
7 Productivity in aged care

Key points

- Productivity growth in aged care is important. It allows providers to reduce costs in providing services, absorb cost increases and/or improve service quality. From a fiscal perspective, productivity improvements could lessen upward pressure on public expenditures.
- Measuring productivity growth in the aged care sector is challenging due to:
 - limited data availability
 - client and service diversity, including differences in service quality.
- A study by the Centre for Efficiency and Productivity Analysis (University of Queensland) suggests that if all Australian residential aged care facilities were to operate on a notional best practice frontier and restructuring occurred to realise opportunities for improved economies of scale, there could be efficiency gains of around \$1.6 billion (in 2002-03 dollars).
 - However, realising all of these gains is not possible as some differences in efficiency are due to factors — such as remoteness — which are beyond the control of individual providers. Further, securing improvements would require new investment and involve adaptation costs. Even so, there appears to be considerable scope for worthwhile improvements.
- Substantial productivity gains have been realised by some providers in recent years through the use of flexible workplace agreements, investing in better technology and restructuring their activities.
- Opportunities to further improve productivity in the aged care sector may result from:
 - extending better practices in enterprise bargaining across the sector, improving the use of information and assistive technologies to lessen costs and additional restructuring of activities
 - relaxing or redesigning regulatory settings which unnecessarily raise the cost of providing services and/or impair competition and other incentives for enhancing efficiency.

This chapter outlines why productivity growth is important, discusses issues related to productivity measurement (including quality aspects) and examines productivity levels in residential care. It also identifies some emerging opportunities to improve productivity within aged care by using information and assistive technologies, improving workplace flexibility and reducing excessive regulatory burdens. In the

absence of appropriate data and studies covering productivity movements in community care, the focus is on residential care.

7.1 Why is productivity growth important?

In the context of aged care, productivity growth is important because it enables service providers to reduce costs in providing services, absorb cost increases and/or improve service quality. Aged care clients could benefit from productivity improvements through downward pressure on user contributions and access to higher quality services. From a fiscal perspective, productivity improvements in the delivery of aged care as well as other social services lessen upward pressures on public expenditures.

How the benefits of productivity growth are shared among stakeholders is likely to depend on the extent of competition in the market for aged care services and the influence of funding and regulatory arrangements on cost sharing and service provision. Consumers are likely to benefit more where there is greater contestability and competitiveness in the market as service providers are encouraged to pass on the benefits to consumers or risk losing clients.

Although the importance of productivity growth in aged care is generally accepted, analysts and commentators are divided over the scope for growth.

Many industry analysts argue that the scope for further productivity improvement is limited. They point to the large proportion of clients who require hands-on care which is inherently time and labour intensive. Reflecting this, Aged Care Australia (1998, p. 11) has claimed that ‘the opportunities for productivity gains by nursing homes through enterprise bargaining or through the substitution of labour inputs with equipment are extremely limited’. This is due to:

... the nature of the industry, quality care standards, the high level of productivity and staff flexibility that already exists, and insufficient funding or productivity gains to offset further changes in working conditions. (Aged Care Australia 1998, p. 11)

Faced with the prospect of limited productivity improvement, these analysts highlight growing constraints on the capacity of aged care providers to attract resources, particularly labour resources, arising from the challenge of the so-called Baumol effect. In general, industries experiencing higher rates of productivity growth have the ability to pay higher returns to factors of production, such as labour and capital. As a result, rising wages in industries with strong productivity growth impose cost pressures on industries with lower productivity growth, particularly the labour intensive service industries with limited opportunities for raising productivity (McLachlan, Clark and Monday 2002; AIPC 2003).

Over the last decade or so, the health sector (including the acute care sub sector) has undergone a number of reforms. These have included a shift to case mix funding and changed work practices to make better use of staff. Changes to regulations to enhance incentives for productivity growth have also facilitated improvement, as have advances in technology.

Despite this, the Australian Institute for Primary Care (AIPC 2003, p. 11) maintains that residential aged care providers:

... cannot match the productivity gains made in the acute care sector where technology and workforce reforms have significantly reduced length of stay and thereby unit costs. Over time, as wage rates in related sectors flow through to aged care, unit costs for the delivery of care rise.

Some analysts are less pessimistic about the opportunities for improving productivity in aged care, particularly in areas with relatively high levels of regulatory control. As the Hogan Review (2004, p. 289) highlights:

All the work on the aged care industry supported and funded by the Review points to the large potential gains in efficiency and productivity to be secured by changes in policy towards some regulatory features bearing on providers.

For example, some providers wanting to diversify or expand their operations to secure improved economies of scale and scope claim they have been stymied by the needs based planning approach and other regulations (CEPA 2003; IBIS Care 2007; TriCare 2007). In addition, targeted reforms including changes to permit greater competition would provide additional incentives for improving productivity. This could, for example, be achieved by relaxing bed and place allocation restrictions and relying on ACAT assessment criteria to determine an entitlement for services (Hogan Review 2004; Ergas 2006).

Other opportunities for productivity growth may arise from adopting more flexible workforce practices, improving management practices, using assistive and information technologies more widely and changing regulatory arrangements to facilitate innovation and improvements in efficiency.

7.2 Measuring productivity

What is productivity?

Productivity measures provide a basis for assessing and comparing production and service activities in terms of the amount of inputs (labour, capital, materials) required to generate outputs. Productivity *levels* measure the ratio of outputs to inputs at a point in time, for example, the number of aged care clients handled per

full time equivalent staff. Measures of efficiency (allocative, productive and dynamic — chapter 4) capture different underlying influences which combine to shape both productivity levels and growth.

Productivity *growth* arises where output growth exceeds input growth over a specified period. Evidence of productivity growth usually means that ways have been found to generate more output from given inputs or to produce the same output with fewer inputs.

How is productivity measured?

Productivity is often measured in relation to a single input, such as labour or capital, yielding a partial measure of productivity performance. Labour is the most commonly used partial measure because data are often readily available and, for many service industries, it is the single most important input. Indeed, in the case of aged care, labour's share of input costs is dominant, typically ranging from around 65 per cent for low care residential services to around 80 per cent for HACC services (Access Economics 2004).

However, partial measures of productivity can be misleading because they tend to attribute all productivity change to a single factor and fail to capture changes in the use of other inputs.

Multifactor productivity (growth in output relative to the combined contribution of key inputs, usually labour, capital and intermediate goods and services) provides a more comprehensive productivity measure. This is particularly important in the aged care sector where providers have realised efficiency gains by altering their use of capital and different types of labour inputs. Examples include the introduction of lifting devices in residential aged care facilities and the increased use of personal carers relative to registered nurses. In this latter case, if the measure of labour inputs is purely a physical one (such as full time equivalent staff) then labour substitution which may facilitate reduced wage costs would not be captured as a productivity improvement (presuming no change in quality adjusted output).

The choice between partial and multifactor productivity measures is generally influenced by the purpose of productivity measurement but also by the availability and quality of data. Limitations in available data often heavily circumscribe productivity analyses in the health and welfare sectors. Indeed, for Australia, the Commission is aware of only one study of productivity covering aged care services and this study only covers residential care (section 7.3).

Defining and measuring the intangible outputs of service industries, such as health services, aged care and educational instruction, can be more difficult than for

physical products associated with agricultural and manufacturing processes (Dean 1999; Bloor and Maynard 2001; McLachlan, Clark and Monday 2002; Jacobs, Smith and Street 2006). This arises because a single output indicator (such as the number of beds occupied or home-based services dispensed) often does not adequately capture various dimensions of an industry's output, including service quality. Further, the inputs to, and outputs from, service industries can be more heterogeneous than in goods producing industries. For example, in the residential aged care sector, the majority of international studies attempt to deal with output heterogeneity by categorising patients according to broad dependency levels, which may not accurately reflect the associated input combinations.

Further, the treatment of quality has far-reaching consequences for productivity measurement. Quality is an integral dimension of both inputs used, and outputs generated, for many industries and should be taken into account to avoid biases in measured productivity (Gullickson and Harper 1999; OECD 2001). Improvements in output (input) quality need to be taken into account when measuring productivity growth to avoid understating (overstating) real productivity growth (McLachlan, Clark and Monday 2002). This is particularly relevant for Australia's aged care sector where providers face pressure to improve residential care standards through a mandated system of continuous quality improvement (chapter 5).

Of particular importance to service industries, such as aged care, is the effect on productivity growth of changing labour force composition (OECD 2001). Measuring productivity in terms of quality adjusted labour inputs provides a better measure of labour's contribution to production, particularly in those industries where the workforce is becoming more diverse. For example, using quality adjusted labour input measures may help to explain growth arising from investment in human capital or changes in the labour force mix. Techniques used to adjust the number of hours worked to allow for differences in input quality typically use characteristics such as occupation, education and experience. Adjusting for quality in aged care may be particularly relevant where there has been a substantial shift towards using lower skilled staff that have been trained to provide safe, quality care for a specific range of activities. Without an adequate adjustment for quality, comparisons between firms at an industry level or across countries could be misleading.

7.3 Performance of the residential aged care sector

The Hogan Review (2004) commissioned the Centre for Efficiency and Productivity Analysis (CEPA) at the University of Queensland to examine the efficiency of Australia's residential aged care sector. The CEPA study drew on data derived from a KPMG survey. The first stage of the study assessed the technical and

scale efficiency of a representative sample of facilities using data envelopment analysis (box 7.1). A second stage investigated the importance of factors affecting the observed performance of these facilities.

Box 7.1 Estimating technical and scale efficiency using data envelopment analysis

Data envelopment analysis (DEA) is a linear programming technique that identifies those providers able to produce the highest level of services with a given set of inputs, or to produce a given level of services with the least amount of inputs. Other service providers receive an efficiency score determined by their performance relative to the best performers. This technique can be used to identify the likely origins of 'efficiency gaps' relative to the best providers.

Technical efficiency is the ability to convert inputs (such as labour and capital) into outputs (such as days of care) and is measured with reference to the 'efficiency frontier' defined by the most productive providers. Organisations that are the most productive are considered to be technically efficient.

Scale efficiency measures the degree to which changing the size of a facility could improve its ability to operate more efficiently.

DEA is often employed to compare health and aged care organisations because:

- it can readily incorporate multiple inputs and outputs to measure technical (and scale) efficiency levels can be determined as well as possible sources of inefficiency
- it is potentially a useful tool for benchmarking by identifying 'best practice' role models for other providers.

However, there can be limitations with DEA, including:

- producing results that are particularly sensitive to the presence of 'outliers'
- measuring efficiency only relative to best practice within a particular sample.

While DEA is a useful tool for examining the efficiency of residential aged care facilities, the challenge in undertaking policy relevant studies is to identify the drivers of efficiency variations (such as regulatory impediments and management quality), especially those that could be changed through improved policy settings.

Sources: SCRCSSP (1997); CEPA (2003).

The results from the CEPA's preferred model (box 7.2) suggest that if all facilities operated with a technical efficiency equivalent to the best performers, then combined input usage could have been reduced by 17 per cent or \$1.1 billion in 2002-03 (Hogan Review 2004). This notional efficiency gain could, alternatively, have allowed providers to care for an additional 23 100 clients at the dependency levels that existed in 2002-03. The average level of technical efficiency (83 per cent) present in Australia's residential aged care facilities is broadly

comparable with that determined by international studies which have used similar methods of analysis (box 7.3).

Box 7.2 Technical aspects of the CEPA study

CEPA undertook a two stage analysis to calculate the technical efficiency of each residential care facility relative to the best performers and the factors likely to influence their performance.

KPMG collected data from 912 aged care facilities across Australia, representing around a third of all facilities. However, largely due to incomplete responses, data from around 500 facilities was used in calculating the level of technical efficiency. Broadly speaking, the sample was fairly representative of the population except for two categories that were underrepresented: Queensland and privately owned facilities.

In the first stage, DEA and stochastic frontier analysis (SFA) were used to calculate the level of technical efficiency using a variety of specifications. The analysis specified a combination of input variables (number of beds or facility area, labour costs and other costs) that were used to deliver bundles of care services. These services (or 'outputs') were measured in two ways: scores reflecting assessed needs for accommodation, personal care, nursing needs and cognitive and emotional behaviours; and the number of high and low care bed days provided.

DEA was the preferred method as it produced more information on the level of technical and scale efficiency and the results were considered more robust. It has also been the preferred method in many similar international studies. However, DEA can be susceptible to data noise (that is, data errors and omitted variables) — when the initial results were compared with those from SFA, the mean technical efficiency scores from DEA were significantly lower. As a result, CEPA concluded that the DEA results were most likely affected by measurement error, unlike those from the SFA which explicitly deals with data noise. Accordingly, the sample was adjusted by removing the initial set of frontier firms and recalculating the DEA technical efficiency scores so that they were closer to those obtained by SFA. The preferred DEA model specified outputs in terms of high care and low care bed days using inputs of labour costs, other costs and facility floor area (a proxy for size).

In the second stage, a multivariate (Tobit) regression analysis was performed on the adjusted technical inefficiency scores from the DEA calculations to investigate the importance of a number of environmental and inefficiency factors that may have influenced the performance of residential aged care facilities. Most factors were not found to be statistically significant and, reflecting this, much of the variation in technical efficiency could not be explained. This suggests that other factors beyond the scope of the analysis influence the performance of facilities.

Source: CEPA (2003).

The feasibility of realising these improvements is constrained, at least in the short to medium term, by fixed capital and policy settings which limit the scope for restructuring to secure least cost outcomes. Further, choices made by governments as to the level and quality of service delivered to satisfy equity and social objectives impact on the costs of delivery and often involve a trade-off between cost and outcomes.

An array of factors influence the productivity performance of residential aged care providers including:

- location — state and remoteness (capital city, other metropolitan, rural, remote)
- ownership status
- quality of care
- chain membership
- proportion of complex and special needs clients within a facility's case mix (Indigenous, culturally and linguistically diverse, respite, concessional).

In all, the CEPA study tested the importance of a wide range of environmental and inefficiency factors in explaining differences in technical efficiency across the sample. Although several factors were found to be likely determinants of efficiency, most (84 per cent) of the variation in their preferred model was caused by unknown factors. Further, of those factors that were found to be significant, many are beyond the control of individual operators, for example, the location of facilities. Despite the obvious modelling limitations, the results of the preferred model suggested that, on average:

- The location of aged care facilities can affect their relative efficiency. Although some states may not be significantly different from others, variations in observed efficiency may reflect differences in input prices or other characteristics (for example, the lower average efficiency score of Victorian facilities may reflect the larger number of government services in that State).
- Remote residential aged care facilities were found to be less efficient (but not statistically so) compared to providers in other locations, in part due to the increased costs of employing labour (especially skilled labour).
- For-profit facilities were found to be more efficient than not-for-profit facilities and substantially more efficient than government facilities. This is consistent with international studies (box 7.3). These results may reflect the stronger incentive mechanism associated with a commercial operation. However, the study also found that for-profit providers were less likely to operate rural and remote services where lower efficiency scores were typically observed. Further,

for-profit facilities may select less complex clients in an operating environment where demand is high.

- Quality factors, as proxied by certification scores, were found to significantly affect efficiency in the provision of residential aged care. Indeed, facilities with certification scores above the minimum proscribed standard were found, in general, to register lower efficiency scores, reflecting the higher costs of providing a higher standard of care.
- There appeared to be little difference in the average efficiency scores between providers operating more than one facility (that is, chain providers) and independent providers. This result is possibly affected by the existence of quasi-chains operating in the not-for-profit sector, such as religious or charitable affiliates, where members are effectively part of a broader organisational group or entity but act like individual operators and are not, therefore, able to capture the benefits of economies of scale or scope. International studies indicate that chain providers generally have higher average efficiency scores (box 7.3).
- Facilities catering for complex and special needs groups were found to register lower notional levels of efficiency. For example, Indigenous and culturally and linguistically diverse clients appear, on average, to require more inputs, reflecting their higher servicing requirements. Facilities accommodating a higher proportion of respite patients were found to be less efficient, reflecting the greater administrative burden associated with admission and discharge procedures. However, facilities with a higher proportion of concessional residents were found to register higher notional efficiency scores possibly reflecting the benefits of providing a largely standardised service to these clients.

The study also estimated that costs could be reduced by up to a further 7 per cent, or \$470 million in 2002-03, through structural adjustment to improve the scale efficiency of the sector (CEPA 2003). However, these additional gains may be overstated. For example, it is likely that smaller facilities (those with less than 30 beds) are heavily represented in rural and remote areas where larger facilities are not practical and occupancy rates are often lower than in more densely populated locations.

Due to limitations in the range of data available, the CEPA study was unable to address broader policy questions, such as the extent to which different management practices impact on the efficiency of aged care facilities or the degree to which identified inefficiencies were caused by regulatory settings as distinct from variations in the quality of management.

Box 7.3 International efficiency studies of residential aged care

Several international studies have examined the efficiency of residential aged care facilities. In examining the results of these studies and their implications for Australia, it is important to recognise inter country differences in the structure of aged care services as well as in their corresponding regulatory frameworks.

A study of long-term care units in Finland found average technical and scale efficiencies of 0.85 and 0.92 respectively using data collected in 1995 (Bjorkgren et al. 2001). However, the study's sample size was relatively small and only publicly owned facilities were examined. In addition, quality of care was not controlled for in the analysis.

A study of Dutch nursing homes over the period 1984 to 1993 estimated average technical and scale efficiencies of 0.89 and 0.94 respectively (Eggink and Blank 2000). Nursing homes that provided care solely to physically disabled patients were found to have higher efficiency when compared with homes providing services exclusively to psycho-geriatric patients. Higher notional efficiency scores were also found in homes with a higher proportion of males and high occupation rates.

Various studies of nursing home efficiency in the United States that used DEA have calculated technical efficiencies between 0.66 and 0.89 (CEPA 2003). In general, for-profit nursing homes were found to have higher efficiency scores than not-for-profit providers while increased quality of service provision was found to reduce efficiency scores (see, for example, Nyman and Bricker 1989; Fazel and Nunnikhoven 1992).

A study using data collected in 1996 on Florida nursing homes found that without controlling for quality, for-profit facilities were slightly more efficient than their independent (non-chain) and not-for-profit counterparts. However, chain affiliated facilities scored lower on quality than independents and for-profit facilities scored lower on quality than not-for-profit facilities (Anderson et al. 2003).

Hence, it remains unclear how much of the assessed efficiency gap could be captured by improved management and work practices. Accepting that some of the efficiency gap may have arisen due to differences between operators that are beyond their control (such as a remote area location and the attendant higher costs of operation) some of the gap undoubtedly reflects genuine differences in operator efficiencies.

As noted above, regulation as a source of inefficiency was not examined explicitly by the CEPA study. Importantly, however, as recognised by the Hogan Review (2004), the design and administration of regulation can have a significant effect on the performance of the aged care sector by constraining the flexibility of providers to efficiently allocate resources. For example, the current bed allocation system may restrict capital investment decisions. This could result in sub-optimal sized facilities being constructed. It also constrains competition between providers.

Exploring opportunities for improving the efficiency and effectiveness of existing policy settings and some specific regulations within aged care will assume growing importance in the coming years as the sector and governments respond to the challenge of meeting the growing demands for, and costs of, aged care services.

7.4 Some emerging opportunities for improving productivity

In light of the research undertaken for the Hogan Review (including by CEPA) and the experiences of the health sector (see, for example, PC 2006), there are opportunities for providers to improve their productivity by adopting innovative practices in their operations within the existing regulatory framework. Beyond this, from a forward looking perspective, removing unnecessary regulatory constraints and improving the effectiveness of remaining regulations across the sector offers scope for further productivity improvements (Hogan Review 2004; Ergas 2006).

In examining the opportunities for productivity improvements, however, there is limited research available to indicate their relative size and to whom the benefits would accrue. Quantification of the potential for productivity gains is beyond the scope of this study and is not attempted in the following analysis.

Opportunities for providers to improve their productivity

The earlier analysis of the results of the CEPA study (2003) suggest that significant productivity gains within the current regulatory framework are possible if more providers were to adopt the practices of the better performers. However, in practice, the scope to realise these gains is likely to be circumscribed by factors beyond the control of individual operators (section 7.3). Further, some industry representatives and providers maintain that the scope to achieve productivity gains by making changes within their operations has already largely been exhausted (see box 7.6).

But the industry, and therefore the productivity frontier, is dynamic. Industry leaders continue to innovate, thereby creating new best practice benchmarks. This affords further opportunities for other providers to extract productivity gains from adopting these practices in an environment of continual improvement.

Insights from some providers and industry representatives are drawn on to give illustrative examples of ‘best practice’.

Information technology

Greater use of information technologies can contribute to productivity gains in a number of ways. They enable more efficient data capture, storage and shared access and can augment productivity gains arising from greater use of some assistive technologies.

Digitally recording clinical assessments and other data at the bedside and transferring them using broadband and wireless technology can facilitate clear and concise communication between staff. For example:

IBIS Care has introduced a fully computerised management system into all of its facilities ... focussed on care/clinical management with all assessment, care planning and evaluation carried out on computers ... The introduction of this system has:

- Reduced significantly documentation and paperwork at all staff levels
- Increased the capacity of our care staff to provide more care and services to residents
- Reduced administration of reporting systems and collection of data — for example, Head Office (HO) has access to each of the facilities systems and if a problem is identified such as a resident complaint or significant event, HO staff can easily access the records to provide advice and assistance to facility staff and management rather than wait for the information to be collated and faxed, etc. (IBIS Care 2007, p. 5)

Further, wider use of these systems could reduce the likelihood of duplicate records and mistakes caused by transcribing information (DoHA 2005a).

Adopting compatible information technology platforms that better integrate health and aged care settings may also lead to productivity improvements. For example, such integration could reduce the incidence of medication and other errors that occur when clients are transferred between aged care facilities and health care providers such as hospitals and general practitioners (DoHA 2005d).

There are also opportunities to more efficiently organise and schedule community care services. For example, some providers are now employing geographic information systems to reduce service scheduling and transport costs. Initial applications of these systems to community care indicate that these costs may be reduced by over a third (Howie 2008). Use of these systems can increase productivity directly and also generate indirect benefits through reduced management and administration costs, reduced staff turnover and improved client satisfaction.

It needs to be recognised, however, that it may prove difficult for some providers to upgrade their systems in line with advances in best practice. In particular, the cost and time associated with purchasing and installing the software and hardware, and

subsequent staff training may diminish the net benefits from implementing information technology solutions. In this context, Holy Family Services (2007, p. 3) note they:

... have looked at the options available ... to utilise IT advances in managing communications, resident records and regulatory obligations. At this point, given the extremely high costs for software and hardware required and few clear benefits, we have taken the matter no further. It remains under review and consideration as we expand our organisation and mix of services.

Assistive technologies

Assistive technologies can contribute to productivity growth by reducing the care burden on formal and informal care givers. These technologies encompass devices, systems or designs that allow individuals (both carers and clients) to perform tasks that they would otherwise be unable to do, or increase the ease and safety with which tasks may be performed (ILCA nd). As noted by Catholic Health Australia (CHA 2007a, p. 3), ‘advances in assistive technologies will increasingly be used in home care and to some extent residential care as the workforce shortage grows’.

Assistive technologies can enhance client independence, thereby reducing the level of care required and raising staff productivity. For example, the use of portable aids (such as canes, walkers and lifting devices), structural modifications (such as grab bars and ramps) and other devices (such as medication reminders and dispensers, emergency call devices and global positioning system bracelets — box 7.4) may reduce the amount of supervision needed in both community and residential care settings. Even simple assistive technologies, such as Velcro closures on clothing or leveraged jar openers, have the potential to increase the functional independence of older persons (Elliot 1992). These technologies may create opportunities for improving labour productivity and/or service quality through enhanced scope for contact between staff and clients covering, for example, social activities.

In conjunction with information technology networks, more sophisticated monitoring and scheduling systems can allow staff to spend more time with clients and increase the quality of care provided (ACSA 2007c). For example, centralised networks can monitor client movements and activities remotely and allow routine tasks, such as controlling air conditioning, lighting and opening and closing doors, to be performed more efficiently. An analysis of the application of wireless technologies in a Canadian long-term care facility estimated that staff productivity gains of up to 25 per cent could be achieved by using small pendants, equipment tags and location monitoring sensors to quickly locate equipment and identify staff and residents (Klassen 2008). As a result, more time would be available to focus on client care.

Box 7.4 **Examples of assistive technology for the aged**

Assistive technologies encompass a wide variety of types and applications. They have the potential to improve provider productivity either directly or through improving client independence and include:

- Medication dispensers — automatically provides access to the correct medication by using visual and audible alerts to the user when required. An alert is raised with a monitoring centre or carer if the medication is not taken.
- Personal monitoring devices such as bracelets, emergency call buttons and sensors. These devices allow client monitoring from a remote location while still permitting an immediate response in the case of an emergency. Global positioning system bracelets are especially useful for monitoring clients who tend to wander or stray, such as those with dementia.
- Intelligent keyless entry — when a client leaves their house or room, a swipe of their finger can turn off all lights, lock the doors, close the blinds and turn off the air conditioning. Upon returning, a finger swipe will turn all devices back on.

Source: Soar and Croll (2007).

Employing assistive technologies can also reduce physical injury among formal and informal care workers. As discussed in chapter 6, staff injury can arise from regularly moving clients in aged care settings. The installation and proper use of lifting devices throughout community and residential settings could reduce the number and duration of worker compensation claims. Of course, the benefits of reducing the likelihood of physical injuries arising from caring activities also extends to informal carers in home settings.

Work practices

As noted to in chapter 6, opportunities for productivity growth may arise through creating more flexible work practices and a supportive workplace.

Over the past decade, collective and individual employment agreements (including enterprise bargaining agreements (EBAs)) have enabled greater flexibility in service delivery that was not possible under the traditional award structure (box 7.5). Although the extent of these efficiency gains is not easily measured, some providers indicate gains in operational efficiencies in areas such as staff deployment. For example, Mercy Aged Care (2007, p. 2) maintains:

Whilst EBAs have enabled improvements to cost structures and service quality, the main improvements have been in relation to flexibility of service delivery. Awards are extremely prescriptive of staffing duties and mirror outdated task orientated practices.

To meet increasing demand for higher quality and flexibility, EBAs allow providers to design the workforce to meet services requirements.

In some instances, these efficiency gains have been used to provide more competitive wages than would otherwise have been possible. This has improved the capacity of these providers to retain valuable employees and lessened staff turnover.

Improved support services for employees may also generate further improvements in operational efficiency. Examples of such initiatives include child minding, flexible meal breaks that provide opportunities to attend to family responsibilities and offering casual relief work to employees on long term unpaid leave (Office of Industrial Relations NSW 2004). Enhanced flexibility of this nature can reduce the need to employ agency staff and lessen staff turnover and absenteeism, resulting in cost savings and improvements in the continuity of care.

Box 7.5 Flexible work practices introduced through innovative workplace agreements

The introduction of innovative workplace agreements has enabled some aged care providers to use workers more effectively by introducing greater flexibility into their operations.

TriCare, for example, has implemented a single (Union certified) collective agreement covering all levels of staff. Improvements in productivity have been achieved by:

- the abolition of demarcations — staff may now undertake any duty for which they have been properly trained
- the replacement of a seniority based career structure with a competency based structure
- the development of some aged care specific competencies
- easier access to additional hours and duties for permanent staff
- organisational funding for external training courses in exchange for guaranteed periods of service
- financial recognition of cross training in other areas.

That said, TriCare is of the view that the scope for further productivity gains through new workplace agreements is limited.

Source: TriCare (2007).

Restructuring activities

Aged care providers may realise productivity growth by restructuring their activities in various ways, such as increasing the scale of their operations, outsourcing auxiliary services and/or adjusting the mix of capital and labour to reflect changes in relative prices.

In some instances, residential providers may be able to achieve greater scale economies by increasing the number of facilities they own or manage, streamlining administrative activities and extending their purchasing power.

A recent analysis of the residential care sector noted that there is evidence of some consolidation occurring among providers although ownership is still thinly spread. This consolidation is taking a variety of forms including rationalisation of smaller units among religious groups and the creation of larger operating units through acquisitions (Grant Thornton 2007).

However, increasing the scale of operations may not always be feasible for smaller facilities that are not attractive merger targets or for providers operating in remote areas. To assist single facility providers, the Hogan Review (2004) advocated the formation of cooperatives to secure gains in managerial accounting, technological and educational arrangements not available to any one entity acting alone. In response to industry demand, ACAA established Aged Care Efficiency Services to assist providers by offering a service to reduce facility operating costs by acting collectively and exerting purchasing power. This initiative has achieved savings of over 20 per cent in areas such as telephony, office stationary, energy and food products (ACES nd).

By reducing the risks associated with their activities, some providers have been able to lower the costs of insurance and improve productivity as a result. For example, TriCare (2007, p 10):

... acquired from Q-comp a self-insurance licence enabling the company to internally manage its workers compensation claims and it is self insured through Aged Care Employers Self-Insurance Group. The result is that TriCare has comprehensive risk management standards, employee orientation processes aligned with those standards, policies and procedures for self insurance and an emphasis on workplace health and safety. TriCare has secured sufficient savings in premium outlays while reducing injury rates in conjunction with a focus on good practice, process and training.

There may also be scope to outsource some auxiliary activities to improve the productivity of aged care facilities (such as administration, food preparation and laundry services). Employing contractors for various tasks has, for some, generated greater cost efficiencies than providing these services 'in-house'.

Opportunities to realise productivity gains through regulatory reform

Further opportunities for productivity improvement could be secured through changes to the regulatory regime directed at improving its overall effectiveness. Regulation of the aged care sector exists to satisfy certain social and economic objectives, such as the provision of quality services, equity of access and management of the government's fiscal exposure. Hence, the case for regulatory reform needs to consider the effectiveness of the existing regulatory regime in addressing these objectives and the scope for changes to this regime to secure more cost effective outcomes.

Industry representatives, providers and analysts maintain that a number of regulations constrain the ability of the sector to effectively and efficiently respond to changes in the demand for aged care services (box 7.6). In particular, they maintain that the current regulatory regime weakens incentives for providers to invest in ways that could potentially enhance their productivity.

Box 7.6 **Some views on the scope to improve productivity through regulatory reform**

Aged Care Association of Australia:

The aged care industry is one of the most heavily regulated segments of the Australian economy. Whilst recognising the need to protect the most frail persons in our society, ACAA believes that it is counter productive to pursue excessive regulation and compliance at the expense of efficient administration and service quality delivery. (ACAA 2007b, p. 5)

Holy Family Services:

Aged care remains the most regulated and monitored of the whole of health care. All this compliance costs substantial time and money. (Holy Family Services 2007, p. 4)

TriCare:

The current width and breadth of regulation of the sector as identified in the Hogan Report remains unchanged in 2007. Consequently, the opportunity to improve both efficiency and cost effectiveness remains severely limited. TriCare sees no significant opportunities over the next 10–15 years unless there is fundamental reform of the regulatory regime, particularly in the following areas of bed allocation, extra service quotas, high care capital funding mechanisms and care funding. (TriCare 2007, p. 13)

Professor Warren Hogan:

Regulation serves to shield providers from the competition which would induce greater efficiencies and improved quality of service ... What is being witnessed in this major service sector activity is a playing out of the familiar competition versus protection scenario witnessed in Australia's international trade two decades ago. And this prevails while national competition policies are supposedly in place to ensure competitive outcomes which will secure gains in efficiency and quality. (Hogan 2007, pp. 6–7)

Analyses by various industry bodies together with the Commission's analysis in chapter 4, indicate that poorly designed regulations constrain the capacity of the sector to operate efficiently and undertake appropriate investments. Some key areas include:

- the supply of aged care services
- excessive building certification
- inconsistency in accommodation bonds across service types
- contract management in community care
- the subsidy mechanism for residential care.

Supply

As outlined in chapter 4, regulations restricting the supply of aged care services reduce efficiency within the market for these services. There are two 'gatekeeper' mechanisms in aged care — a planning/allocation system and an aged care assessment process. The former determines the number, location and allocation of aged care places. In addition, the eligibility of individuals to access aged care services is dependent on the evaluation of an ACAT. Inefficiency arises where these mechanisms do not work in concert to deliver appropriate care, such as where clients meet the assessment requirements but are unable to access services.

The planning and allocation system effectively lessens competition between providers, thereby reducing incentives for cost consciousness, efficiency improvement and innovation in service delivery. Relaxing this barrier to entry would create more competition in the market for aged care services. Beyond this, restrictions over the quantity and type of extra service places impose additional constraints on the capacity of residential service providers to accommodate client preferences. Any concerns about the quality and safety of care within a more competitive environment could be addressed through existing quality assurance mechanisms. Similarly, the current ACAT process provides a mechanism to control the extent of government funding for aged care services.

In addition, the current planning and allocation system for community and residential care places constrains the capacity of providers to undertake investments that are responsive to demand. In this context, TriCare (2007, p. 14) contends:

The current system of annual bed allocation results in a lag in new construction to meet the growth in demand. The uncertainty of securing additional beds means that providers cannot secure land for expansion based on the normal commercial or business planning basis as would be the case with other businesses operating in regulated markets. Where a provider acquires land, the holding costs may extend over years while successive annual applications fail.

The operation of gate-keeping arrangements needs to be improved so that providers can respond promptly and flexibly to changes in client needs and developments in the industry, such as the growth of retirement villages with assisted living arrangements.

Building certification

Building certification was introduced as part of the 1997 reform package to improve the physical standards of aged care facilities.

The Banks Review (2006) highlighted that the Australian Government certification arrangements largely duplicate the Building Code of Australia standards administered by the States and Territories. While the Australian Government maintains that its certification standards address issues of poor building stock within the industry, there are only two criteria — privacy and space requirements — that are not covered by the Building Code of Australia. These criteria could be mandated separately, thereby reducing the costs of duplicating the certification standards.

Aged and Community Services Australia (ACSA 2008) has estimated that removing the unnecessary duplicative aspects of the building certification requirements would save the Australian Government around \$350 000 per year and allow providers to improve the quality of care they provide and/or reduce costs.

Accommodation bonds

As noted in chapter 4, regulations surrounding the levying and retention of accommodation bonds for different types of aged care services currently distort capital investment decisions within the industry.

The disparity between who can and cannot be charged accommodation bonds is resulting in inefficient capital investment outcomes. Providers may request accommodation bonds from low care but not high care clients, unless they are extra service clients. This differential in access to bonds creates perverse incentives for aged care providers to preferentially invest in developing low care places relative to standard high care places. As a result, aged care providers have told the Australian Government that ‘without sweeping changes, the nursing homes we need to cater for an ageing population will not be built’ (Mundy and Young 2008, p. 1).

In addition, current bond retention arrangements inhibit the efficient provision of residential aged care services. The amount of the bond that may be retained to cover the costs of maintaining existing and constructing new facilities has only been adjusted to reflect changes in the consumer price index since the introduction of the

Aged Care Act 1997. But construction costs have risen faster than the consumer price index over this period. Further, new certification standards have meant that some existing facilities have required major renovations to comply. This has the result of lessening incentives to provide new facilities and thereby reduces the long term capacity of the system to absorb the expected increase in demand for services.

Contract management

Providers of community care can offer a variety of services to clients under various programs including formal packaged care (CACPs, EACH and EACHD) as well as HACC, NRCP and other community care services.

Administrative inefficiencies arise as the allocation and funding of community care contracts occurs on a program rather than client package basis. As a result of differing reporting and evaluation requirements across programs, there is no consistent approach for managing program contracts even where similar programs are administered by the same agency. In this context, BlueCare (2007, p. 9) contends:

The fragmented structure of the community aged care system creates a heavy administrative burden for service providers that manage diverse client groups across multiple programs. High administrative costs divert dollars from care service delivery.

Similarly, Aged and Community Services SA & NT (ACS SA & NT 2006, p. 1) highlights:

There is a growing array of largely compatible community care programs with separate reporting arrangements and different eligibility rules. Often the same organisation provides a mix of community care programs and must complete multiple sets of essentially similar information. These different requirements are inhibiting the provision of quality care to individuals whilst replicating overhead costs.

There would appear to be opportunities for reducing the current costs of providing these services by adopting a consistent contractual management framework for administering different aged care services and programs.

The subsidy mechanism for residential care

The Australian Government subsidy for residential aged care services is set having regard to the care needs of each resident. Between 1997 and 2008, the basic subsidy per resident was set according to an eight category RCS.

The RCS and accompanying regulations were seen as unduly complex with a high associated compliance burden for providers. Indeed, research found that residential

care staff spent, on average, 9 per cent of their time on classification scale documentation and registered nurses up to 16 per cent of their time (ACSA 2003a).

In response to industry concerns, a review of the RCS was set up in 2003. The review (DoHA 2003a, p. 6) found that:

... the current RCS system does not work as intended and needs to be modified... It is our view that any minor evolution of the existing system will not overcome the fundamental difficulties associated with the RCS approach (ie linkage between assessment and funding aspects).

This view was supported by the Hogan Review (2004) which recommended that the RCS be replaced with a simplified three category scale covering low, medium and high care.

In response, the Australian Government introduced a new aged care funding instrument (ACFI) on 20 March 2008. The ACFI is designed to:

- better match funding to the complex care needs of residents
- reduce the documentation required from aged care providers to justify funding
- achieve higher levels of agreement between aged care staff and departmental review officers in review audits (DoHA 2007a).

Although it is generally accepted that the ACFI will reduce the administrative burden on aged care providers, other aspects of the new instrument have caused concern within the industry. For example, just before the introduction of the ACFI, Catholic Health Australia (CHA 2008, p. 3) claimed:

Member studies that have compared the funding presently received under the Resident Classification Scheme with that which is likely to be achieved under the ACFI indicate that one third of facilities would be financially worse off and that up to ten per cent more residents would be assessed as needing High care, thus seriously impacting on the Accommodation Bond earning capacity of the sector.

Reflecting concerns within the industry about the new funding instrument, a reference group has been set up to consult with providers and consumers on all aspects of its implementation. In addition, a review of the instrument has been scheduled for 18 months after its implementation (Elliot 2008b).

