignment of growth in related measures such as workforce costs. Based on the internal DoH analysis of ACFI data, the increase in ACFI expenditure does not appear to correlate with the overall increase in resident needs. The expense growth patterns are neither linear nor consistent across all three domains of ACFI, falling predominantly within the Complex Health Care (CHC) domain. DoH analysis also suggests that these claiming patterns are not present across all parts of the sector. In short, the data suggests that ACFI is open to 'gaming' by providers seeking to maximise resident subsidies.

For providers, the imperative is to ensure certainty and stability in funding.

> *Current funding is subject to frequent and inconsistent policy change, creating uncertainty for providers and consumers(Leading Aged Services Australia 2016).*

Despite these comments, it would be wrong to assume providers are looking only to government as the source of their financial stability as they also recognise the role of consumers in contributing to their revenue base:

> *there is a need to more urgently work on a strategic review of how aged care is funded over the next decade and the appropriate mix of taxpayer funds and consumer contributions for aged care(ACSA 2016).*

A recurring theme within the consultations was stakeholders asking the question:

> *Is ACFI broken or are the forward estimates inaccurate?*

The question as to how the forward estimates are arrived at was one which was raised by a number of stakeholders, mostly provider representatives. In its submission to the Productivity Commission's Inquiry into human services reform, the Aged Care Guild is unequivocal in its view that the government

> *'is influenced by incorrect forecasts …. (and) that ACFI [funding] is manifestly inadequate' (Aged Care Guild 2016).*

Not surprisingly, the consultations and the position statements developed by stakeholder groups include a desire for greater transparency in the government estimates for aged care funding. For many this requires a robust and transparent 'cost of care' study to ensure funding for aged care is evidence-based.

Alignment with the reform agenda

There appears to be general agreement in principle with the Roadmap, which is neatly summed up by the following recommendation by COTA in its 2016 budget submission:

> *Continuation of steps towards a consumer led, market based aged care system that is fully responsive to assessed need and capacity to pay, including full implementation of the current aged care reforms and those currently in collaborative planning (COTA Australia 2016)*

However, the consultations undertaken and grey literature reviewed revealed a number of different perspectives regarding the operationalising of certain features.

Market based and consumer driven

The Roadmap frequently refers to the 'marketization' of aged care and the need for competition within the sector which can only occur through an 'agile and proportionate regulatory framework', usually referring to reduced regulation of bed licences and planning ratios. There is general agreement amongst all stakeholder groups of the expectation that consumers will contribute to the cost of care and, in particular, their accommodation and everyday living costs 'as they have been throughout their lives'. Facilitating increased 'consumer choice and control' through the provision of individualised funding models are also key drivers for a consumer-directed market.

There are mixed views about the capacity of consumer directed care to be realised within the residential aged care sector. As indicated above, consumer group COTA is a strong advocate for the introduction of Consumer Directed Care (CDC) and individualised budgets, arguing in its 2016 Budget Submission that government should;

> *announce a timetable for putting residential aged care funding in the hands of consumers and families (COTA Australia 2016).*

Providers, however, are generally being more cautious about the drawing parallels between community and residential aged care. LASA is very clear that

> *… CDC should not be introduced into the residential care sector (including as a pilot) until a full evaluation of Home Care CDC has been undertaken to determine the impacts and/or benefits for both consumers and providers (Leading Aged Services Australia 2016).*

Of interest is the general absence of any aged care stakeholder analysis or challenge of the assumptions underpinning the marketization of aged care, apart from recent media commentary by Glenn Rees, Chairperson Alzheimer's Disease International in Australian Ageing Agenda;

> *I have the suspicion that there is unwarranted faith in the market to solve all problems. The invisible hand will not I fear work that well in dementia care… (Rees 2016).*

Simplifying funding mechanisms

There remains a strong interest in 'simplifying' the funding mechanisms for aged care, but not necessarily agreement about how this can be achieved, or understanding of the potential implications for either provider or consumer groups. For example, COTA argues for a streamlined funding system that mirrors the Home Care Packages Program; that is, funding arrangements should seamlessly 'flow on' from the four levels of Home Care Package funding and transition to a similar four levels for residential aged care. This is not generally supported by providers due to the embedded fixed costs required to provide 24 hour institutionalised care compared to support being delivered in a resident's home. Of interest is that no stakeholder raised the inherent infrastructure costs of the home care model provided by the 'hidden workforce' of family and friend carers, or the potential for subsidisation of such costs through similar 'carer packages'.

There is general recognition of the role of government to act as a 'safety net' for those who are unable to financially contribute to their care, and to address 'market failure' that arises from insufficient demand (e.g., rural and remote areas, special needs groups etc.). This is important given an estimated one in twelve older Australians experience significant financial or social disadvantage (Uniting Care Australia 2016). Indeed, this appears to be such a 'given' to the point where few consultations or submissions reviewed explicitly alluded to this function.

In its submission to Productivity Commission's Inquiry into Human Services Reforms, UnitingCare Australia challenged the assumptions underpinning this move toward increased focus on competition, noting that 'consumer well-being and protection' should be at the 'forefront' of all considerations. Similarly, in its budget submission ACSA noted two key considerations in any discussion of consumer choice are market failure and risk;

> *Market failure can risk consumers' wellbeing and choice if there are significant asymmetries of information or of market power…It is also essential that returns to providers be sufficient to maintain their operation – if consumer expectations are*

too high, or subsidies are too low, many providers may be unable to sustain operations (ACSA 2016).

Dementia is core business

In general, most stakeholders recognised that dementia is 'core business' for aged care, however this was regarded as being an additional cost to their usual care delivery. Many continued to advocate for an explicit funding category against which the needs associated with dementia could be addressed. Given the emerging evidence that behaviours are now seen as a function of both the internal changes occurring in the brain as well as external factors such as care environment and staff skills, a number of stakeholders were asked whether the inclusion of a specific dementia funding component could inadvertently be seen as a disincentive to implement best practice that could reduce or alleviate behaviours.

Most respondents were adamant that the cost of reframing care practices for people living in a communal environment add to the day to day costs of care delivery and therefore need to be recognised within the funding model. Examples may include the introduction of simple measures that account for individual preferences in terms of seating, dining, noise and lighting that may also prevent the onset or escalation of behavioural issues.

Diversity of client populations

Similarly, meeting the needs of diverse populations is recognised as 'core business' that also requires additional resourcing. There appears to be mixed views regarding as to who should pay for this and how. The Roadmap is relatively unclear about this as it acknowledges the role of government in setting standards for the sector yet leaves open the responsibility for providing the "continued investment in improving provider's capacity" to meet these needs. COTA also has mixed perspectives regarding payment for services, on the one hand advocating a market system which takes into account people's capacity to pay, while on the other recommending that government pricing and subsidies should take into account

issues such as payment for language services, additional costs for remote services, when provision of case management is essential; and dealing with "thin markets"(COTA Australia 2016).

Not surprisingly, given its membership, ACSA was unequivocal in its arguments regarding diversity;

Funding should … ensure that all consumer groups, including CALD, LGBTI, indigenous Australians, older people living with disability, people suffering mental ill health or those who may be socially or geographically isolated, have access to appropriate support, care and services as they require them (ACSA 2016).

End of life care

A surprising omission from the Roadmap is any explicit recognition of the fact that residential aged care settings are also the place where many people will die. Stakeholders, particularly providers and professional groups, clearly recognise that palliative care is also 'core business'

and advocate strongly for the need to be appropriately supported to deliver quality end of life care. Several providers spoke of the timeframe in which palliative care is provided being the most intensive but so short as to preclude undertaking a formal re-assessment to secure additional funding. Some also spoke of the additional costs associated with supporting family members as well as staff at this time.

Some providers commented that it is 'easier' to justify claims for palliative care patients under the 'pain' domains of ACFI rather than claiming the resident as 'palliative care'. A number of providers expressed frustration at not being able to 'claim more' for palliative care for residents already assessed as being 'High' in all three ACFI domains. Several providers and clinicians noted the ACFI Palliative Care Guidelines used to support clinical care (and therefore justify ACFI claims) had not been updated for over a decade, and was not reflective of contemporary definitions and evidence regarding the provision of palliative care.

The relationship between assessment of need and care provision

One of the limitations of the ACFI tool, identified through the stakeholder consultations, is the lack of clarity around its overall purpose and the relationship between funding levels associated with an ACFI assessment and the care provided. Clinicians commented that comprehensive assessments undertaken by RACFs to develop care plans for residents should ideally provide the evidence to underpin the ACFI tool.

While the assessments are of individual resident needs, the overall funding is aggregated so that services can determine how best to meet the operational requirements, including care delivery. Consequently, the responsibility for day to day oversight of ACFI rests primarily within the finance departments of aged care organisations. Many spoke of the 'ACFI pack' being physically located in the finance office, and the tools within (PAS, Cornell and frequency chart results) bearing no relation to care planning or delivery by the nursing / care staff. This in turn has resulted in a situation whereby ACFI documentation is driven by financial imperatives rather than clinical assessment of need, despite the requirement for a registered nurse to sign off the completed ACFI.

It also results in providers 'cherry-picking' prospective residents to accommodate their internal financial modelling; as one provider representative noted;

> *ACFI provides incentives to find the 'right resident' to fit the funding needs of the aged care provider.*

This perspective was echoed by a number of stakeholders, notably consumer representatives and clinicians. DoH representatives stated that there are 'huge black spots' in the ACFI evidence that are apparent when the review officers investigate claims.

Effects on Care Planning

As the ACFI review is only to determine the legitimacy of the ACFI claim at the time of the claim and not to monitor care planning processes or review current care provided, ACFI review officers do not check care planning documents. This has created a situation where there is a huge disconnect between information collected for ACFI and information used for care planning, this relates to problems with the ability to track the evidence for the ACFI claim. As one DoH officer summarised in this statement:

> *ACFI process is inefficient, lacks transparency, is duplicative. There needs to be a direct 'line of sight' between the ACFI and the care planning process – by RACF staff and residents and families.*

Feedback from clinicians (nursing and allied health) indicates that ACFI has resulted in encouraging certain practices which may not always be in the resident's best interest, but are required to be undertaken in order to qualify for the relevant funding band. Physiotherapists, for example, have spoken of the requirement for them to provide activities such as massage and TENS therapy for residents even though the evidence to support the benefits may be limited. A number indicated that gentle mobilisation and exercise is likely to be more beneficial for pain relief, let alone socialisation and general well-being, however have been advised that only treatments specified in the ACFI pack are funded.

Similarly, speech therapists have advised that the ACFI focus on swallowing has resulted in the communication needs of residents not being addressed, despite this being a much greater issue for resident well-being and quality of life. A recent report by Speech Pathology Australia included a quote from a speech pathologist called to assess a resident who had recently had a stroke; the resident also had a 'significant speech disorder … but good understanding' and her clinical notes indicated she was depressed;

> *I was asked to provide input about her swallowing ability, but communication was not seen as a priority and would not be paid for. I wonder how much her depression and quality of life could be improved is she was given the opportunity to …. communicate with those around her…(Speech Pathology Australia 2014)*

A further issue is the perverse incentives in increased payments for residents with behavioural and psychological symptoms of dementia who anecdotally account for between 50 and 80% of aged care residents. As evidence increases about the role of environment, models of care and unmet needs emerges, best practice would suggest a series of design features, staffing skills and attributes and person-centred care practices can assist in alleviating the prevalence and presentations of behaviours. However, the ACFI appears to effectively 'reward' services that are not implementing best practice, increasing the subsidy amounts as the prevalence of behaviours increase.

Other perceived problems with the ACFI identified in the consultation related to the assessment tools. ACFI is very prescriptive in assessment tools to be used; some were seen by aged care providers as poor and not useful for care planning, such as Psychogeriatric Assessment Scale (PAS) or Continence tools. The sector was not using the tools chosen for ACFI prior to its introduction. As one example, it was reported that the sector was using the Mini-Mental State Examination (MMSE) cognitive assessment instrument rather than the PAS tool (understood to have been used because there are copyright issues with the MMSE). A range of clinical assessment tools that are used by the sector would align more closely with care planning.

Thus, ACFI as it is currently implemented is perceived to have a number of inherent perverse incentives regarding care delivery. Not only are prescribed practices not in alignment with contemporary evidence, the inability to deliver care which optimises residents' health and well-being also place providers at risk of meeting their obligations under the *Act* in terms of the Quality of Care Principles and the Accreditation Standards, described above.

Assessment – internal versus independent

All stakeholders were in agreement that a needs based assessment was fundamental to determine the allocation of funding and care planning. There was, however, mixed perspectives regarding who should undertake the assessments and how to ensure objectivity and consistency when assessments are used for funding purposes. COTA and some professional stakeholders were strong advocates of separating assessment from 'vested interests' of aged care providers, albeit for different reasons. For COTA, the argument appears to be mainly philosophical in line with shifting the balance of power from providers to consumers. For some professional groups, the issues were more about ensuring that funding is allocated on the basis of need, rather than the financial modelling of the provider.

Provider groups were divided about the merits of independent assessment. Proponents argued that benefits would include enable care staff to focus on what they do best; delivering care, rather than undertaking funding related 'paperwork'.

Some saw that independent assessment could reduce the need for costly and time consuming validation processes and remove one of the chief sources of tension between providers and the Department.

Opponents of independent assessment spoke of the importance of knowing their residents in order to fully understand their care needs and preferences. This appears to be the rationale for the 'seven day' rule regarding ACFI assessments for new residents which is designed to allow residents to adjust to their environment and for staff to obtain a more in-depth understanding of their needs, across a range of time-settings and personal and social activities.

Regardless of their views on external assessment, all stakeholders recognised the challenges associated with the proposition;

> *External assessment isn't the 'fix' for ACFI budget fluctuations, although independent assessment is appealing to government. The aged care industry more broadly doesn't have a workforce that could undertake external assessment.*

The prevailing assumption was that Aged Care Assessment Teams (ACATs) would be best positioned to take on the role of independent assessor; however, several problems were identified with this approach. Firstly, this would be a significant change to the ACAT business model, requiring them to be more responsive to ensure assessments are contemporary and accurately reflect the needs of the resident at the time of entering the facility. This approach has been used previously with the RCS but was found to be inefficient and stopped by the Department. The use of the ACAT workforce for assessments must also be negotiated with the States and Territories.

There are often significant delays between the time of ACAT assessment and entry to residential care, and to ensure assessments are accurate and timely would require significant enhancement of resources. Some form of accountability/performance management would need to be inbuilt to ensure consistency in delivery nationally. Furthermore, there would need to be better alignment between the My Aged Care (MAC) system and ACATs to ensure timely access to assessment; current experience of ACATs suggests there is considerable variability in the information being received from MAC despite the standardised processes involved.

As the independent assessment would be limited to a 'snapshot' in time it would be dependent on input from caregivers and the resident if the ACFI is to be retained.

Re-ablement

Re-ablement is perceived to be both a general philosophy and a specific type of service. For residents of aged care services, re-ablement primarily relates to improving or maintaining the functional abilities of residents to prevent premature decline and support well-being. There are mixed views across the sector about the capacity of the ACFI to support re-ablement, with a predominant view of stakeholders being that improving clients' functional ability places them at risk of receiving a downgrading of funding if validated. The DoH, however, is clear that there is inbuilt incentive for re-ablement under ACFI and that all services are required to do to maintain the level of funding is to document in their client records the actions undertaken to maintain or improve functional ability.

Access to re-ablement services was perceived to be limited, particularly for residents who require short term functional restoration following an episode of illness or a fall. A recent report from Speech Pathology Australia noted that with the current medical model focus on the restoration of function, many older people are at risk of being judged as having 'no rehab goals' resulting in transfer out of an acute service to a nursing home with little or no rehabilitation. Several stakeholders spoke of the limited opportunities available to aged care residents to access appropriate range and intensity of allied health services compared to people living in the community.

Summary of findings from stakeholder consultations

A more sustainable and certain funding system for residential aged care was the number one priority for all stakeholders. From the provider perspective, certainty in funding is needed to reduce fiscal risk and to enable long-term planning. From government's perspective, this would remove unanticipated fluctuations in the residential care budget expenditure that result in unpopular budget containment measures.

The majority of stakeholders identified the need for the funding to reflect the true costs of care delivered, with several arguing for a 'cost of care study' to be conducted that would provide transparency and equity in terms of funding for service provision. Such a study would need to recognise both the care needs of clients, as well as the infrastructure costs associated with providing care, particularly for smaller and/or rural services.

At the stakeholder interviews, there was general acknowledgement that dementia and end of life care was 'core business'; however there were mixed views about the adequacy of the ACFI in reflecting the associated care costs. Of particular interest, is the limited acknowledgement of these 'core business' elements in the Aged Care Roadmap that appears to underpin government policy for the sector.

There was a clear agreement about the 'disconnect' between the ACFI and care delivered. For aged care providers, ACFI was primarily a funding tool with clinical/care assessment, care planning and delivery completely separate activities. Several stakeholders identified 'design flaws' in ACFI that generated perverse incentives and were not reflective of current best practice. There was general consensus that if funding was reflective of care provided, then this would require an assessment process that utilised contemporary evidence-based tools.

Where there was disagreement, however, was in relation to who should undertake assessment. Some providers believe that assessments should be carried out by RACF staff as they were in the best position to observe residents during night and day over a period of weeks and to determine the true needs of clients. It was thought that it would reduce duplication of effort if the information required for funding purposes would relate directly to care planning.

Others, however, argued for independent assessment external to the facility, in recognition that not all RACFs had access to the expertise in assessment. In addition, some argued, this would 'free up' the registered nursing staff to focus on care delivery. The cost of conducting assessments was not directly addressed by either group.

There is no common view within the sector on many issues other than the need for financial stability. There is a range of opinions concerning the merits of ACFI as a tool, independent vs internal assessment processes. The issue of what is core business and how it is funded is a key issue that needs to be resolved in a new funding system.

Key features of a new system

The features of a new system that were considered to be most important were to:

- be efficient and incentivises efficient practices.
    - The assessment tools that determined eligibility for residential aged care funding may also be used for care planning and funding determination. The system does not involve unnecessary duplication of assessments by multiple agencies, and
    - Providers are given incentives to innovate and deliver high quality services (e.g. re-ablement) at lower or similar costs. (i.e. rewards value).
- be transparent and easy to understand.
    - The assessment tool captures the key drivers of need for services and is clinically meaningful and used by care staff for care planning purposes;
    - The assessment tool is not complicated by the inclusion of additional redundant measures, and
    - The assessment tool is accessible to consumers.
- have capacity for integration across service delivery settings.
    - A system that is clearly based on the factors that discriminate between individuals' need for services as distinct from the services provided would be more applicable across service delivery contexts, and
    - An assessment system for funding will have greater capacity for integration if the base funding of service delivery structures are determined separately from the need for services assessed at the client level.
- be sustainable as a result of:
    - The system being 'self-regulating' in the face of attempts at 'gaming' or seeking undue financial advantage;
    - Supporting services in maintaining currency in practice, and
    - Supporting services to be delivered in the most appropriate context or setting (rather than the one that attracts the most funding).

Appendix Three

Analysis of the ACFI data

The Department of Health provided de-identified ACFI assessment data for the financial years 2008/09 through to 2015/16. Each record in the data represents an ACFI appraisal. It includes resident information such as dates of admission, discharge and assessment, detailed appraisal results as well as high-level information about the provider, e.g. organisation type and remoteness. However, no measures of resource utilisation were included. Therefore, the analysis was limited to identification of trends and possible priority areas for changes to the ACFI assessments. This section discusses the data analysis carried as part of this project.

Methodology

After the data were cleaned, exploratory data analysis was undertaken to identify volume and trends in the ACFI assessments over the last eight years. High-level summary statistics and graphs were produced for all three domains. More detailed item-level analysis was undertaken for the Complex Health Care (CHC) domain which turned out to be the main driver for the continued increase of residents being assessed as highly dependent. Furthermore, potential splits of the Behaviour (BEH) domain were investigated using Spearman correlations calculated between different domains and items. Spearman correlation, an alternative to Pearson correlation, is a nonparametric measure of association based on the ranks of the data values.

Findings

Trends

In relation to total volume, a slight increase can be observed over time. However, larger year-on-year differences between 2008/09 and 2009/10 are likely due to grandfathering arrangements for residents under RCS who would not have been ACFI assessed.

Table 6 Aged Care Residents and Separations, 2008/09 to 2015/16

Financial Year	Number of Residents	Number of Separations
2008/09	198,198	49,130
2009/10	212,724	61,219
2010/11	217,611	63,037
2011/12	220,336	63,503
2012/13	223,718	66,413
2013/14	228,431	65,927
2014/15	227,296	67,073
2015/16	228,252	67,610

Table shows the number of residents. This number increased from 198,198 in 2008/09 (212,724 in 2009/10) to 228,252 in 2015/16. Each person spending at least one day in a residential aged care (RAC) facility in a given financial year is counted as a resident if they were assessed in that year. Separations show the number of residents whose stay in RAC ended during that year. These separations increased from 49,130 (61,219 in 2009/10) to 67,610 in the same time period.

As noted previously, each resident is assessed in the ACFI against three domains - Activities of Daily Living (ADL), Behaviour (BEH) and Complex Health Care (CHC). Each domain is rated nil (N), low (L), medium (M) or high (H) depending on the results of the accompanying assessment questions. In total, there are 64 possible combinations of the three domains ADL, BEH and CHC, ranging from nil in all three domains (NNN) to high in all three domains (HHH). Most of these combinations are very rare. The categories have been combined in Figure to more clearly illustrate the trends and to improve readability.

The ACFI assessments have been ordered by the level of their dependency irrespective of the actual domains. *3xH* is the highest category with all domains being assessed as high. *2xH* is the second highest category with two of the domains being high and the third being below that (i.e. M, L or N). The next highest category is *1xH* where only one of the domains is high and the other two are below that (i.e. M, L or N). The other categories are defined accordingly.

Figure 3 ACFI Assessments (combined), 2008/09 to 2015/16

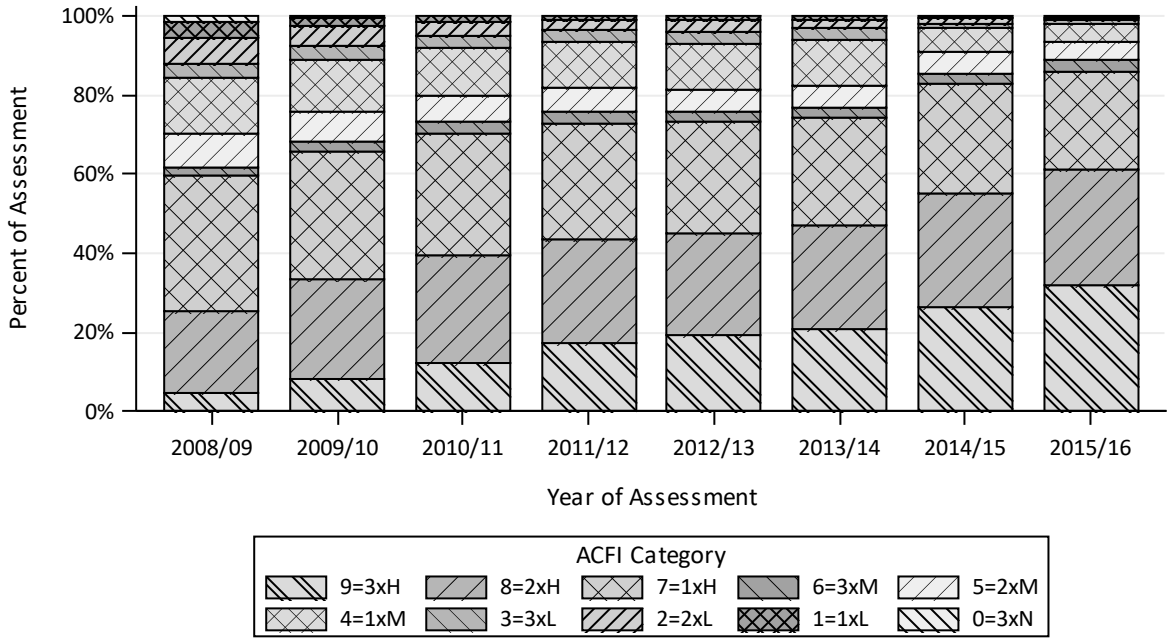
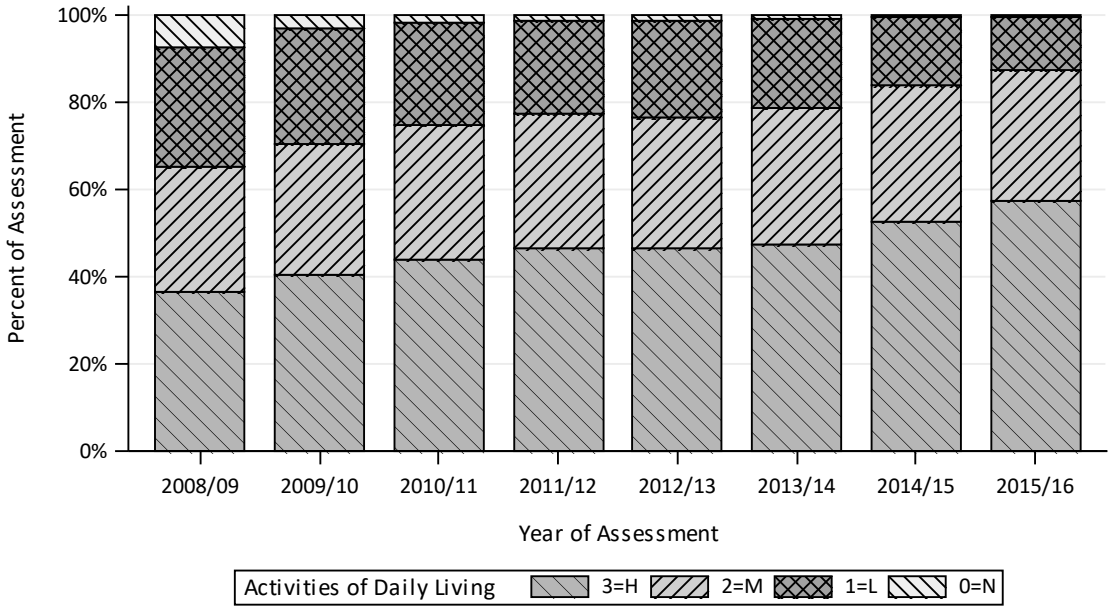


Figure 3 shows a clear trend. The largest increase can be observed in the highest category *3xH* which increased from 4.5% in 2008/09 to 31.8% in 2015/16. *2xH* increased in the same time period from 19.3% to almost 29.3%. *3xM* increased slightly from 2.3% to 2.7%. All other categories decreased and their combination makes up only 36.2% in 2015/16 while it was 72.2% in 2008/09.

To investigate further where the growth in those high dependency categories is originating from we analysed the changes in each of the three domains. Figure shows the changes in ADL.

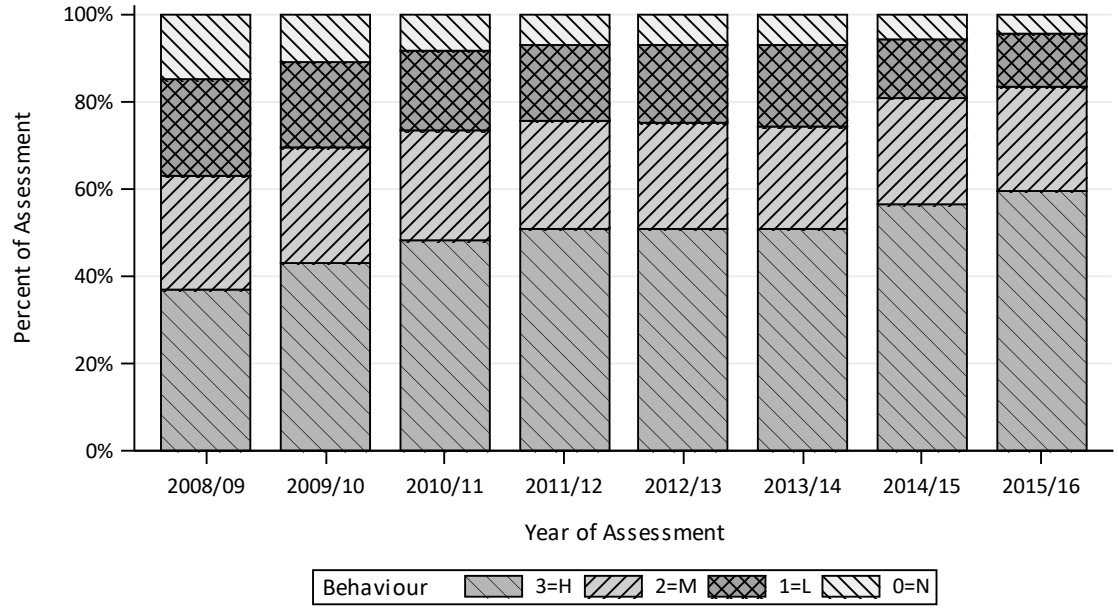
While the assessments resulting in nil or low have decreased and medium results have been almost unchanged around the 30% mark, the rate of high scores has increased from 34.4% to 57.2%. Furthermore, it can be observed that the trend of the early years stops around 2011 and between 2011/12 and 2013/14 the rates remained unchanged. The trend continues in the later years again.

Figure 4 Activities of Daily Living Domain, 2008/09 to 2015/16



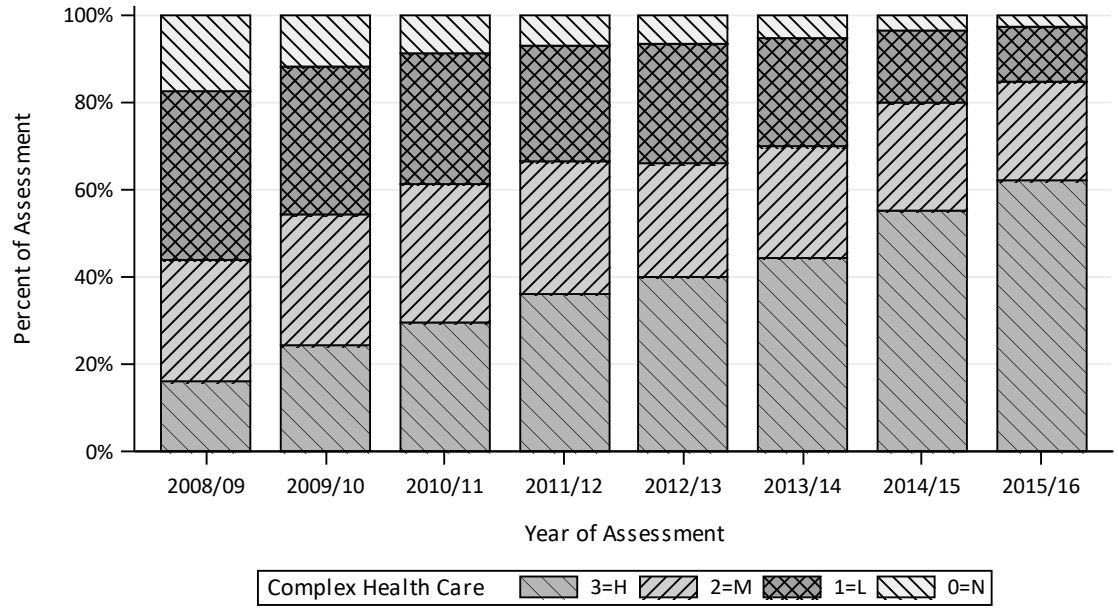
Similar to ADL, the behaviour (BEH) domain exhibits growth in high scores from 36.4% to 59.7% between 2008/09 and 2015/16. Figure shows that the proportion of medium scores decreased slightly while low and nil decreased considerably by more than 10 percentage points each. Also for the behaviour domain, a break in this trend can be observed between 2011/12 and 2013/14.

Figure 5 Behaviour Domain, 2008/09 to 2015/16



The CHC domain shows a much steeper trend. This trend is illustrated in Figure . While all three scores of nil, low and medium decrease only, the high scores increase year after year from 15.2% in 2008/09 to 62.1% in 2015/16. In contrast to the other domains, no stabilisation between 2011/12 and 2013/14 can be found.

Figure 6 Complex Health Care Domain, 2008/09 to 2015/16



Main drivers in the Complex Health Care domain

Further analysis of the CHC domain revealed that the increase is almost entirely driven by Questions 12 (Complex Health). Table shows the percentages of *yes* responses to the 18 items of question 12.The items can be categorised into two main groups, those that are responsible

for the increase in the CHC domain and those with rare *yes* responses. The first group consists of items in relation to pain management (of differing complexity), skin integrity management, and management of oedema. All other items, 14 out of 18, are very rare. Six of them occur in less than 1%, five between 1% and 5% and three between 5% and 10%.

Table 7 Item level responses, Question 12 (Complex Health), 2015/16

Question 12 (Complex Health Care) items	Percent of assessments rated yes
Q12.3 Pain management	49.3
Q12.12 Management of oedema (including arthritis)	40.2
Q12.5 Complex skin integrity management	39.6
Q12.4b Complex pain management II	33.3
Q12.4a Complex pain management I	30.3
Q12.2 Blood glucose measurement	8.2
Q12.10 Management of chronic wounds	7.4
Q12.1 Blood pressure measurement	5.5
Q12.8 Catheter care program	4.1
Q12.13 Oxygen therapy not self-managed	3.5
Q12.14 Palliative care program	3.3
Q12.9 Management of chronic infectious conditions	1.6
Q12.15 Management of ongoing stoma care	1.3
Q12.18 Technical equipment for continuous monitoring	0.6
Q12.7 Administration of suppositories or enemas	0.5
Q12.17 Management of ongoing tube feeding	0.5
Q12.6 Management of special feeding	0.3
Q12.11 Management of ongoing administration …	0.3
Q12.16 Suctioning airways, tracheostomy care	0.1

Splitting the Behaviour domain

It has been noted before that the Behaviour domain consists of five questions - cognitive skills (question 06), wandering (question 07), verbal behaviour (question 08), physical behaviour (question 09), and depression (question 10). While wandering, verbal and physical behaviour are clearly aspects of 'behaviour', neither cognitive skills nor depression would typically be defined as aspects of 'behaviour'. Cognition skills are better conceptualised with ADLs while depression should be included in CHC. To evaluate the possible splitting of the behaviour domain the cut-off scores for Low, Medium and High were recalibrated to reflect the removal of cognitive skills and depression from the weighted sum. The collection of the remaining three question (wandering, verbal and physical behaviour) will be referred to as core behaviour. (CBEH).

Table shows the Spearman correlations between all 12 questions and the three domains. All correlations are significant on a 0.001 level with the exception of core behaviour vs. cognitive skills (question 06) and core behaviour vs. depression (question 10). It can be seen that correlations between cognitive skills (question 06) and questions of the ADL domain are generally higher than the correlation within the behaviour domain, with the exception of physical behaviour (question 09). When comparing correlations of cognitive skills and the three domains the correlation is highest with ADL and some correlation with CHC exist as well. There is no correlation to the core behaviour.

A similar pattern can be observed for depression (question 10). Correlations with questions of the complex health care domain tend to be higher than correlations within BEH. The correlation with the CHC domain is slightly higher than the correlation to the ADL domain. However, the correlations with depression are generally lower than with cognitive skills. Again, there is no correlation between depression and core behaviour.

Table 8 Spearman Correlations between Questions and Domains, 2015/16

	Q01	Q02	Q03	Q04	Q05	*Q06*	*Q07*	*Q08*	*Q09*	*Q10*	Q11	Q12	ADL	BEH	CHC
Q01	1.00														
Q02	0.46	1.00													
Q03	0.45	0.50	1.00												
Q04	0.52	0.71	0.65	1.00											
Q05	0.40	0.45	0.47	0.53	1.00										
Q06	***0.43***	***0.20***	***0.30***	***0.31***	***0.29***	***1.00***									
Q07	***-0.11***	***-0.47***	***-0.10***	***-0.23***	***-0.10***	***0.12***	***1.00***								
Q08	***0.11***	***0.09***	***0.13***	***0.14***	***0.16***	***0.14***	***0.06***	***1.00***							
Q09	***0.25***	***0.15***	***0.20***	***0.22***	***0.23***	***0.27***	***0.11***	***0.44***	***1.00***						
Q10	***0.04***	***0.11***	***0.09***	***0.11***	***0.08***	***-0.02***	***-0.07***	***0.08***	***-0.01***	***1.00***					
Q11	0.18	0.18	0.18	0.19	0.16	***0.06***	***-0.06***	***0.13***	***0.17***	***0.11***	1.00				
Q12	0.23	0.37	0.22	0.30	0.21	***0.06***	***-0.25***	***0.05***	***0.03***	***0.11***	-0.06	1.00			
ADL	0.65	0.83	0.60	0.78	0.67	***0.34***	***-0.32***	***0.15***	***0.24***	***0.11***	0.21	0.35	1.00		
CBEH	0.17	0.03	0.16	0.14	0.20	***0.25***	***0.30***	***0.74***	***0.80***	***0.00***	0.14	-0.01	0.15	1.00	
CHC	0.28	0.42	0.28	0.36	0.27	***0.10***	***-0.25***	***0.12***	***0.12***	***0.14***	0.40	0.78	0.42	0.08	1.00

Figure shows the evolution of cognitive skills between 2008/09 and 2015/16. During this period, an increase from 23.3% to 34.5% of C-ratings can be observed while B-ratings and D-ratings remained almost constant at around 27% and around 30% respectively.

Figure 7 Cognitive Skills, 2008/09 to 2015/16

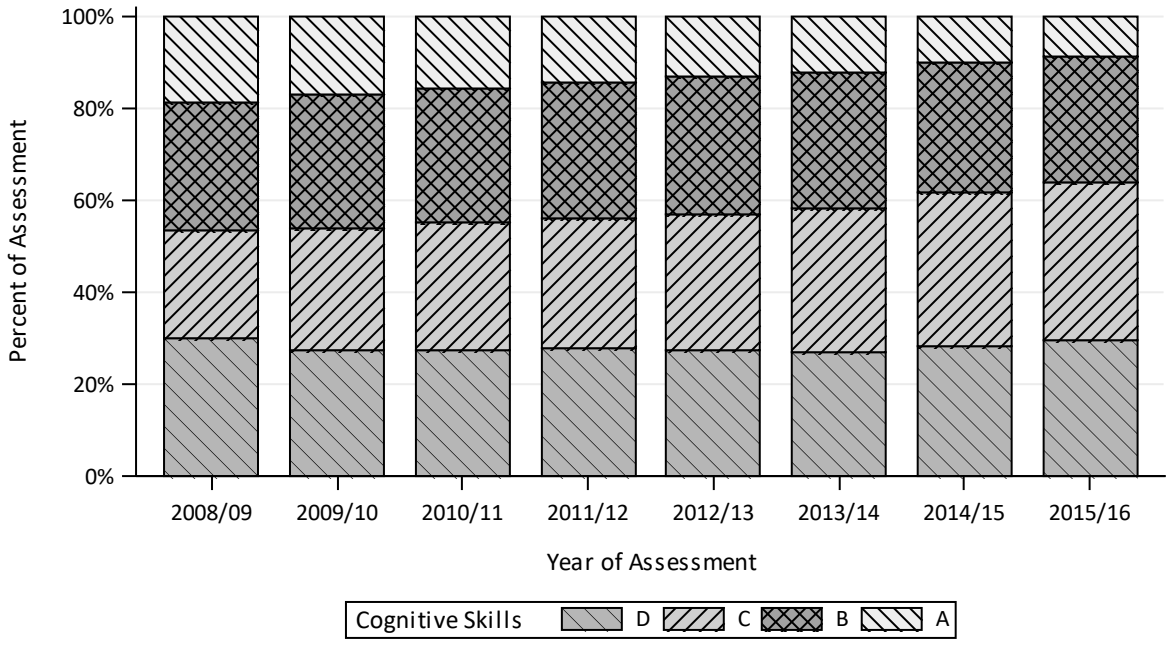


Figure shows the trend in depression ratings. During 2008/09 and 2015/16, the proportion of A-ratings decreased from 55.8% to 36.3%. At the same time all other ratings increased by around 6-7 percentage points.

Figure 8 Depression, 2008/09 to 2015/16

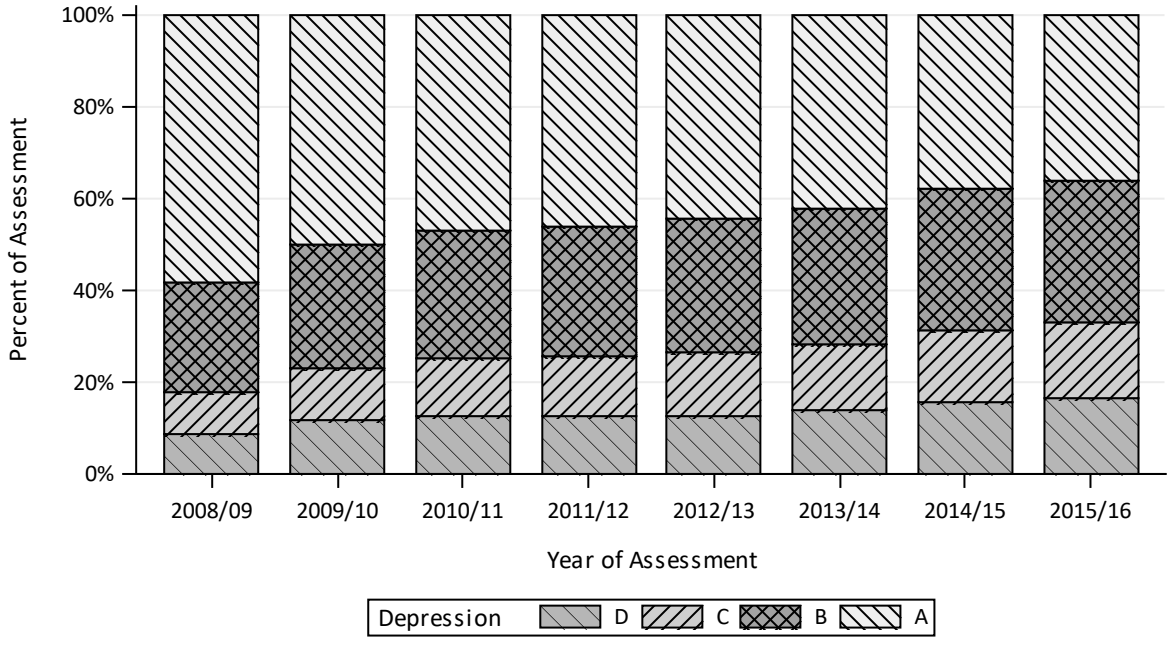
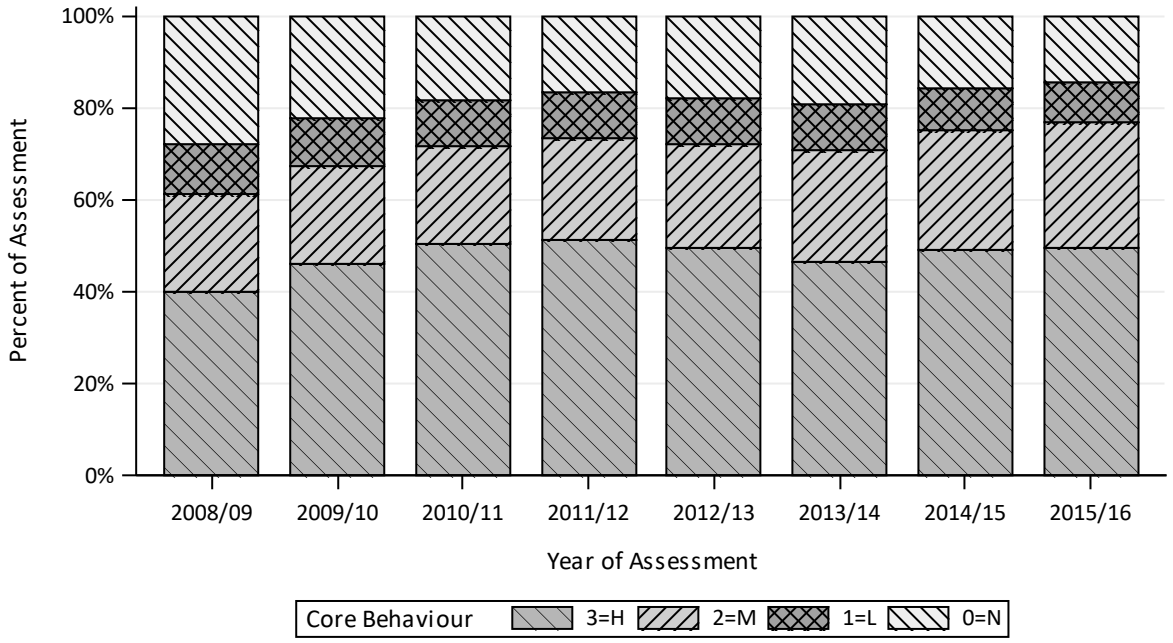


Figure shows the trend in core behaviour, i.e. the remainder of the behaviour domain with cognitive skills and depression ratings removed. While low and high scores remain relatively stable at around 8% to 11% and 50% respectively, medium scores increased from 21.1% to 27.6% in 2015/16 at the expense of nil scores.

Figure 9 Core Behaviour, 2008/09 to 2015/16



The results of the core behaviour stand in contrast to the trend in the 'full' behaviour domain (depicted in Figure) where high scores increased while all other scores decreased.

Summary of the ACFI data analysis

In summary, while it is apparent from the data that ACFI assessments return ever-increasing rates of high dependency, the data are unable to provide the reasons for this development. Additional resident specific variables that were not available in the data set such as age and gender or other evidence or measures of health status (if they were available) would be required to further explore this issue. Without additional information, it is unclear to what extent the increasing number of ACFI assessments rated as 'high' is due to a frailer population or due to funding optimisations by aged care providers. There is no doubt that in reality there are elements of both factors.

The data analysis has also revealed that there are only a few items (pain management, skin integrity management, and management of oedema) of question 12 in the Complex Health Care domain that are responsible for the increase in high dependency claims. All other conditions of question 12 are very rare.

The analysis about splitting the behaviour domain revealed that there is no correlation between the core behaviour and cognitive skills and depression respectively. For these two questions there seems to be higher correlation with the ADL and CHC domain respectively. While the issue of correlation and redundancy of items has not been fully explored in this review, analysis carried out internally by the DoH shows that there is substantial overlap between certain items in all three domains (Murray). Some of these issues, including a splitting of the behaviour domain, can be addressed in the early stages of the aged care funding reform.

Appendix Four

Literature review

Literature review findings are presented in the following sections with specific reference to the five issues which are the focus of the overall study. As the issues of classification, funding model, pricing, implementation and audit are overlapping within the available literature, the findings were presented in this section in three clusters of classification, funding and pricing, and implementation and audit to allow for increased fluency and readability and to avoid duplication of the presentation with regards to the reviewed articles.

Methodology

A review of the available literature from two main sources was undertaken. These two sources were academic and non-academic literature obtained through a comprehensive search strategy and in documents provided by DoH. The purpose of the literature review was to provide an overview of international approaches for funding residential aged care and similar services with a specific focus on the five issues previously outlined.

Academic literature search

A range of search terms/key words were used in the search of academic literature that included Medline/Pubmed, Cochrane, Scopus, Cinahl, Ebsco, Econlit, Science Direct databases and Google Scholar. For each search an umbrella term (Aged care, or residential aged care, or home care, or nursing home etc.) was used with one or more of the terms related to issues or domains (e.g. funding, pricing, costing, assessment, classification, tools, implementation, execution, reform, policy, audit, validation, governance etc.). Various combinations of the search terms were used. Articles that were found based on the presence of only one of these terms were not included.

One example of a search string appears below:

> "residential aged care" OR "long term care" OR "nursing home" OR "assisted living facilities"
>
> AND
>
> "funding model" OR financ* OR pricing OR costing.

A complete set of the search terms is provided in the Table .

Systematic methods for searching the literature are necessary but not sufficient to find all the relevant literature, particularly for a topic as broad as aged care. Database searching was supplemented with snowball searching by pursuing references within the relevant literature and tracking citations forward in time. Additional articles were found searching reference lists, and searching on specific authors.

The academic literature search covered the period from 2006 to 2016 and was restricted to English language publications. On occasion, this was supplemented by earlier articles where the article was identified through other mechanisms and deemed relevant. Publications from developing countries were excluded because of the very different nature of their health

systems. In addition, articles that may be classified as reform proposals or responses to such proposals were also disregarded.

Table 9 Key search terms related to each of the five issues

Search universe:	**Issues/domains**		
Aged care	***Funding / pricing***	***Classification***	***Implementation / audit***
Long term care	Funding	Assessment	Implementation
Residential aged care	Financing	Care dependency	Application
Residential facilities	Costs	Classification	Execution
Homes for the aged	Expenditure	Complex care needs	Use
Nursing home	Finance	Comprehensive assessment	Sustainability
Assisted living facilities	Financial sustainability	Tools	
Old age homes	Financing and delivery	Checklist	Audit
Housing for the elderly	Government sustainability	Eligibility	Validation
Aging	Pricing	Entry requirements	Monitoring
Health services for the aged	Costing	Geriatric assessment	Governance
	Policy		Gaming
Home care	Reform		
Older people			
Residential care			
Social care			
Senior living			
Long term institutional care			

A total of 3,025 articles were identified from all searches after removal of duplicates. A title and abstract review identified in 59 articles. A full text review was then undertaken with 34 relevant articles remaining for examination. The relevant details from the reviewed literature were captured in a structured data collection tool to ensure the inclusion of findings related to priority issues. Figure 1 shows a PRISMA chart (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) for the academic literature selection process.

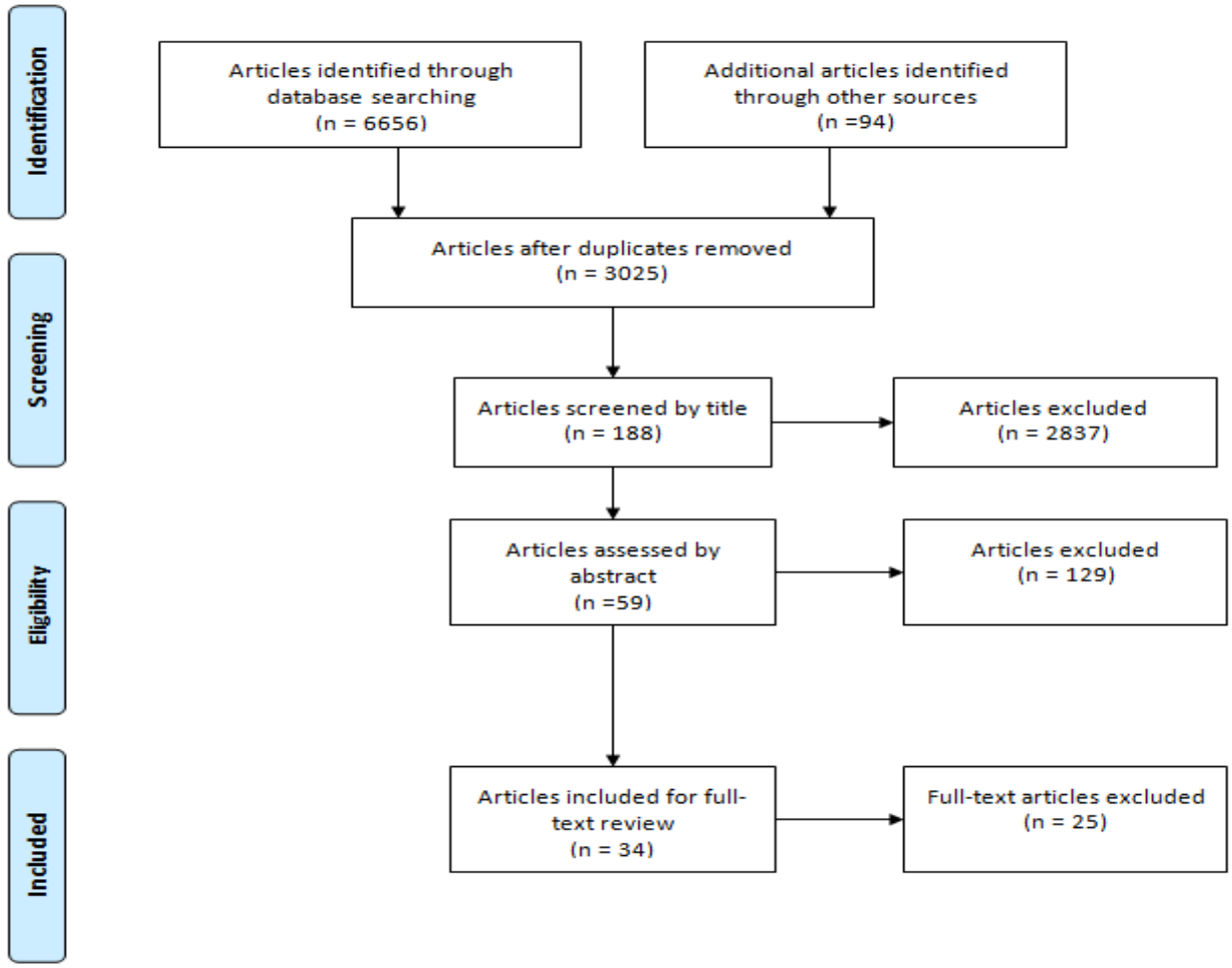
Grey literature (practice literature) search

Two streams of grey literature were reviewed. This included the documents provided by DoH; and the documents found from searches of national and international websites of government departments and non-governmental organisations and peak bodies. The material provided by DoH was carefully reviewed and served primarily as starting point for further searches.

Targeted Google searches of the health departments and other relevant websites in Belgium, Canada, France, Germany, New Zealand, the United States and the United Kingdom were undertaken.

Other supplementary searches were undertaken to ensure that we accessed all of the most relevant literature. One example of a supplementary search technique is “snowballing” from one website based on references used in documents to another website.

Figure 10 Aged care funding literature review - PRISMA chart



Modified from (Moher, Liberati et al. 2009)

Article review process

A data collection tool was created which included prompts for the important issues that were the focus of the literature review. The review findings were organised according to the five key issues of classification, funding, pricing, implementation and audit mentioned earlier.

Other relevant information was also taken into account, including the funding principles identified by Aged and Community Services Australia (ACSA). These principles are: a focus on outcomes, equity, consumer choice and control, flexibility and scalability, efficiency, certainty and sustainability, transparency and simplicity, integration, value for money and affordability (ACSA 2016).

Table 10 List of the articles and documents reviewed

Author and year	Title	Country of study	Type of article	Description of article	Context and setting
Alberta Health Services 2015	Activity based funding of long-term care: user summary	Canada/Alberta		describes the usage of an earlier version of RUG, RUG-III 44 groups in Alberta	Long-term care facilities
Arling, Kane et al. 2007	Explaining Direct Care Resource Use of Nursing Home Residents: Findings from Time Studies in Four States.	USA	Research article	The focus of this study is on explaining the variation in direct care resource use of nursing home residents based on the Resource Utilization Groups III (RUG-III) classification system and other resident- and unit-level explanatory variables.	Nursing home
Australian Aged Care Quality Agency 2015	Australian Aged Care Quality Agency's Annual Report 2014-15	Australia	Annual report	Activities of the Australian Aged Care Quality Agency	Aged care
Cadieux 2012	Comprehensiveness of the RUG-III Grouping Methodology in Addressing the Needs of People with Dementia in Long-term Care	Canada	Review of articles	The purpose of this study was to determine the comprehensiveness of the RUG-III 34 Group) in addressing the needs of residents with dementia living in LTC.	Long-term care
Challis 2004	The value of specialist clinical assessment of older people prior to entry to care homes.	UK	Research article RCT)	This RCT was conducted to ascertain the value of a specialist clinician assessment of older people prior to care home entry	Residential aged care facilities
CIHI 2011	How RUG-III (44 Group) Case Mix Index Values Are Calculated, 2011—CCRS Technical Document	Canada	Technical document	This document includes a description of the derivation methodology and the detailed calculations from the production of 2011–2012 RUG-III (44-group) CMI values.	
CMS 2013	Analyses of data collected in CMS national nursing home time study used to establish RUG-IV model	USA	Government website	This was a national staff time measurement study that provided data and analysis to update the Medicare Skilled Nursing Facility Prospective Payment System (SNF PPS). Analysis using staff time and resident characteristic information	Nursing Home
CMS 2013	Skilled Nursing Facility PPS - Case	USA	Website	The website provides a description of the Medicare	Payment systems,

Author and year	Title	Country of study	Type of article	Description of article	Context and setting
	Mix Prospective Payment for SNFs Balanced Budget Act of 1997			payment system for LTC. It also contains information on a national staff time measurement study that provided data and analysis to update the Medicare Skilled Nursing Facility Prospective Payment System (SNF PPS).	Skilled nursing facilities
Department of Health 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	OECD countries	Internal document	This document summarises the key information that was provided to the Department of Health following a cable request to selected OECD countries.	Long-term care
Doty 2015	Long-Term Care Financing: Lessons From France	France	Research article	describes the French LTC system	Long-term care
Dubuc, Hébert et al. 2006	Disability-based classification system for older people in integrated long-term care services: The Iso-SMAF profiles	Canada	Research article	This study was conducted to develop and evaluate a disability-based classification system for management of long-term care (LTC) needs in an integrated service delivery system.	Long-term care sector
Federal Government of Belgium	Maximum amounts of allowances for disabled persons	Belgium	Website	The website shows the maximum allowances.	Long-term care benefits
Federal Government of Belgium	Allowance for assistance to the elderly	Belgium	Website	The website provides general information on available allowances.	Long-term care benefits
Federal Ministry for Labour Social Affairs and Consumer Protection of Austria	Care benefits	Austria	Website	The website provides general information on available care benefits.	Long-term care benefits
Government of France 2016	Social Welfare and Family Law	France	Law		
Government of France	Allowances and aids for the elderly	France	Website	The website provides general information on available allowances.	Long-term care benefits
Guthrie and Poss 2013	Development of a case-mix funding system for adults with combined vision and hearing	Canada	Research article	This study examines the possibility of using casemix approach of funding for adults with vision and hearing loss (Dual Sensory Loss- DSL) who present	Nursing home

Author and year	Title	Country of study	Type of article	Description of article	Context and setting
	loss			with wide variety of needs.	
Heckman, Gray et al. 2013	Addressing health care needs for frail seniors in Canada: the role of interRAI instruments.	Canada	Research article	The article describes the advantages of a comprehensive assessment approach involving interRAI instruments in addressing the unique needs of frail elderly population in Canada.	Multiple care settings
Hirdes, Mitchell et al. 2011	Beyond the 'Iron Lungs of Gerontology': Using Evidence to Shape the Future of Nursing Homes in Canada	Canada	Review article	This article provides an overview of interRAI instruments including RAI 2.0 and RAI-HC used for nursing homes and publicly funded home care programs respectively.	Multiple care settings.
Hirdes, Poss et al. 2008	The Method for Assigning Priority Levels (MAPLe): A new decision-support system for allocating home care resources	Canada, USA, Iceland, Sweden, Japan and Italy	Research article	The study developed and validated a methodology for prioritizing access to community and facility-based services for home care clients.	Home care
Howell-White, Gaboda et al. 2006	Creating needs-based tiered models for assisted living reimbursement	USA	Research article	This is an evaluation of different methodologies that affect the structure and outcomes of needs-based reimbursement models for Medicaid-funded assisted living residents in the US.	Assisted living residents
Martin, Fries et al. 2011	Using the RUG–III classification system for understanding the resource intensity of persons with intellectual disability residing in nursing homes.	USA	Research article	This study employs retrospective analysis of data collected as part of the STRIVE project to understand the resource intensity of person with intellectual disability residing in nursing homes.	Nursing home
MDS 2016	Guidelines of the National Association of Statutory Health Insurance Funds for needs assessment	Germany	Official Guidelines	Guidelines for assessment for Care eligibility	Long-term care
MDS 2016	Long-term care assessment	Germany	Website	The website provides general information on the new LTC assessment.	Long-term care benefits
MEDPAC	Skilled Nursing Facility Services	USA	Policy brief	describes the Medicare	Payment

Author and year	Title	Country of study	Type of article	Description of article	Context and setting
2016	Payment System			payment system for LTC	systems
Ministry of Health Labour and Welfare of Japan 2015	Health and Welfare Services for the Elderly - Outline of Long-Term Care Insurance System	Japan	Government report	provides detailed information on several aspects of the LTCI system	Long-term care
Minnesota Department of Health 2015	Case Mix Classification Manual for Nursing Facilities	USA	Government document	Case Mix Classification Manual	Nursing home
National Health Insurance Fund for Employees 2008	The AGGIR model – User guide	France	Official Guidelines	Guidelines for assessment for Care eligibility	Classification
NHS UK 2015	"How Will My Eligibility For NHS Continuing Healthcare Be Assessed? - Health Questions - NHS Choices".	UK	Website	Eligibility For NHS Continuing Healthcare	Health and social care assessment
Poss, Hirdes et al. 2008	Validation of Resource Utilization Groups version III for Home Care (RUG-III/HC): evidence from a Canadian home care jurisdiction	Canada	Research article	This work examines the performance of the RUG-III/HC classification using a large sample from Ontario, Canada.	Home care
Shelkey and Wallace 2012	Katz Index of Independence in Activities of Daily Living (ADL)	NA	Commentary	Commentary on the Katz index	Aged care
Sutherland, Repin et al. 2013	The Alberta Health Services Patient/Care–Based Funding Model for Long Term Care	Canada/Alberta	Research Report	Report describes current status quo and makes a number of recommendations	Long-term care
The Iowa Foundation for Medical Care 2011	Staff Time and Resource Intensity Verification Project	USA	Research report	The Staff Time and Resource Intensity Verification (STRIVE) study was initiated by the CMS primarily to collect and analyse the time that nursing home staff spend caring for residents, based upon current care practices. This report focuses on the analysis	Nursing home

Author and year	Title	Country of study	Type of article	Description of article	Context and setting
				phase of the study.	
Tsutsui T 2005	Care-needs certification in the long-term care insurance system of Japan	Japan	Research article	The article describes Japan's long-term care insurance system for 65+ before the reform in 2005	Long-term care
Willemé 2010	The long-term care system for the elderly in Belgium	Belgium	Research Report	This report describes the organisation of the Belgian long-term care system.	Long-term care
Zhang, Unruh et al. 2006	Minimum Nurse Staffing Ratios For Nursing Homes	USA	Research article	This article focusses on nursing staff ratio and quality of care with implications of staff ratio on reimbursement for the services provided by the providers.	nursing care
Zhang, Yu et al. 2012	The benefits of introducing electronic health records in residential aged care facilities: A multiple case study	Australia	Research article	The study intended to identify the benefits of electronic health records (EHR) in residential aged care services and to examine how the benefits have been achieved.	Aged care information technology

Summary of the evidence on classification

Classification systems provide a consistent method of grouping all types of clients, the services they receive and associated costs to provide efficient care. In many cases, particularly subacute and long-term care (LTC), the classification of client services includes the application of client assessment tools.

Several classification and assessment systems were identified in international and Australian literature that is suitable for use in settings such as LTC, aged care services and nursing homes. They include the resource utilisation groups- RUG which were discussed in a number of articles the interRAI, the Decision Support Tool (DST)), Functional Autonomy Measurement System-SMAF (Dubuc, Hébert et al. 2006), the Katz scale (Willemé 2010, Shelkey and Wallace 2012), the Method for Assigning Priority Levels – MAPLe (Hirdes, Poss et al. 2008) the French AGGIR, Autonomie Gérontologique et Groupes Iso-Ressources (Doty 2015). Various local systems were also discussed in documents sourced from Belgium, Germany and Japan.

Resource Utilisation Groups

Resource Utilisation Groups Version III (RUG–III) with 53 classes and RUG-IV with 66 classes was found to be the most commonly used classification system in the LTC sector which uses the 'Minimum Data Set (MDS) Resident Assessment Instrument (RAI)' for assessment. The classification information also serves as the basis for decision making, outcome identification, care planning and evaluation of an individualised care plan (CMS 2013) which are considered to be useful in making the services outcome-focused and in maintaining seamless continuity

between different areas of care provision. RUGs were mentioned in several US and Canadian research articles.

The RUG grouping methodology recognises the importance of the ADLs, overall health, cognitive needs, and pain management (Poss, Hirdes et al. 2008, CIHI 2011, Martin, Fries et al. 2011). However, a review article identified that the needs for people with dementia, such as management of behavioural problem, did not appear to be addressed appropriately by the RUG-III grouping methodology (Cadieux 2012). Arling et al. found in another study that resident care time and resource use varied between and within nursing units and the casemix index (CMI) showed much less variation across RUG-III groups and they suggested that CMIs should be revised to better reflect the relative costs of caring for these residents (Arling, Kane et al. 2007). This indicates that consideration of the RUG system for Australia will require a local level derivation of the casemix index.

In a study of staff time and resource intensity verification (STRIVE) it was found that RUG-IV system was substantially better than RUG-III in explaining wage weighted staff time measure of resources use, better at capturing the frailty measures including shrinking, weakness, exhaustion, slowness, and low activity (The Iowa Foundation for Medical Care 2011). This ability to capture frailty aspects may prove to be effective in Australian context.

The interRAI suite of instruments

In most of the Canadian provinces, the interRAI suite of instruments is used for nursing homes and publicly funded home care programs. These tools are claimed to be reliable and validated and used for comprehensive geriatric assessment with person level and organisation level applicability (Hirdes, Mitchell et al. 2011, Heckman, Gray et al. 2013). Similar claims were made when interRAI Community Health Assessment tool was tested on people with dual sensory loss of vision and hearing to develop a casemix funding model (Guthrie and Poss 2013). However, in a technical report concerns were expressed that RAI system requires significant expenditure of resources, is too medically oriented, and is highly vulnerable to staff turnover (Milbank Memorial Fund 2003). Consideration for RAI as a candidate for an aged care classification and funding system in Australia will require a context-specific careful examination of its applicability across the LTC sector, especially in relation to certainty for the government and providers.

The Katz tool

The Katz tool has consistently demonstrated its utility in evaluating functional status in the elderly population. The tool with its different variants was identified as the most appropriate instrument to assess functional status as a measure of the client's ability to perform activities of daily living independently and to plan care accordingly (Willemé 2010, Shelkey and Wallace 2012). The Index ranks adequacy of performance in the six functions of bathing, dressing, toileting, transferring, continence, and feeding using a scale of 0-6. Although Katz tools are widely used, formal reliability and validity reports are scarce. One study in Turkey reported good internal consistency, interrater and test–retest reliability of the Turkish version of the Katz ADL (Arik, Varan et al. 2015).

Other studies

Other studies examined different approaches for classification and assessment including a validity measurement of MAPLe, a disability-based classification system (Hirdes, Poss et al. 2008), and the use of Iso-SMAF (29 items) classification in clients with disability (Dubuc, Hébert

et al. 2006). It was found that the MAPLe can be used to support clinical decision making at the individual level. For assessing clinical meaningfulness of the classification, a technique combining the Delphi method with the nominal group technique was used to allow members to choose the most satisfying solution according to a set of criteria and some classification goals.

The ADL assessment tool was the subject of one study which evaluated different methods of assessing clients to predict hours of care needed. This study compared an assignment to care dependency tiers based on defined rules, counts of dependency factors and a weighted scoring system using ADLs. It was confirmed that the weighted scoring system (ADL) was better at both predicting the required hours of care and in discriminating between clients with different care needs (Howell-White, Gaboda et al. 2006). This study provides evidence that weighted models are more flexible and work best but the results are mixed and evidence is inadequate to support large scale implementation.

A randomised control trial evaluated the role of specialists in assessment at entry to the residential care facility and found that specialist assessment was associated with better client outcomes (Challis, Clarkson et al. 2004).

Overseas processes

In the UK, most people go through an initial screening with a health or social care professional (doctor, nurse or social worker) using an instrument called checklist Tool. If the screening identifies someone as a potential case for continuing care, a full assessment is arranged using a 12 item instrument called Decision Support Tool (DST) which is carried out by a multidisciplinary team. The client is finally categorised into one of the seven levels: priority, severe, high, moderate, low or no need (NHS UK 2015).

The French AGGIR algorithm is a complex system where each of the discriminatory items is assigned a weight and the sum is checked against a threshold. This step is repeated until the threshold is met and one of the six ratings, 1 (highest) to 6 (lowest), can be assigned (Doty 2015, Government of France 2016). For persons in residential aged care the residing physician of the facility is responsible for the reassessment (Department of Health 2016).

In Japan, the assessment is a two-stage process including an initial computer based assessment followed by a review by a local board (Tsutsui T 2005, Ministry of Health Labour and Welfare of Japan 2015, Department of Health 2016). Depending on the level of need the appraisal will have to be reviewed every two years, every six months or ad-hoc (Department of Health 2016).

In Germany assessments are conducted by specially trained nurses or doctors of the Medical Review Board of the Federal Association of Statutory Health Insurance Funds (Medizinischer Dienst des Spitzenverbandes der Krankenkassen, MDS). Under Germany's new reform of LTC starting in January 2017 a new assessment tool will be used to assess six modules. The weighted sum of the modules determines the person's level of care eligibility including possible rehabilitation and scope for frailty improvement care (MDS 2016). It appears to be useful in determining special care needs of a client thus resulting in appropriate care provision with focus on maintenance and re-ablement.

Similar to the German case, needs assessments in Austria are independent of the type of care (home care or residential aged care) that is sought and are generally conducted at the person's home by a physician or occasionally by a qualified nurse. Although standards are defined for

assessment, there is no official assessment tool (Federal Ministry for Labour Social Affairs and Consumer Protection of Austria).

In Belgium, a patient generated request for assessment is attended by a medical doctor, a qualified nurse or a social worker. Formal LTC services consist of benefits in cash or in kind. Eligibility depends on the severity and number of limitations, and is evaluated using the familiar six ADL items of physical limitations (Willemé 2010).

Table 1 Summary of the articles and documents on classification

Author and year	Title	Classification structure/tools used/data model	Key findings / points regarding classification
Arling et al. 2007	Explaining Direct Care Resource Use of Nursing Home Residents: Findings from Time Studies in Four States.	RUG-III MDS 2.0 - assessment tool	The study found that the resident care time and resource use varied between and within nursing units. RUG-III grouping was related to resource use; and variables such as length of stay and unit percentage of high acuity residents. Case-mix indices (CMIs) constructed from study data displayed much less variation across RUG-III groups than CMIs from earlier time studies.
Cadieux, Marie-Andree. 2012	Comprehensiveness of the RUG-III Grouping Methodology in Addressing the Needs of People with Dementia in Long-term Care	RUG-III MDS 2.0 - assessment tool	The RUG-III grouping methodology recognises the importance of ADLs, general overall health, cognitive needs and the need to receive proper pain management which are needs related to direct nursing care. The results of this study suggest that some important needs well supported by the literature are not thoroughly considered by the funding system.
Challis et al. 2004	The value of specialist clinical assessment of older people prior to entry to care homes.	Clinical assessment by specialist at entry to service	There improved outcome for those older people receiving specialist assessment compared to those receiving the usual care management assessment. Outcomes were measured as significantly fewer days spent in nursing home care and significantly fewer visits to ED. The total NHS costs were also significantly lower for the experimental group subjects.
CIHI. 2011	How RUG-III (44 Group) Case Mix Index Values Are Calculated, 2011—CCRS Technical Document	RUG-III	Across Canada, facilities that provide continuing care services collect administrative and clinical data during a resident's period of care and report that information to the Continuing Care Reporting System (CCRS) at CIHI. Each CCRS assessment is assigned to one of the 44 RUG groups using the RUG-III version 5.11b methodology. The RUG-III grouping methodology categorizes assessments into groups that have similar clinical characteristics and levels of resource use following an index-maximizing approach based on resource ranking.
CMS, 2013	Analyses of data collected in CMS national nursing home time study used to establish RUG-IV model	RUG-III & IV	An examination of RUG III-related resource times and payment rates has suggested that SNF care patterns have changed over the decade since the last STM studies. Evaluation of the STRIVE data ultimately culminated in SNF PPS refinements and established the RUG-IV model.
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	Katz scale plus a cognitive criterion	Belgium: Assessments are conducted by a doctor, nurse or social worker and are generally patient-initiated.

Author and year	Title	Classification structure/tools used/data model	Key findings / points regarding classification
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	AGGIR/APA	France: Assessment in residential aged care is done by the residing physician.
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries		Japan: Assessment is a two-stage process: Stage one: computer questionnaire (paralysis and limitation of joint movement, movement and balance, complex movement, activities of daily living (ADL), communication and cognition, behavioural problems, use of medical procedures) Stage two: local review board evaluates computer assessment, physician statement and assessor notes Reviewed two-yearly, six-monthly or ad hoc, depending on level of need.
Doty et al. 2015	Long-Term Care Financing: Lessons From France	AGGIR	The classification system is called AGGIR, (Autonomie Gérontologique et Groupes Iso-Ressources). It assesses ADL and cognitive impairment.
Dubuc et al 2006	Disability-based classification system for older people in integrated long-term care services: The Iso-SMAF profiles	29 items of the Functional Autonomy Measurement System (SMAF)	This study provided evidence of the good reproducibility and validity of a disability-based classification system composed of 14 Iso-SMAF profiles. The Iso-SMAF profiles were assigned with their individual casemix weights representing the average required nursing resources. The cost assessment includes care (provided by formal and informal caregivers), infrastructure (building and furniture), functioning (cooking, laundry, housekeeping, etc.) and administrative support. For each subject, the costs of care were estimated by multiplying individual care time by the average salary of the caregivers (skilled or unskilled).
Federal Ministry for Labour, Social Affairs and Consumer Protection of Austria	Care benefits		Care needs are assessed at home by a physician, or by a qualified nurse. The assessment is independent of the type of care (home based or residential) that is sought after. While there is no official assessment tool, appraisals have to fulfil certain criteria. A 'consensus paper' is available for download.
Government of France	Allowances and aids for the elderly	AGGIR/APA	Ten discriminatory variables: coherence, orientation, toileting, clothing, food, continence, transfers, movement indoors, movement outdoors, distant communication Seven illustrative variables: management, cooking, housekeeping, transportation, purchases, medical treatment, leisure activities The APA is periodically reviewed based on either the department's the person's own initiative.
Government of France. 2016	Social Welfare and Family Law	AGGIR	The multistep algorithm to determine the AGGIR is based on the 10 discriminatory items. A weighted sum of items is calculated. Item weights can be negative and change from one step to the other.

Author and year	Title	Classification structure/tools used/data model	Key findings / points regarding classification
Guthrie et al. 2013	Development of a case-mix funding system for adults with combined vision and hearing loss	The interRAI Community Health Assessment (interRAI CHA) and Deafblind Supplement.	The resulting casemix model had 9 terminal nodes. The CM index (CMI) showed a 35-fold range for total costs. Explained variation in the derivation sample was 67.7% for total costs versus 28.2% in the replication sample. A strong correlation was observed between the CMI values in the two samples (r = 0.82; p = 0.006).
Heckman et al. 2013	Addressing health care needs for frail seniors in Canada: the role of interRAI instruments.	interRAI instruments including RAI 2.0 for nursing home.	InterRAI instruments are standardized, reliable, and validated suites of tools to conduct comprehensive geriatric assessment. They offer several benefits, including helping clinicians identify important health issues among patients, develop appropriate care plans, and monitor patient progress, quality indicators to assess care quality, and case-mix classification algorithms to facilitate funding of health services including nursing homes. Algorithms embedded within interRAI systems facilitate decision-support at the individual and organizational levels, including funding of Complex Continuing Care Hospitals in Ontario, and nursing homes in Alberta and Ontario.
Hirdes et al. 2011	Beyond the 'Iron Lungs of Gerontology': Using Evidence to Shape the Future of Nursing Homes in Canada	interRAI suite of instruments Used data from four information sources over 4 years from 2006	Most of the Canadian provinces and territories have implemented interRAI assessments. The Resident Assessment Instrument (RAI 2.0) is used in nursing homes and hospital-based continuing care. The RAI-Home Care (RAI-HC) instrument is used by publicly funded home care programs. The primary application includes care planning and need identification, outcome and performance measurement, and resource allocation. The interRAI instruments use person and organization level decision support tools available to inform resource allocation. At the organization level are case mix systems like the Resource Utilization Groups (RUG-III).
Hirdes et al. 2008	The Method for Assigning Priority Levels (MAPLe): A new decision-support system for allocating home care resources	Method for Assigning Priority Levels (MAPLe) algorithm	The MAPLe algorithm provides an empirically based decision support tool that may be used to inform choices in the allocation of home care resources and prioritisation of clients needing community or facility-based services. MAPLe is a valid predictor of nursing home placements and caregiver distress. MAPLe can be used at the individual level to support clinical decision-making, but it may also be used with aggregated data to inform policy development and planning.
Howell-White et al. 2006	Creating needs-based tiered models for assisted living reimbursement	Three types of models (rules, count, and weighted) were used.	The three models tested varied in fit from 0.127 to a high of 0.357 using the adjusted R2 statistic. Both count and weighted models adequately predicted service needs and discriminated individuals into their appropriate tiers well. Weighted models with the largest score range worked best and provided more flexibility. The hours of care needed is not an exact proxy for assisted living cost of care as it is dependent of the type of staff; this variable therefore needs to be further refined before being used.

Author and year	Title	Classification structure/tools used/data model	Key findings / points regarding classification
Martin et al. 2011	Using the RUG–III classification system for understanding the resource intensity of persons with intellectual disability residing in nursing homes.	RUG-III, RUG-IV MDS- assessment instrument	The RUG–III system explained 33.3% of the variance in age-weighted nursing time among persons with intellectual disability compared to 29.6% among other residents, making it a good fit among persons with intellectual disability in nursing homes. Overall the RUG–III system was quite effective in explaining the cost of supporting persons with intellectual disability in nursing homes. In addition, no other variables or embedded scales in the RAI 2.0 assessment instrument could be identified that could increase the ability of the RUG–III to explain variance in cost among persons with intellectual disability.
MDS. 2016	Guidelines of the National Association of Statutory Health Insurance Funds for needs assessment		Assessment based on 6 modules: Module 1:Mobility Module 2: Cognitive and communicative abilities Module 3: Behaviour and psychological problems Module 4: Self-reliance Module 5: Coping with and independent handling of demands and pressures caused by illness or the need for therapy Module 6: Organising everyday life and social contacts The total score is the weighted sum of modules. Only the higher of modules 2 or 3 is counted. Reassessment frequency is determined on individual basis, but can be requested if care needs change. Each assessment should also include a prognosis and if the prognosis is that no improvement expected, then no reassessment is required. If improvement is highly likely, eligibility will be approved for a limited time period.
MEDPAC. 2016	Skilled Nursing Facility Services Payment System	RUG-IV	RUG-IV with 66 groups is used, containing: 14 rehabilitation groups, 9 groups with rehabilitation and extensive services (e.g. ventilator care), 3 groups for extensive services, 16 groups for special care (e.g. COPD), 10 groups for clinically complex care (e.g. pneumonia), 14 groups for impaired cognition and reduced physical function (typically not covered)
Ministry of Health, Labour and Welfare of Japan. 2015	Health and Welfare Services for the Elderly - Outline of Long-Term Care Insurance System		The local Committee for Long-term Care Need is responsible for evaluating and deciding on investigation results of the mental and physical conditions and on family doctors' letters.
Minnesota Department of Health. 2015	Case Mix Classification Manual for Nursing Facilities	RUG-III & IV Resident Assessment Instrument (RAI)	The Minnesota Case Mix System relies on the data collected by the federal Minimum Data Set (MDS). MDS software generates RUG-IV classes. These classes are determined by the coding of specific MDS items related to the amount of assistance the resident received with activities of daily living plus selected treatments, health conditions, diagnoses, behaviour and cognitive status. Each group is associated with an index value indicating relative resource use.

Author and year	Title	Classification structure/tools used/data model	Key findings / points regarding classification
National Health Insurance Fund for Employees. 2008	The AGGIR model-User Guide	AGGIR	The AGGIR assessment/classification tool consists of 17 items. Each of them is evaluates whether the person is able to perform activities spontaneously, totally, usually and/or correctly. Based on that each item is scored A, B or C (highest).
NHS, UK. 2015	"How Will My Eligibility For NHS Continuing Healthcare Be Assessed? - Health Questions - NHS Choices". Nhs.uk. N.p., 2016. Web. 16 Nov. 2016.	Decision Support Tool	The Decision Support Tool (DST) is used to assess the care needs within 12 domains: behaviour, cognition (understanding), communication, psychological / emotional needs, mobility (ability to move around), nutrition (food and drink), continence, skin (including wounds and ulcers), breathing, symptom control through drug therapies and medication, altered states of consciousness, and other significant needs. The assessment is undertaken by a multidisciplinary team and often follows the use of the screening Checklist Tool. The level of care need is categorised into one of the seven levels: priority, severe, high, moderate, low or no need. The tool determines the level of care and helps in the care planning.
Poss et al. 2008	Validation of Resource Utilization Groups version III for Home Care (RUG-III/HC): evidence from a Canadian home care jurisdiction	RUG-III MDS 2.0 - assessment tool	A large episode dataset showed a skewed distribution with over 56% of cases falling into the lowest hierarchical level, reduced physical functions. Case-mix index values for formal and informal cost showed very close similarities to those found in the Michigan derivation. Explained variance for a function of combined formal and informal cost was 37.3% (20.5% for formal cost alone), with personal support services as well as informal care showing the strongest fit to the RUG-III/HC classification.
Shelkey and Wallace. 2012	Katz Index of Independence in Activities of Daily Living (ADL)	Katz scale	The Katz tool is the most appropriate instrument to assess functional status as a measurement of the client's ability to perform activities of daily living independently. Clinicians typically use the tool to detect problems in performing activities of daily living and to plan care accordingly. The Index ranks adequacy of performance in the six functions of bathing, dressing, toileting, transferring, continence, and feeding. Clients are scored yes/no for independence in each of the six functions. A score of 6 indicates full function, 4 indicate s moderate impairment, and 2 or less indicates severe functional impairment. The Katz ADL Index is sensitive to changes in declining health status; but it is limited in its ability to measure small increments of change seen in the rehabilitation of older adults.
Sutherland et al. 2013	The Alberta Health Services Patient/Care–Based Funding Model for Long Term Care	InterRAI	In Alberta, InterRAI reassessments are required at admission, every 90 days and after change of health status.

Author and year	Title	Classification structure/tools used/data model	Key findings / points regarding classification
The Iowa Foundation for Medical Care, University of Michigan. 2011	Staff Time and Resource Intensity Verification Project	Resource Utilisation Groups (RUG)	Overall, the RUG-III 53-group system had good baseline predictive ability, with variance explanations comparable to the original study and with derived relative cost measures of similar magnitudes. An implication is that while nursing facility care patterns may have changed in the decade since the derivation of the RUG-III system, the relative cost of different types of residents has not changed substantially. On the basis of these results, it was decided that project efforts should focus on refinement of RUG-III to a RUG-IV system, rather than the derivation of a fully new system paradigm. The full RUG-IV system was substantially superior to the RUG-III system in explaining wage weighted staff time (WWST) measures of resource use.
Tsutsui et al. 2005	Care-needs certification in the long-term care insurance system of Japan		A local board decides on LTC eligibility. This is based on a computerised 74 item test, a doctor report and investigator report.
Willemé, P. 2010	The long-term care system for the elderly in Belgium	Modified Katz scale	The scale includes ADL and IADL limitation items as well as a medical assessment.

Summary of the evidence on funding and pricing

While there is a lively debate in the literature about how LTC should be financed, be it through taxation or insurance schemes and how LTC insurances should be priced, there is very little regarding the technical design of funding models and how services should be priced. The following discussion is based on findings in government documents and websites and these documents are generally concerned with covering the costs of care associated with frailty. In some countries the funding is means-tested while in others additional subsidies on regional or state level exist. As is the case in Australia in almost all cases accommodation costs are covered by the resident except in instances of extreme hardship. Table 2 summarises the findings from the literature regarding funding and pricing models.

Europe and Japan

In Austria and Belgium care benefits are graded in seven levels. To be eligible for the lowest benefit level a person has to be eligible for more than 65 hours of care (in Austria) or to have been assessed as having a threshold level of dependency in the case of Belgium. There is a seven and ten-fold difference between the levels of funding from lowest to highest respectively for these two countries (Federal Government of Belgium , Federal Ministry for Labour Social Affairs and Consumer Protection of Austria , Department of Health 2016). In Austria the assessment and care benefits are independent of the care setting (home care or residential care) and in both cases co-payments are required based on the financial situation of the person. Willemé notes that the current LTC system in Belgium and its integration with the other means of support provided to individuals is adequate (Willemé 2010).

In France, the individualised funding (APA) has six levels. AGGIR 1 is the most dependent and AGGIR 6 the least dependent. The lowest two levels provide only very basic support while the

groups 4 to 1 are eligible for residential LTC. There is only a 2.5-fold difference in the payment levels between AGGIR 1 and 4 (Government of France). The actual funding allocated depends on the financial situation of the individual and it is noted that this often leads to the APA-based funding being inadequate (Doty 2015).

In Germany the new funding model introduced in January 2017 includes five levels. While the assessment is independent of the type of care that is required the funding is differentiated by home care (cash), home care (in-kind) and residential aged care. There is a very large range of payments levels across the home care and residential care sectors with the highest levels of dependency receiving payments that are more than 16 times that of the lowest levels (MDS 2016).

In Japan there are seven funding levels. The lowest two are primarily designed to support preventive care in the community and the upper five define eligibility for residential LTC. Care levels are defined in units per month which can be converted into a monetary value by multiplying with a base rate. The base rate includes a local adjustment factor to include service type or regionality (Ministry of Health Labour and Welfare of Japan 2015). This system is considered equitable and the continuous improvement of the needs assessment a positive initiative (Tsutsui T 2005).

The funding systems in Austria, Germany and Japan are designed to be setting independent, with the aim being, to increase the integration between home care and residential care (Federal Ministry for Labour Social Affairs and Consumer Protection of Austria , Ministry of Health Labour and Welfare of Japan 2015, MDS 2016).

North America

In the USA, the funding of skilled nursing homes for eligible Medicare beneficiaries is based on RUG scores. For each RUG nursing weights are calculated, reflecting staff time, and a fixed component reflecting non-casemix related costs. The rehabilitation RUGs include additional therapy weights. The actual daily payment made to a skilled nursing facility is the weighted sum of these three components/weights. Urban and rural facilities are weighted differently and a local wage index is applied (MEDPAC 2016). This system, including the weights, is reviewed and updated annually (CMS 2013). MEDPAC considers this system to be adequate as it reimbursed for all costs “that efficient facilities would be expected to incur” (MEDPAC 2016).

In Alberta, Canada, a funding system based on fixed and variable funding amounts is also used with the variable component reflecting casemix difference as with the US Medicare related payments. In the case of Alberta, however the fixed funding is explicitly determined to support minimum staffing levels, which is particularly important for small facilities. The initial casemix weights were based on those used in the US for Medicare beneficiaries, but they have been modified using local data from time-in-motion studies (Department of Health 2016). CMIs (weights) are now recalculated annually (Alberta Health Services 2015). In addition to funding, Alberta legislates for staffing levels to ensure safe quality of care, e.g. providers must maintain staffing in line with the required hours of care for their recipients based on their casemix (Sutherland, Repin et al. 2013, Department of Health 2016).

Co-payments

The literature for most countries notes that a level of co-payment from the individual is required. In most cases the contribution is means tested, or adjusted in cases of extreme hardship (Doty 2015), but in only a few cases is there a mention of what the contribution specifically covers. Tsuitsui et al. note that recipients are generally expected to contribute 10 per cent. To reduce the financial burden recipients also have the option to request a reduction in funding to organise some of the required care within the family (Tsutsui T 2005).

A Canadian review of resource allocation based on the interRAI assessment tool (Hirdes, Mitchell et al. 2011) confirmed that the needs of persons in LTC are highly complex, and resource allocation does not always correspond to actual need.

Table 2 Summary of the articles and documents on funding and pricing

Author and year	Title	Key findings / points regarding funding / pricing
Alberta Health Services. 2015	Activity based funding of long-term care: user summary	In Alberta there is a fixed and variable funding amount. The variable amount is based on casemix, similar to the CMS/USA. Fixed funding is provided for small facilities with shared staff (shared with acute care) or to ensure minimum staffing levels. Additional funding is available for administration and for each turnover. CMIs are recalculated annually.
CMS. 2013	Skilled Nursing Facility PPS - Case Mix Prospective Payment for SNFs Balanced Budget Act of 1997	The information provided by MEDPAC is mirrored, the hospital wage indices are provided The system, weights and all other calculated items are updated annually.
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	Austria: Co-payments are the norm. For residential aged care substantial amounts of a person's pension is paid as co-contribution. Additional subsidies from the States.
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	Belgium: The federal allocation is means-tested and the actual amount depends on the financial situation of the person. Further subsidies exist on regional level. Hotel costs are generally excluded.
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	Alberta, Canada: Providers must maintain staffing models that meet the required hours of care of the recipients. Certain staffing levels are required by law. The funding model uses RUGs and accompanying CMIs for funding. The weighting by CMI is applied to resident days in a facility. Case Mix Index values for RUGs are calculated based on time-in-motion studies but were initially based on US data. The funding model takes into account additional considerations that impact upon a facility, e.g. occupancy rates. Funding minimums exist to ensure small sites remain in operation and deliver safe quality of care. Additional funding is determined for rural and remote facilities.
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	France: The APA is means-tested and does not include hotel costs.

Author and year	Title	Key findings / points regarding funding / pricing
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	Germany: Germany is currently reforming LTC funding and the assessment. Previously there were 3 levels of funding including supplements. The new system will consist of five levels. The funding amount will be different for the setting of care. Hotel costs are excluded.
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	Japan: There are seven funding levels, only the upper five define eligibility for residential LTC. Co-payments of 10% are expected.
Doty et al. 2015	Long-Term Care Financing: Lessons From France	There are 6 levels of funding. The actual funding amount is means-tested against the person's financial situation.
Federal Government of Belgium	Maximum amounts of allowances for disabled persons	There are seven funding levels. The difference between the lowest and highest is 6.71-fold.
Federal Ministry for Labour, Social Affairs and Consumer Protection of Austria	Care benefits	There are seven levels of funding. To be eligible for the minimum more than 65 hours of care per month are required. Funding for the highest level is 10.74 times that of level one.
Government of France	Allowances and aids for the elderly	The Personalised funding level, APA, is based on the person's level of dependence which is evaluated against AGGIR. AGGIR 1 being most depended and AGGIR 6 least dependent. Only the groups 1-4 are eligible for residential aged care. Funding for the highest level is 2.58 times that of the minimum entry level for residential aged care.
MDS 2016	Long-term care assessment	Five funding levels. The highest funding level represents 16.04 times that of the lowest level. The needs assessment is universal for all types of LTC, but the level of benefits are different for home care (cash), home care (in-kind) and residential aged care. So are the relativities.
MEDPAC. 2016	Skilled Nursing Facility Services Payment System	RUGs have a nursing weight, a therapy weight (only rehabilitation RUGs,) and another component which is a fixed amount. Different dollar values are set for urban and rural facilities and the local wage index is used to adjust actual daily payment to a SNF based on local wage levels.
Ministry of Health, Labour and Welfare of Japan. 2015	Health and Welfare Services for the Elderly - Outline of Long-Term Care Insurance System	There are 7 funding levels. The lowest two are for primarily preventive measures and the other five define the eligibility for LTC. The highest level represents 7.21 times that of the lowest level. 1 unit equates to ¥10 - ¥11.26. The base rate can be adjusted for region or service type.
Sutherland et al. 2013	The Alberta Health Services Patient/Care–Based Funding Model for Long Term Care	The report describes the current funding model in Alberta which is a casemix funding model. It also includes a lot of recommendations for the future.
Tsutsui et al. 2005	Care-needs certification in the long-term care insurance system of Japan	Recipients are expected to contribute 10 per cent but have the option to choose a lower level of care by using family care and hereby reducing total cost.

Author and year	Title	Key findings / points regarding funding / pricing
Willemé. 2010	The Long-Term Care System for the Elderly in Belgium	Formal long-term care services consist of benefits in cash and in kind. At the federal level there is a cash benefit for assistance to elderly persons who score a minimum of 7 points on the modified Katz scale. The level of the cash benefit also depends on the financial situation of the applicant. Nursing care is provided mainly to elderly patients with low to moderate limitations at home, and to patients with moderate to severe limitations (including dementia) in nursing homes.

Summary of the evidence on implementation and audit

Implementation policies and practices

There is a very limited amount of literature relating to implementation policies and practices for aged care classification and funding systems. The following is an account of relevant findings in this respect with the details of the literature provided in Table 13.

The study on Iso-SMAF (Dubuc, Hébert et al. 2006) reported that in combination with the clinical information, the costs associated with each Iso-SMAF profile by setting can help managers reorganise services, understand their cost behaviour and reinforce the drive for more cost-efficient services. These system level outcomes show promise but will require feasibility studies in Australian context.

There was one article from the USA which described a study of nursing staff ratios and quality of care with implications for reimbursement based on of staff ratios for the services provided. Analysis of quality index measure and staffing data revealed that there is a non-linear relationship for registered nurses. With regards to funding, the authors suggested that higher level of quality index achievement might require disproportionately higher level of nursing staff that may not be sustainable given the current reimbursement rates (Zhang, Unruh et al. 2006). In a similar situation in Alberta, Canada reportable levels of staffing that are informed by the client casemix are an inherent component of the funding model designed to ensure safer levels of care provision (Alberta Health Services 2015).

There are potentials for existing resources that can be to be tapped for efficient implementation of aged care activities. One such area is the use of electronic health records (EHR) in residential aged care. A study commented that there are potentials for EHR to be used in financial monitoring and auditing (Zhang, Yu et al. 2012). The authors found that frequent audits were facilitated by the ease of access to the electronic care records. Similarly, activities related to accreditation and quality assurance implemented by the Australian Aged Care Quality Agency (AACQA) can also be explored for auditing (Australian Aged Care Quality Agency 2015).

A study examining the role of specialist clinical assessment at the entry to care homes in the UK (Challis, Clarkson et al. 2004) showed some benefits related to less marked deterioration of physical functioning when the assessment was undertaken by a specialist clinician. It appears this approach has the potential to provide opportunities for better outcome oriented care planning. In Germany, an external assessor is responsible for determining the timeframe for future assessments. In this model, if an expert clinician finds that improvement or significant deterioration is likely for a client, a shorter timeframe for reassessment is set.

Auditing

In a number of systems auditing programs are described to support the implementation and sustainability of the system. In Belgium, there is no independent entity that assesses the client's condition prior to the provision of LTC services, but random evaluations of the dependency category are routinely carried out, called Kappa controls. In the Belgian residential care sector, for instance, the dependency category can be changed after an external evaluation by a pool of physicians ('college of advisory physicians'), working under the auspices of the National Health Insurance Institute (Willemé 2010, Department of Health 2016).

The importance of audit programs varies between systems principally based on whether external or internal assessments client are undertaken. In the New Zealand and Belgian systems where assessments are undertaken by internal staff, a program of regular audits is punctuated with random and unannounced 'spot checks'. Often, in the case of Belgium, the facilities receive some short term warning of a spot check to give them the opportunity to review their assessment documentation. In countries where the assessors are external agencies such as Germany, Japan, Scotland and England, auditing is less of an issue (Department of Health 2016).

Table 3 Summary of the articles and documents on implementation and audit

Author and year	Title	key findings points re implementation and audit
Australian Aged Care Quality Agency, 2015	Australian Aged Care Quality Agency's Annual Report 2014-15	Performance review results are presented in the report against accreditation standards. The review includes unannounced visits, review audits, re-accreditation audits, follow-up visits etc.
Challis et al. 2004	The value of specialist clinical assessment of older people prior to entry to care homes.	Stakeholders' views were favourable as it resulted in better care planning Stakeholders and clients both found it useful as it was associated with less marked deterioration of physical functioning
Department of Health. 2016	Public Long-Term Care Financing Arrangements in Selected OECD Countries	Belgium: Routinely, there are random post-appraisals conducted.
Dubuc et al. 2006	Disability-based classification system for older people in integrated long-term care services: The Iso-SMAF profiles	In combination with the clinical information, the costs associated with each Iso-SMAF profile by setting can help managers reorganize services, understand their cost behaviour and reinforce the drive for more cost-efficient services.
Heckman et al. 2013	Addressing health care needs for frail seniors in Canada: the role of interRAI instruments.	Compared to non-standardized assessment tools, interRAI instruments offer several distinct advantages, all for the cost of one instrument. They include features to support health care system integration, including standardization, comprehensiveness, and compatibility with electronic medical records; and improved efficiency of the health care system and potentially reduced costs.
The Iowa Foundation for Medical Care, University of Michigan. 2011	Staff Time and Resource Intensity Verification Project	Frailty is an important implementation issue and linked to funding growth. It is anticipated that frailty is inadequately captured by current classification of residents. It is mentioned in the STRIVE project report that RUG-IV modification has elements of frailty measures that are capable of capturing the frailty. The frailty measures include shrinking, weakness, exhaustion, slowness, and low activity which are increasingly considered as geriatric syndrome in recent times. There are fourteen MDS/STRIVE items linked to these five areas of frailty.

Author and year	Title	key findings points re implementation and audit
Willemé, P. 2010	The long-term care system for the elderly in Belgium	Different extensions of Katz scales are used to assess the dependence category of the patient in different care settings. In residential care and home nursing care, the patient's score determines the care level that he or she is entitled to receive. The patient generally initiates a request for LTC services by contacting a medical doctor, a qualified nurse or a social worker, who assesses the severity of ADL or IADL limitations using an official scale. AUDIT: There is no independent entity that assesses the patient's condition prior to the provision of LTC services, but random evaluations of the dependency category are routinely carried out. 'Kappa controls' are done to check correct use of assessment. Kappa is a statistical measure to measure interrater reliability. In the residential sector, for instance, the dependency category can be changed after an evaluation by a 'college of advisory physicians', working under the auspices of the National Health Insurance Institute.
Zhang et al. 2006	Minimum Nurse Staffing Ratios For Nursing Homes	Analysis of quality index measure and staffing data revealed that there is a non-linear relationship for registered nurse. With regards to funding, the authors suggested that high level of quality index achievement might require disproportionately higher level of nursing staff that may not be sustainable given the current reimbursement rates.
Zhang et al. 2012	The benefits of introducing electronic health records in residential aged care facilities: A multiple case study	The RACFs gain an increased ability to manage information and using the information for funding. Most of the managers expressed the view that the system assisted the facilities to get appropriate funding. The income of some facilities had improved, particularly in the case of high care facilities. AUDIT: The authors discuss the benefits of the EHR system in the areas of auditing of the service. The mentioned that frequent audits were facilitated by the ease of access to the records.

Summary of literature review findings

The key findings of this literature review are the features of international classification, funding and pricing systems and the implementation and maintenance of these systems which best align with the key design features required of an Australian system which have also informed the options presented in Section 6.

In terms of classification systems the RUG classification is best supported by the evidence in its capture of client needs for services and is noted to be associated with the most effective allocation of resources, although, its limitations in assessment of dementia and challenging behaviour remain. RUG-IV is an improvement on previous versions with its ability to identify rare but costly residents and to measure frailty (shrinking, weakness, exhaustion, slowness, and low activity) which is linked to cost increases in the aged care sector.

The assessment system in Japan, which assigns monthly units of care to each of the seven levels that are then multiplied by a base price to determine funding, is a similar approach to ABF in Australia. The additional adjustments for certain service types and regionality also mirrors casemix based systems premised on a base price.

Of particular interest, are the funding systems in place in Alberta, Canada and in the US (for Medicare beneficiaries). These systems are reported as having features that are well aligned with the options for an alternative Australian system. These features include:

- Relative value units or weights have been developed for the RUG classification based on time-in-motion studies;
- The RUG-based resource weightings are updated annually;
- The funding system includes a combination of fixed and variable payments where the fixed component represents the basic services provided to all clients and the variable payment is casemix-based;
- In the Alberta model a legislated requirement for staffing levels based on assessed client dependency is designed to ensure the integrity of assessment practices and the maintenance of safe and high quality practices, and
- The Alberta model also takes occupancy into account for funding but to ensure that small sites are able to deliver good quality care they introduced the funding minimums; there are top-up payments for rural and remote facilities.

In some international funding models, it is found that variable funding can result in unpredictable budget impacts and on the other hand, fixed-level funding may prove to be not incentivising the initiatives to improve care recipient's status due to the reduction in benefit.

The widely used assessment tools in long-term care sector include the Katz scale and the RAI (Resident Assessment Instrument) with its two components, Minimum Data Set and the Resident Assessment Protocols (RAPs). The RAI tool is considered to be standardised, reliable and validated and is used for comprehensive assessment. Although the Katz scale is not extensively evaluated, it has been reported to be sensitive to changes in declining health status.

The implementation strategy adopted in Germany, where an external assessor is also responsible for determining the timeframe for future assessments is worthy of consideration. In this model, where an expert clinician finds that improvement is likely for a client, a shorter timeframe for reassessment is set. An individual can also apply for a renewed assessment depending on the changes in their care needs.

There are indications in various studies that a more holistic and participatory assessment system combining the findings and views of the assessor, client, family and service providers worked well in predicting nursing home placement.

In many of the international models reviewed the assessment for eligibility and for the level of residential aged care funding is linked to the care plan and the level of service provided.

There are potentials for existing resources to be tapped for efficient implementation of aged care activities. Electronic health record can be used in assessment, and financial monitoring and auditing of aged care activities as it provides easy access to client information. Similarly, routine activities of the aged care accreditation bodies, such as the Australian Aged Care Quality Agency (AACQA), can also be explored for auditing.

It is evident from the findings that no single model is replicable in Australia, different models and approaches have their own strengths and weaknesses. In designing funding model, there is a need for careful review of the individual components that are evidence-based and applicable

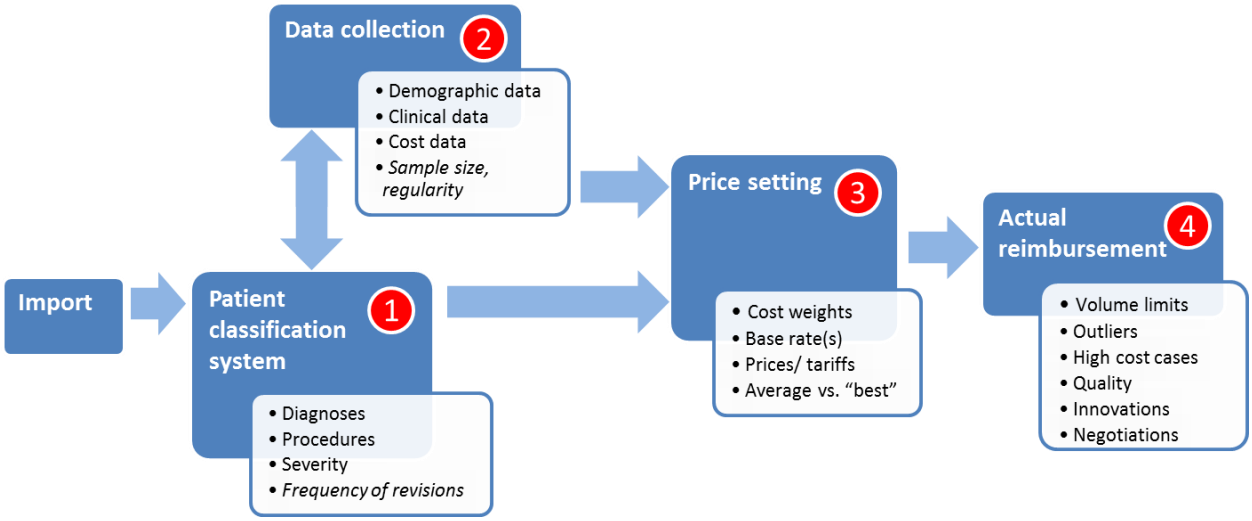
to Australian context. It seems appropriate to select the best from these alternative approaches in formulating optimally efficient options for Australian Aged care sector.

Appendix Five

Explanation of casemix systems

Figure 2 (Busse 2011) graphically represents the essential elements of the hospital DRG casemix classification and payment system. Similar essential elements would be required in an ABF system for residential aged care except that element 1 ('patient classification system') would be replaced with a purpose-built residential aged care classification that allocates residents to a casemix class based on residential care cost drivers.

Figure 2 Essential building blocks of ABF systems



The features of the Australian hospital ABF system that relate to each of the five issues addressed in this review are briefly discussed in this appendix.

Classification

Within the ABF system different classification systems have been selected for each 'stream' of care reflecting the understanding that the drivers of cost in each case are different. For example, patients in the acute inpatient stream are classified according to their principal and co-morbid diagnoses which have been statistically confirmed as predictive of cost and length of stay for this group where the primary goal is cure. In contrast, the principal dimensions of the classification of rehabilitation care are impairment type and functional independence while Emergency care is classified mainly by urgency (triage) category on presentation.

In all cases the data variables that are used in the classifications are those that are captured routinely in the provision of care. That is, a confirmed diagnosis is required to initiate acute care, a Functional Independence Measure (FIM) score is required to develop a goal based rehabilitation care plan and the assignment of urgency categories to patients presenting to the ED enables that service to provide appropriate and safe emergency services. There are no variables included in the classification systems that are not required in the planning and delivery of care.

Another key principle in the selection of ABF classifications is the focus on patient (client) rather than service driven characteristics. This provides two key benefits; it limits the potential for

'gaming' by providing services without indication; and it funds the required care independent of setting or provider.

The various ABF classifications are at different levels of evolution and some perform better than others. In some cases service based elements (such as clinic type) have been used in the interim while developments in client specific data collections are underway. All classification systems undergo ongoing maintenance and development.

Funding

The ABF system has adopted the concept of a funding framework rather than assigning separate prices for different types of care. In this system a single price is determined for all services and relative weighting determined for each type of service delivered. The total funding allocation is calculated by multiplying cost weight of each service by the volume and price. A service episode (as a funding unit) is defined differently for each stream of care from a multi-day hospital stay to a single clinic visit. In the case of residential aged care the most appropriate funding unit would be a day of stay. The weighting system is also calibrated across all streams of care so that services may be interchanged within the framework (i.e. outpatient services may replace day cases for some interventions).

This system of single price applied to cost weights provides stability in the funding system as the relativities between different types of care do not tend to change other than with significant changes in technology or models of care. That is, the cost of a straightforward hip replacement (inlier weight 4.10) will always be about four times as expensive as a hernia procedure (inlier weight 0.99) (Independent Hospital Pricing Authority 2015). Global adjustments to the level of funding may be achieved by modifying only the price, with the relative funding allocation across services being preserved through the weighting system. The impacts of changing the price are also able to be estimated with a high degree of accuracy where the volume and casemix of services are known.

The framework also allows for adjustments to the weightings for unavoidable and justifiable costs. The most relevant of these for the aged care sector are remoteness and indigenous adjustments which recognised are non-clinical drivers of cost. Note that the same price is still applied in these cases but the weights assigned to relevant client records are increased. The capacity also exists within the ABF system to make adjustments in the cost weights to create incentives and for preferred practices or good outcomes by increasing the cost weight value in selected cases.

Pricing

As is noted above, the Australian ABF System allocates national funding using a single price for all services. The State level implementations of ABF where the allocations at the facility level carry much greater risk to the provider will often use separate peer facility prices to account for structural differences or justifiable drivers of difference in cost that cannot be attributed to the level of a care episode (e.g. costs of formal teaching and training in a tertiary referral centre).

In all cases the ABF price is informed by the cost data that is produced from annual costing studies. At present, nationally, the price is the full average cost for all in-scope ABF services.

Within the capped funding contexts of State and local health network allocations the price is more likely to be driven by the available funds but validated against the cost data.

An important feature of this system is its capacity to self-regulate and dis-incentivise 'gaming'. The inappropriate assignment of a client episode to a higher casemix class in order to attract more funding will result in the eventual 'de-valuing' of that class. This occurs because the costs reported in the annual costing study are the basis for the weighting of the casemix classes. If the actual cost of providing a service which has been captured in a complex class is reported as low, the cost weight for that class is reduced in the subsequent year.

Within the cost data fixed (indirect) and variable (direct care) costs may be identified. These are not treated separately in the ABF allocation, however the decision to exclude smaller and rural facilities from the ABF allocation is based on the high proportion of fixed costs identified in the cost data for these services. The 'national efficient cost model' applied to these services allocates a block payment for the fixed cost components and a marginal payment based on activity levels.

Implementation

The successful implementation of ABF across Australia required a strategic approach involving a number of initiatives primarily aimed at achieving consistency in data sources and in local ABF implementations. These include:

- National data definitions (the National Health Data Dictionary) and National Minimum Data Sets (NMDS) for in-scope services were in place and reviewed in the development of ABF information systems;
- Australian Hospital Patient Costing Standards, and
- The National Hospital Cost Data Collection (NHCDC) data set specifications.

These technical aspects of the implementation were also supported by the engagement of stakeholders in technical and clinic expert consultation panels such as the Clinical and Jurisdictional Advisory Committees and focus working groups for issues such as funding small rural hospitals, and mental health services. Broad consultations are also undertaken on policy issues and proposed changes to the funding framework.

The introduction of ABF in new streams is also associated with the establishment and testing of data collections and the shadowing of funding during a transition period where the impacts can be assessed and the system refined.

Audit

There are two main areas of audit that are formally undertaken to support the integrity of the ABF system in Australia. These are the costing and coding (classification) audit programs.

Costing audits are sponsored and co-ordinated nationally using costing experts from one jurisdiction to review records in a sample of facilities within another jurisdiction. In addition, the individual jurisdictions will often employ their own resources to undertake formal auditing of cost data.

Coding standards and specialised coding audit tools have been developed to ensure the integrity of the classification data. Expert independent coding auditors are also used to ensure

that the class assigned to a service episode is supported by clinical evidence in the client record or care plan. Formal independent audits of coded data a widespread across Australia.

Appendix Six

Options for the development of a casemix classification

Options 4 and 5 described in the body of this report involve an Activity Based Funding model underpinned by a casemix classification. If either of these options were selected, it would be necessary to develop a casemix classification that was fit for purpose. There are two ways that a casemix classification could be developed. Each option is described below.

Casemix classification and costing/pricing based on an empirical classification and costing study

The usual method to develop a new casemix classification is to engage an expert group to undertake a casemix classification study. While the details vary between studies, the general steps are:

- Select a representative sample of provider agencies to participate;
- Capture data on resource utilisation per consumer per day. This is typically time in minutes by each professional designation plus other resources, goods and services consumed. In the context of residential aged care, this study would need to run for about a month;
- The capture of financial data within the same cost buckets as the service inputs (e.g. nursing salaries for nursing inputs) to determine the relative costs of different inputs;
- In parallel, capture data on the care needs of each consumer. In the residential aged care sector, this data collection would resemble the current ACFI and it would be captured at the beginning of the study on each consumer, and
- Undertake a regression tree statistical analysis using the resource utilisation data to test and create a classification.

The outcomes of such a study are:

- A casemix classification that consists of a number of casemix classes, each of which contain consumers (who might be referred to as patients, residents or participants depending on the context) who are relatively similar with respect to cost and need for care;
- An average **cost** for each class based on the costs calculated in the course of the study;
- **A cost weight** (National Weighted Activity Unit) for each class whereby the cost per class is reported as a relative value unit rather than in dollar terms, and
- A set of **service weights** for each class. These reflect the relative resource consumption of each major cost bucket separately. In the hospital casemix context, there are separate service weights for nursing, medical, allied health, drugs, pathology and so on. In the residential aged care context, the key services might include (but not be limited to) personal care, allied health, aids and appliances, re-ablement programs and goods and services. A set of service weights would be calculated for each service type.

An example is included in the table below. The full report on the development of the AN-SNAP classification can be found at http://ahsri.uow.edu.au/chsd/snapreport/index.html.

Once a classification is initially developed, the cost of each class can be updated each year. In the hospital context, this is undertaken through an annual hospital costing study involving a sample of hospitals in both the public and private sectors. If actual costs or service utilisation

for each service for each patient are known, they are used in the costing process. If they are not, costs are distributed among patients in proportion to per diem service weights calculated in the original study. Costing studies can identify the costs that are marginal and driven by activity levels versus those that are relatively fixed.

After the original study is undertaken, single service weight studies can be undertaken periodically in response to changing models of care. In the hospital context, separate service weight studies have been undertaken in areas such as drug and diagnostic test costs due to changes in technology. In the residential aged care context, such studies would only be needed less frequently as costs are not technology dependent, but would need to be updated in line with developments in therapies and changing models of care.

Casemix classification and costing/pricing based on expert consensus

The following is an example of how a casemix classification can be developed and costing based on expert consensus rather than through a classification and costing study.

In planning for a large coordinated care trial in the Illawarra (which subsequently, for unrelated reasons, did not proceed), an expert group designed the model of care and this model of care was used to determine a funding band for each participant. This example was in a community care setting and thus the detail is not relevant to residential aged care. However, the methodology is relevant and could be applied to the residential aged care sector.

The approach in this example consisted of three steps.

Design a casemix classification

An expert group was convened to develop the classification using four criteria:

1 Consumer related cost drivers

Each class should be defined based on consumer attributes, not service provision attributes. The key question is this – What attributes of a consumer best predict the care and services they need? Contender variables typically include (but are not limited to) medical conditions, functional status, behaviour, cognition, age and socioeconomic factors.

2 Ability to predict cost

Each class should contain people who are expected to cost similar amounts over a three month period. This determination in the clinical context and in the absence of cost data will be based on the expected levels of service inputs required within the different classes.

3 Sensible groups

Each class need to make sense to providers and represent groups of sufficient volume. This means that some types of consumers that are different but have more in common with each other than they do with those in other classes will be grouped together. This ensures that the classes are stable and statistically robust.

4 Ease of collection

The variables used in the classification should be capable of routine collection, coding and data entry. Ideally the required variables should be collected as part of the care assessment and delivery process rather than an additional data collection burden.

The result of this step was a casemix classification with 30 classes. The duration of each class was defined up to a maximum of three months. At the end of this period, each participant would be re-assessed. This reassessment might result in them being assigned to a new class (if their needs had changed) or being reassigned to their existing class.

Define and cost standard interventions

A standard set of interventions were agreed and defined and standard units of costing were adopted. Using staff salary and other costs that were standard at the time (in 2000/2001), it was then possible to cost each intervention.

Define care packages

A typical package of care for consumers in each class was developed. Each Care Package had potentially three elements: one-off expenditures such as home modifications; medical services; and planned community care.

It was not proposed that all consumers in a class receive this standard care package. Rather, the purpose of developing the standard care package was to determine an agreed funding level for each class. Case managers would then be able to develop an individualised package of care with each consumer up to the maximum for the class. Table 4 shows:

- Standard community care packages for 6 of the 30 classes, and
- A summary of the price of all 30 classes and how these compared to Commonwealth program funding at the time (in 2000/2001)

Table 44 Palliative care classes in the AN-SNAP casemix classification

Class	Description	Average length of stay (days)	Average Episode Cost	Nursing	Physical therapies	Psycho-social therapies	Other staff	Goods and Services	Medical and Surgical Supply	Imaging	Pathology	Drugs
101	Stable, RUG 4	9.38	$1,979.92	$1,300.81	$46.44	$42.71	$86.28	$474.53	$29.15	$125.21	$53.47	$99.65
102	Stable, RUG 5-17	11.14	$2,953.05	$2,015.48	$76.65	$57.38	$122.26	$640.74	$40.55	$73.54	$33.51	$97.41
103	Stable, RUG 18	10.24	$3,169.04	$2,164.04	$31.80	$34.52	$133.12	$746.64	$58.92	$73.54	$32.46	$110.86
104	Unstable, RUG 4-17	9.01	$2,337.78	$1,537.95	$45.64	$53.30	$105.46	$554.68	$40.75	$84.58	$36.70	$85.29
105	Unstable, RUG 18	5.34	$1,706.54	$1,012.37	$23.98	$28.93	$84.97	$518.12	$38.16	$55.33	$23.89	$71.48
106	Deteriorating, RUG 4-17	7.88	$2,193.27	$1,474.39	$28.71	$47.88	$97.67	$497.93	$46.69	$53.03	$36.37	$82.22
107	Deteriorating, RUG 18, age <=71	5.91	$2,065.72	$1,413.76	$23.07	$53.62	$89.94	$450.74	$34.59	$42.33	$17.41	$69.05
108	Deteriorating, RUG 18, age >=72	4.50	$1,366.64	$881.03	$13.62	$26.34	$44.71	$374.30	$26.64	$47.00	$30.24	$58.27
109	Terminal, RUG 4-16	4.30	$1,279.87	$876.69	$12.01	$30.37	$41.49	$297.31	$21.99	$0.00	$24.45	$70.22
110	Terminal, RUG 17-18	2.90	$944.54	$616.78	$7.88	$25.80	$60.90	$214.95	$18.23	$0.00	$16.76	$43.84

Table 5 Class 15, Maintenance and support, high need, without carer

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
A1	ACAT Plus'	per hour		$45	$0
A2	Accredited CCT assessment	per assessment		$120	$0
A3	Allied health therapy	per session		$45	$0
A4	Assessment - allied health, 1 discipline	per assessment		$45	$0
A5	Assessment - allied health, 2 or more disciplines	per assessment		$90	$0
A6	Assessment - medical only	per assessment		$70	$0
A7	Assessment - multidisciplinary	per assessment	1	$120	$120
A8	Assessment - nursing only	per assessment		$45	$0
B1	Bereavement counselling	for 3 months		$180	$0
B2	Bereavement support	for 3 months		$60	$0
C1	Case management/coordination – Level 1	for 3 months	1	$1,040	$1,040
C2	Case management/coordination – Level 2	for 3 months		$320	$0
C3	Case management/coordination – Level 3	for 3 months		$40	$0
C4	Case management/coordination – Level 4	for 3 months		$480	$0
D1	Centre-based day care	per day		$25	$0
D2	Diagnostic imaging	per test		$100	$0
G1	Group contact	per group		$20	$0
H1	Home help	per hour	13	$25	$325
H2	Home maintenance	per hour	3	$25	$75
M1	Meals	per day		$5	$0
M2	Medical treatment	per consult		$30	$0
M3	Medication dispensing, administration or supervision	per visit		$10	$0
M4	Medication prescription	per consult		$5	$0
M5	Monitoring via home visit	per visit		$25	$0
M6	Monitoring via other means	for 3 months		$50	$0

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
N1	Nursing - general interventions	per visit		$45	$0
N2	Nursing - technical intervention not elsewhere specified	per visit	26	$45	$1,170
O1	Other food services	per day		$5	$0
P1	Pathology testing	per test		$60	$0
P2	Patient education	per session		$30	$0
P3	Personal care including assistance with ADLs	per visit	182	$35	$6,370
P4	Provision of linen	per day		$10	$0
R1	Respite care	per hour	52	$25	$1,300
S1	Social support	per hour		$25	$0
S2	Counselling and support	per hour		$45	$0
T1	Transport	per trip	7	$10	$70
W1	Wound management	per visit		$25	$0
Total cost of expected community care package					**$10,325**

Expected duration: 13 weeks (3 months)

Total cost of package: $ 10,325 per quarter

Table 66 Class 16, Maintenance and support, high need, with carer

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
A1	ACAT Plus'	per hour		$45	$0
A2	Accredited CCT assessment	per assessment		$120	$0
A3	Allied health therapy	per session		$45	$0
A4	Assessment - allied health, 1 discipline	per assessment		$45	$0
A5	Assessment - allied health, 2 or more disciplines	per assessment		$90	$0
A6	Assessment - medical only	per assessment		$70	$0
A7	Assessment - multidisciplinary	per assessment	1	$120	$120
A8	Assessment - nursing only	per assessment		$45	$0
B1	Bereavement counselling	for 3 months		$180	$0
B2	Bereavement support	for 3 months		$60	$0
C1	Case management/coordination – Level 1	for 3 months	1	$1,040	$1,040
C2	Case management/coordination – Level 2	for 3 months		$320	$0
C3	Case management/coordination – Level 3	for 3 months		$40	$0
C4	Case management/coordination – Level 4	for 3 months		$480	$0
D1	Centre-based day care	per day		$25	$0
D2	Diagnostic imaging	per test		$100	$0
G1	Group contact	per group		$20	$0
H1	Home help	per hour	13	$25	$325
H2	Home maintenance	per hour	3	$25	$75
M1	Meals	per day		$5	$0
M2	Medical treatment	per consult		$30	$0
M3	Medication dispensing, administration or supervision	per visit		$10	$0
M4	Medication prescription	per consult		$5	$0
M5	Monitoring via home visit	per visit		$25	$0
M6	Monitoring via other means	for 3 months		$50	$0

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
N1	Nursing - general interventions	per visit		$45	$0
N2	Nursing - technical intervention not elsewhere specified	per visit	26	$45	$1,170
O1	Other food services	per day		$5	$0
P1	Pathology testing	per test		$60	$0
P2	Patient education	per session		$30	$0
P3	Personal care including assistance with ADLs	per visit	91	$35	$3,185
P4	Provision of linen	per day		$10	$0
R1	Respite care	per hour	52	$25	$1,300
S1	Social support	per hour		$25	$0
S2	Counselling and support	per hour		$45	$0
T1	Transport	per trip	7	$10	$70
W1	Wound management	per visit		$25	$0
Total cost of expected community care package					**$7,285**

Expected duration: 13 weeks (3 months)

Total cost of package: $ 7,285 per quarter

Table 77 Class 17, Maintenance and support, medium need, without carer

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
A1	ACAT Plus'	per hour		$45	$0
A2	Accredited CCT assessment	per assessment		$120	$0
A3	Allied health therapy	per session		$45	$0
A4	Assessment - allied health, 1 discipline	per assessment		$45	$0
A5	Assessment - allied health, 2 or more disciplines	per assessment		$90	$0
A6	Assessment - medical only	per assessment		$70	$0
A7	Assessment - multidisciplinary	per assessment	1	$120	$120
A8	Assessment - nursing only	per assessment		$45	$0
B1	Bereavement counselling	for 3 months		$180	$0
B2	Bereavement support	for 3 months		$60	$0
C1	Case management/coordination – Level 1	for 3 months	1	$1,040	$1,040
C2	Case management/coordination – Level 2	for 3 months		$320	$0
C3	Case management/coordination – Level 3	for 3 months		$40	$0
C4	Case management/coordination – Level 4	for 3 months		$480	$0
D1	Centre-based day care	per day		$25	$0
D2	Diagnostic imaging	per test		$100	$0
G1	Group contact	per group		$20	$0
H1	Home help	per hour	26	$25	$650
H2	Home maintenance	per hour	3	$25	$75
M1	Meals	per day	91	$5	$455
M2	Medical treatment	per consult		$30	$0
M3	Medication dispensing, administration or supervision	per visit		$10	$0
M4	Medication prescription	per consult		$5	$0
M5	Monitoring via home visit	per visit		$25	$0
M6	Monitoring via other means	for 3 months	1	$50	$50

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
N1	Nursing - general interventions	per visit		$45	$0
N2	Nursing - technical intervention not elsewhere specified	per visit		$45	$0
O1	Other food services	per day		$5	$0
P1	Pathology testing	per test		$60	$0
P2	Patient education	per session		$30	$0
P3	Personal care including assistance with ADLs	per visit	39	$35	$1,365
P4	Provision of linen	per day		$10	$0
R1	Respite care	per hour		$25	$0
S1	Social support	per hour	13	$25	$325
S2	Counselling and support	per hour		$45	$0
T1	Transport	per trip	7	$10	$70
W1	Wound management	per visit		$25	$0
Total cost of expected community care package					**$4,150**

Expected duration: 13 weeks (3 months)

Total cost of package: $ 4,150 per quarter

Table 88 Class 18, Maintenance and support, medium need, with carer

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
A1	ACAT Plus'	per hour		$45	$0
A2	Accredited CCT assessment	per assessment		$120	$0
A3	Allied health therapy	per session		$45	$0
A4	Assessment - allied health, 1 discipline	per assessment		$45	$0
A5	Assessment - allied health, 2 or more disciplines	per assessment		$90	$0
A6	Assessment - medical only	per assessment		$70	$0
A7	Assessment - multidisciplinary	per assessment	1	$120	$120
A8	Assessment - nursing only	per assessment		$45	$0
B1	Bereavement counselling	for 3 months		$180	$0
B2	Bereavement support	for 3 months		$60	$0
C1	Case management/coordination – Level 1	for 3 months		$1,040	$0
C2	Case management/coordination – Level 2	for 3 months	1	$320	$320
C3	Case management/coordination – Level 3	for 3 months		$40	$0
C4	Case management/coordination – Level 4	for 3 months		$480	$0
D1	Centre-based day care	per day		$25	$0
D2	Diagnostic imaging	per test		$100	$0
G1	Group contact	per group		$20	$0
H1	Home help	per hour	13	$25	$325
H2	Home maintenance	per hour	3	$25	$75
M1	Meals	per day		$5	$0
M2	Medical treatment	per consult		$30	$0
M3	Medication dispensing, administration or supervision	per visit		$10	$0
M4	Medication prescription	per consult		$5	$0
M5	Monitoring via home visit	per visit		$25	$0
M6	Monitoring via other means	for 3 months		$50	$0

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
N1	Nursing - general interventions	per visit		$45	$0
N2	Nursing - technical intervention not elsewhere specified	per visit		$45	$0
O1	Other food services	per day		$5	$0
P1	Pathology testing	per test		$60	$0
P2	Patient education	per session		$30	$0
P3	Personal care including assistance with ADLs	per visit	39	$35	$1,365
P4	Provision of linen	per day		$10	$0
R1	Respite care	per hour	26	$25	$650
S1	Social support	per hour		$25	$0
S2	Counselling and support	per hour		$45	$0
T1	Transport	per trip	7	$10	$70
W1	Wound management	per visit		$25	$0
Total cost of expected community care package					**$2,925**

Expected duration: 13 weeks (3 months)

Total cost of package: $ 3,645 per quarter

Table 99 Class 19, Maintenance and support, low need, old (85+ years)

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
A1	ACAT Plus'	per hour		$45	$0
A2	Accredited CCT assessment	per assessment		$120	$0
A3	Allied health therapy	per session		$45	$0
A4	Assessment - allied health, 1 discipline	per assessment		$45	$0
A5	Assessment - allied health, 2 or more disciplines	per assessment		$90	$0
A6	Assessment - medical only	per assessment		$70	$0
A7	Assessment – multidisciplinary	per assessment		$120	$0
A8	Assessment - nursing only	per assessment	1	$45	$45
B1	Bereavement counselling	for 3 months		$180	$0
B2	Bereavement support	for 3 months		$60	$0
C1	Case management/coordination – Level 1	for 3 months		$1,040	$0
C2	Case management/coordination – Level 2	for 3 months		$320	$0
C3	Case management/coordination – Level 3	for 3 months	1	$40	$40
C4	Case management/coordination – Level 4	for 3 months		$480	$0
D1	Centre-based day care	per day		$25	$0
D2	Diagnostic imaging	per test		$100	$0
G1	Group contact	per group		$20	$0
H1	Home help	per hour	13	$25	$325
H2	Home maintenance	per hour		$25	$0
M1	Meals	per day	91	$5	$455
M2	Medical treatment	per consult		$30	$0
M3	Medication dispensing, administration or supervision	per visit		$10	$0
M4	Medication prescription	per consult		$5	$0
M5	Monitoring via home visit	per visit	1	$25	$25
M6	Monitoring via other means	for 3 months		$50	$0

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
N1	Nursing - general interventions	per visit		$45	$0
N2	Nursing - technical intervention not elsewhere specified	per visit		$45	$0
O1	Other food services	per day		$5	$0
P1	Pathology testing	per test		$60	$0
P2	Patient education	per session		$30	$0
P3	Personal care including assistance with ADLs	per visit		$35	$0
P4	Provision of linen	per day		$10	$0
R1	Respite care	per hour		$25	$0
S1	Social support	per hour		$25	$0
S2	Counselling and support	per hour		$45	$0
T1	Transport	per trip	13	$10	$130
W1	Wound management	per visit		$25	$0
Total cost of expected community care package					**$1,020**

Expected duration: 13 weeks (3 months)

Total cost of package: $ 1,020 per quarter

Table 20 Class 20, Maintenance and support, low need, young (<=84 years)

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
A1	ACAT Plus'	per hour		$45	$0
A2	Accredited CCT assessment	per assessment		$120	$0
A3	Allied health therapy	per session		$45	$0
A4	Assessment - allied health, 1 discipline	per assessment		$45	$0
A5	Assessment - allied health, 2 or more disciplines	per assessment		$90	$0
A6	Assessment - medical only	per assessment		$70	$0
A7	Assessment – multidisciplinary	per assessment		$120	$0
A8	Assessment - nursing only	per assessment		$45	$0
B1	Bereavement counselling	for 3 months		$180	$0
B2	Bereavement support	for 3 months		$60	$0
C1	Case management/coordination – Level 1	for 3 months		$1,040	$0
C2	Case management/coordination – Level 2	for 3 months		$320	$0
C3	Case management/coordination – Level 3	for 3 months	1	$40	$40
C4	Case management/coordination – Level 4	for 3 months		$480	$0
D1	Centre-based day care	per day		$25	$0
D2	Diagnostic imaging	per test		$100	$0
G1	Group contact	per group		$20	$0
H1	Home help	per hour	13	$25	$325
H2	Home maintenance	per hour		$25	$0
M1	Meals	per day		$5	$0
M2	Medical treatment	per consult		$30	$0
M3	Medication dispensing, administration or supervision	per visit		$10	$0
M4	Medication prescription	per consult		$5	$0
M5	Monitoring via home visit	per visit	1	$25	$25
M6	Monitoring via other means	for 3 months		$50	$0

Typical interventions provided as part of planned Community Care package		Unit of costing	Frequency over 13 weeks	Unit cost	3/12 cost
N1	Nursing - general interventions	per visit		$45	$0
N2	Nursing - technical intervention not elsewhere specified	per visit		$45	$0
O1	Other food services	per day		$5	$0
P1	Pathology testing	per test		$60	$0
P2	Patient education	per session		$30	$0
P3	Personal care including assistance with ADLs	per visit		$35	$0
P4	Provision of linen	per day		$10	$0
R1	Respite care	per hour		$25	$0
S1	Social support	per hour		$25	$0
S2	Counselling and support	per hour		$45	$0
T1	Transport	per trip	13	$10	$130
W1	Wound management	per visit		$25	$0
Total cost of expected community care package					**$520**

Expected duration: 13 weeks (3 months)

Total cost of package: $ 520 per quarter

Table 101 Summary of cost of community care packages in 2000/2001

Total cost of expected community care package

Class No	Class Name	Duration of community care package	Total cost of expected community care package	Per year	Per week
Class 1	Palliative care, stable	3 months	$3,210	$12,840	$246.92
Class 2	Palliative care, unstable or deteriorating	2 weeks	$1,550	na	$775.00
Class 3	Palliative care, terminal	4 days	$1,016	na	$1,777.50
Class 4	Rehabilitation/functional gain, amputation	3 months	$3,690	$14,760	$283.85
Class 5	Rehabilitation/functional gain, brain dysfunction	3 months	$5,610	$22,440	$431.54
Class 6	Rehabilitation/functional gain, fractured NOF	4 weeks	$1,483	na	$370.87
Class 7	Rehabilitation/functional gain, stroke	6 weeks	$2,253	na	$375.45
Class 8	Rehabilitation/functional gain, all other	8 weeks	$2,662	na	$443.65
Class 9	Geriatric Evaluation and Management, high need, without carer	3 months	$10,980	$43,920	$844.62
Class 10	Geriatric Evaluation and Management, high need, with carer	3 months	$7,940	$31,760	$610.77
Class 11	Geriatric Evaluation and Management, medium need, without carer	3 months	$4,805	$19,220	$369.62
Class 12	Geriatric Evaluation and Management, medium need, with carer	3 months	$4,300	$17,200	$330.77
Class 13	Geriatric Evaluation and Management, low need, old (85 plus)	3 months	$2,735	$10,940	$210.38
Class 14	Geriatric Evaluation and Management, low need, young (<=84 years)	3 months	$2,235	$8,940	$171.92
Class 15	Maintenance and support, high need, without carer	3 months	$10,395	$41,580	$799.62
Class 16	Maintenance and support, high need, with carer	3 months	$7,355	$29,420	$565.77
Class 17	Maintenance and support, medium need, without carer	3 months	$4,220	$16,880	$324.62
Class 18	Maintenance and support, medium need, with carer	3 months	$2,995	$11,980	$230.38
Class 19	Maintenance and support, low need, old (85 plus)	3 months	$1,150	$4,600	$88.46

Class No	Class Name	Duration of community care package	Total cost of expected community care package	Per year	Per week
Class 20	Maintenance and support, low need, young (<=84 years)	3 months	$650	$2,600	$50.00
Class 21	Prevention and Early Intervention, old (85 plus)	3 months	$85	$340	$6.54
Class 22	Prevention and Early Intervention, young (<=84 years)	3 months	$40	$160	$3.08
Class 23	Diagnosis related acute and post-acute care, vascular	1 week	$1,110	na	$1,110.00
Class 24	Diagnosis related acute and post-acute care, neurological/dementia	2 weeks	$1,480	na	$740.00
Class 25	Diagnosis related acute and post-acute care, cardiac	6 weeks	$480	na	$80.00
Class 26	Diagnosis related acute and post-acute care, COPD	6 weeks	$480	na	$80.00
Class 27	Diagnosis related acute and post-acute care, infections requiring IV antibiotics	1 week	$1,200	na	$1,200.00
Class 28	Diagnosis related acute and post-acute care, all other medical conditions	2 weeks	$580	na	$290.00
Class 29	Diagnosis related acute and post-acute care, wound management without complications	2 weeks	$835	na	$417.50
Class 30	Diagnosis related acute and post-acute care, wound management with complications	4 weeks	$1,865	na	$466.25

Table 112 Summary of cost of community care packages and comparison with the cost of Commonwealth-subsidised aged care in 2000/2001

	day	week	year
Class 3	$253.93	$1,777.50	na
Class 27	$171.43	$1,200.00	na
Class 23	$158.57	$1,110.00	na
Class 9	$120.66	$844.62	$43,920
Class 15	$114.23	$799.62	$41,580
Class 2	$110.71	$775.00	na
RCS 1	$107.85	$755	$39,365
Class 24	$105.71	$740.00	na
RCS 2	$97.49	$682	$35,584
Class 10	$87.25	$610.77	$31,760
Respite High	$83.94	$588	$30,638
RCS 3	$83.94	$588	$30,638
Extended Aged Care in the Home Scheme	$82.26	$576	$30,025
Class 16	$80.82	$565.77	$29,420
Class 30	$66.61	$466.25	na
Class 8	$63.38	$443.65	na
Class 5	$61.65	$431.54	$22,440
RCS 4	$59.65	$418	$21,772
Class 29	$59.64	$417.50	na
Class 7	$53.64	$375.45	na
Class 6	$52.98	$370.87	na
Class 11	$52.80	$369.62	$19,220
Class 12	$47.25	$330.77	$17,200
Class 17	$46.37	$324.62	$16,880
Class 28	$41.43	$290.00	na
Class 4	$40.55	$283.85	$14,760

	day	week	year
RCS 5	$35.80	$251	$13,067
Class 1	$35.27	$246.92	$12,840
Class 18	$32.91	$230.38	$11,980
Class 13	$30.05	$210.38	$10,940
Respite Low	$29.67	$208	$10,830
RCS 6	$29.67	$208	$10,830
CACP	$29.12	$204	$10,629
Class 14	$24.56	$171.92	$8,940
RCS 7	$22.78	$159	$8,315
Class 19	$12.64	$88.46	$4,600
Class 25	$11.43	$80.00	na
Class 26	$11.43	$80.00	na
Class 20	$7.14	$50.00	$2,600
Class 21	$0.93	$6.54	$340
Class 22	$0.44	$3.08	$160