Systemic failures in nursing home care

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Executive Summary: The aged care sector, and in particular the residential aged care system, has been struggling to consistently deliver care that meets the expectation of residents and their families.

Our aim was threefold – (1) to provide a system representation of the current residential aged care system; (2) to elicit how various aged care sector stakeholders understand the current residential aged care system; and (3) to define how these stakeholders envisage a system that delivers effective, efficient, safe, and equitable residential aged care.

The findings show a highly fragmented, dysfunctional system without any evidence of system leadership and transparency of system governance and accountability.

We suggest that the aged and nursing home system require a fundamental redesign. The design should be focused on the residents' care needs, and encourage flexible and adaptive care delivery that maintains residents' quality of life and dignity.

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Tags: preventable morbidity and mortality, health case, aged care, causal loop diagram, regulatory and governance failure, financing failure, workforce shortage and skills, vulnerable population, system redesign, Australia

Glossary of terms

Residential aged care system
Encompasses policy, financing, governance, and care delivery

Nursing home
The place (or facility) where individuals reside and receive care

Agent(s)
The term 'agent' is used in its 'systems science' meaning of any entity being part of the system – not to be confused with its 'social science' meaning of agency

Stakeholders
Agents that represent a particular interest group

1. Introduction

Individuals in nursing homes are a highly vulnerable group of usually frail and/or mentally incapacitated elderly members of our society. They are at a very high risk of adverse events (for example, falls, infections) and outcomes (for example, malnutrition, fractures, skin ulcerations, delirium) and hence require interdisciplinary care by highly skilled and motivated health and social care professionals.

The 'residential aged care' sector – the government's preferred term, whereas residents and family members largely prefer the term 'nursing home' – has a long and well-documented history of failings [7, 11–17]. Aged care in most western countries is a government responsibility. It is for government to make the necessary systemic changes to achieve a well-functioning care system for frail elderly who no longer can care for themselves.

Multiple investigations and inquiries have repeatedly shown the same – systemic – reasons for the sector's failings – inadequate funding, privatisation, inadequate governance with a process rather than outcomes focus, lack of responsiveness to often rapidly changing resident needs due to understaffing, inappropriate staff mix, and inappropriately low staff skills. However, these insights have not resulted in any systemic changes to the aged care system. More disturbingly, as the three cited reports and inquiries [7, 16, 17] have highlighted, the changes to specific parts of the system have in many cases worsened the failings in aged and nursing home care. The actions by government have ultimately contributed to the unnecessary and unacceptable suffering of the most vulnerable group of people in our communities.

The system of aged care should be seen as a continuum from the voluntary move of older people into a retirement village arrangement, many of which are linked to supported living, hostel, and nursing home settings – also called 'ageing in place' (**Figure 1**). Our report specifically focuses on the nursing home setting (even though these issues equally apply to the community-based aged care system) and its **systemic** failings.

1.1. Improving nursing home care – a system-as-a-whole approach

The key challenge for improving the aged and nursing home system will be to enable all stakeholders to see that the complexities of the system arise from the interdependencies and behaviours among each other.

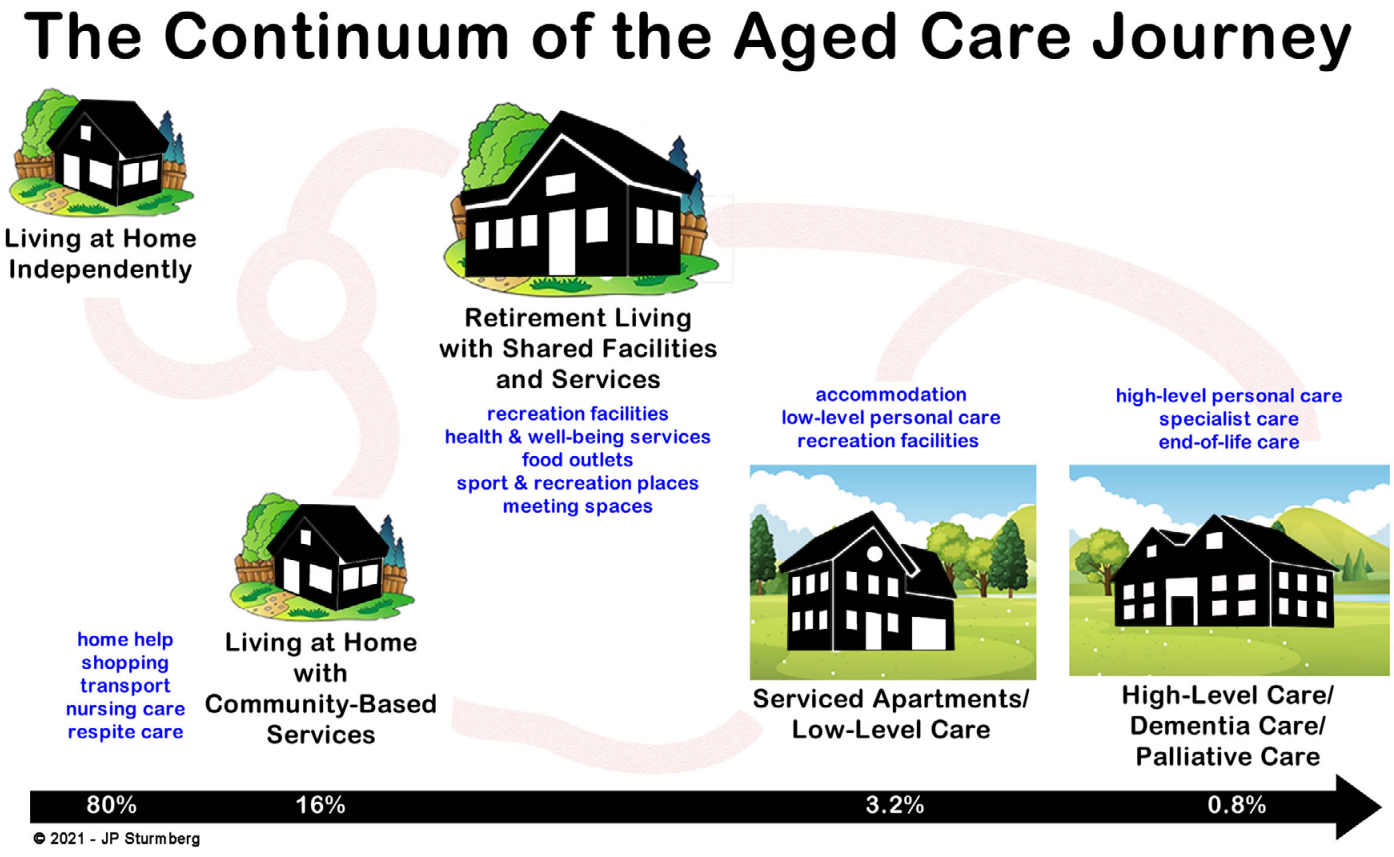


Figure 1 – The aged care journey – ageing in place
Note: only about 0.8% of the total community will ever require nursing home care across their lifetime

Only then will one find the means to design a robust and safe but adaptive 'whole-of-system' aged and nursing home system that delivers:

- effective
- efficient
- safe, and
- equitable care

while equally being:

- affordable, and
- accountable.

1.2. Failing to appreciate that the aged care system is a complex adaptive organisational system

It is the *interdependencies* among the stakeholders of the aged and nursing home system that result in its complexities. The organisational and change management literature presents the key understandings of the structure and function of organisations as 'complex adaptive organisations'.

In the early 1990s Ackoff [18] succinctly described the nature of organisations as social systems – "A system is a whole consisting of two or more parts (1) each of which can affect the performance or properties of the whole, (2) none of which can have an independent effect on the whole, and (3) no subgroup of which can have an independent effect on the whole. In brief, then, a system is a whole that cannot be divided into independent parts or subgroups of parts." He also emphasised that organisations can only achieve their desired outcomes if all its parts, that is, its staff, can freely provide input into the processes that govern the organisation.

More importantly though, an organisation needs to understand that not all that can be done should be done. Ackoff referred to Peter Drucker [19], one of his teachers, pointing to the distinction between "Doing things right and doing the right thing".

1.3. A complex adaptive organisation

These insights emphasise that firstly, organisations are socially constructed, and secondly that their nature is characterised by four key attributes determining its structure and function (**Figure 2**). A complex adaptive organisation:

1. **Understands its purpose** – Why are we here, and what do we want to achieve?
2. **Defines specific goals to achieve** – What exactly do we want to deliver within a given time frame?
3. **Understands its core values** – What are the values that don't change even if our circumstances change? They must be consistent with the purpose of the organisation; and
4. **Articulates its 'core operational rules' (otherwise known as 'simple rules')** – What are the key ways we interact (or what are – typically – the 3–5 principle that describe how we do business in this organisation)?

While the purpose of an organisation determines its goals and core values, all three lead to the definition of its simple (operating) rules, the rules that determine the internal and external interactions among its members (the culture of the organisation). Hence, the nursing home system might best be described as a complex adaptive organisation.

For a complex adaptive organisation to function as a seamlessly integrated system, all its agents have to understand its purpose and have to work towards agreed-upon specific goals. While the organisation's purpose remains stable its specific goals invariably will change over time and with changing challenges.

It is the responsibility of the system's leadership to help maintain everyone's focus on the organisation's common purpose and goals, to ensure that all its agents have and use the required resources to achieve its specific goals.

1.4. Visualising complex adaptive organisations

Mostly organisations do not see themselves as complex adaptive – their organisational charts are linear hierarchical (a reductionist, command-and-control model) missing the importance

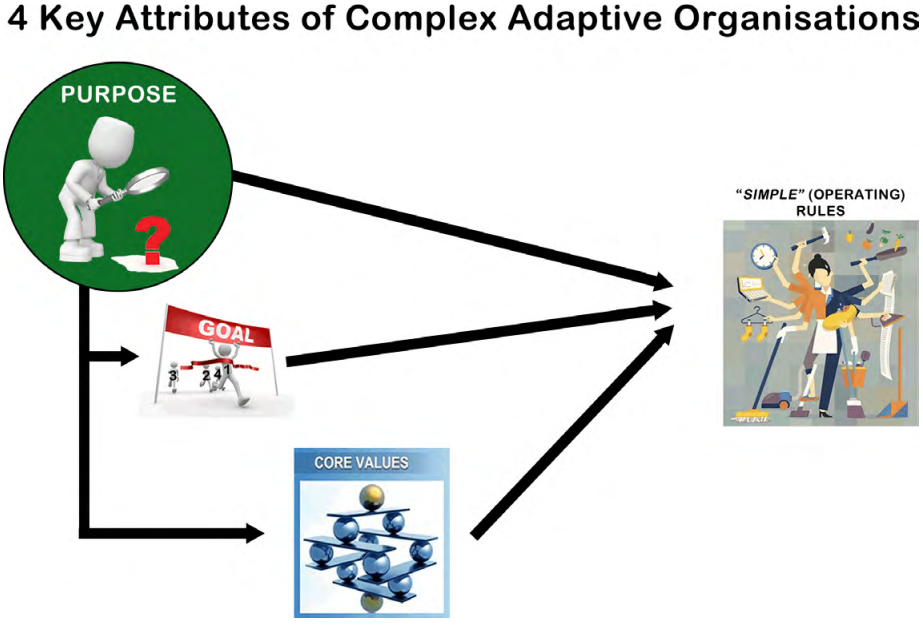


Figure 2 – The key attributes of a complex adaptive organisation

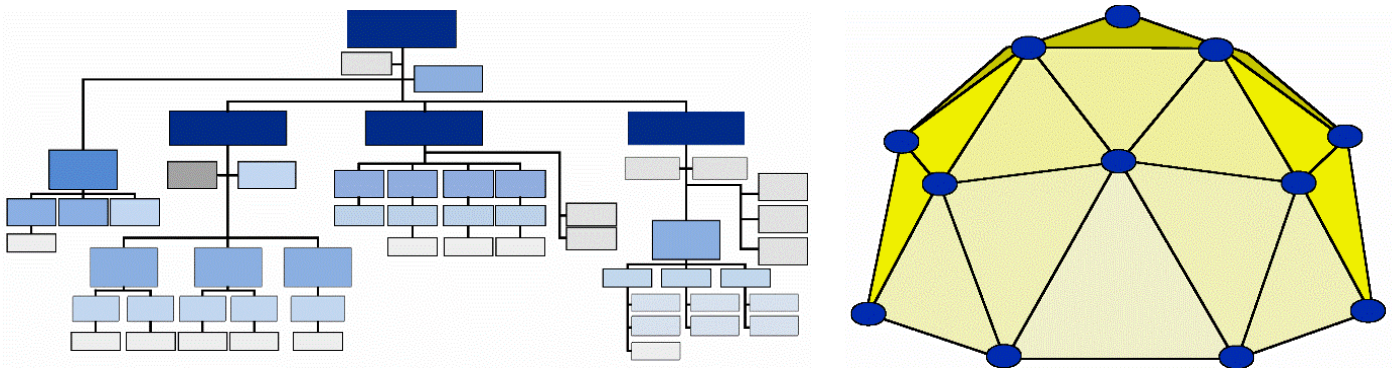


Figure 3 – Standard organisational chart (left) and a network surface organisational chart (right) where every node (oval) is connected to different functional domains (surfaces)

While the network surface organisational chart offers a more realistic representation of an organisation, it still does not sufficiently reflect the embeddedness of organisational domains within the context in which the organisation operates. Hence there is a need for different visualisations that capture the overall attributes of the nature and function of organisational systems like the residential aged care system.

of understanding, collecting, and adapting the insides of all working within the organisation (**Figure 3**).

We suggest three different images that synergistically capture the essence of a well-functioning adaptive organisation, as well as providing different and non-reductionist levels of detail about its interdependencies.

The vortex representation

A vortex – as a physical phaenomenon – can only emerge from a focal point, that is where all actions start, and when removed all actions stop (regardless of looking at a bathtub vortex, the vortex in a tipped over bottle, or a tornado). Physics tells us that there are different properties and behaviours observable along the vortex wall, and that temporary disturbances to the vortex wall while initially altering its shape will allow the vortex to restore itself (close) to its original shape.

The vortex analogy provides a useful metaphor to look at the structure and function of an organisation. The focal point reflects the purpose of the organisation – without knowing what the organisation stands for it cannot develop its goals and the necessary structures and interactions to realise them (**Figure 4**).

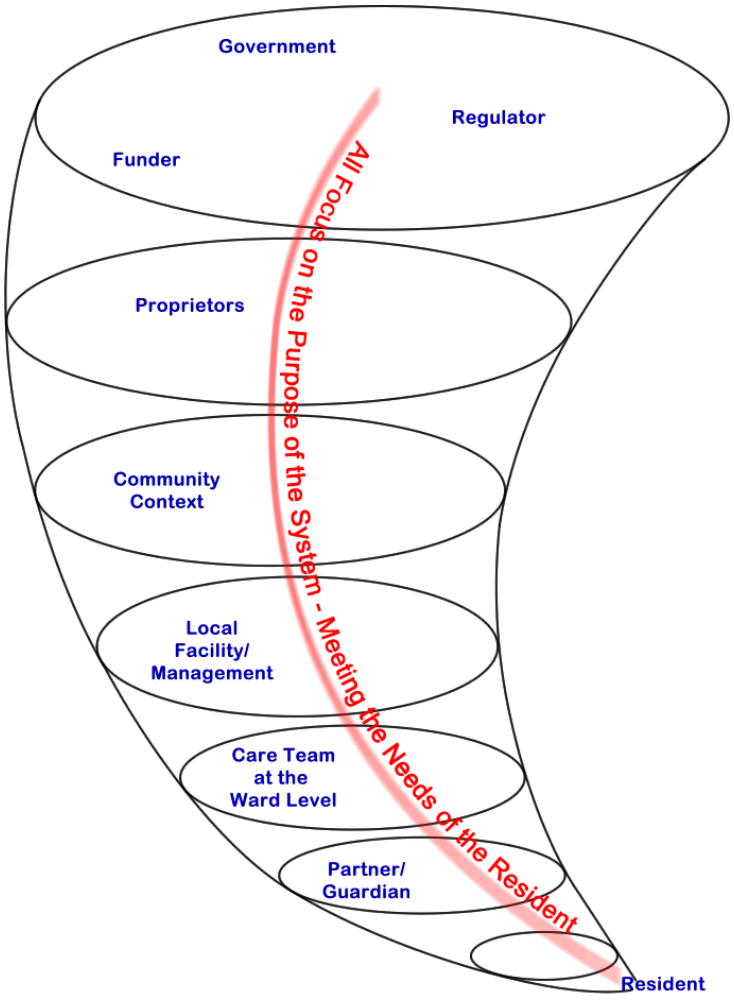


Figure 4 – Vortex metaphor – a complex adaptive organisation needs an agreed purpose as its focal point

The hierarchical nature of complex adaptive organisations

Organisations can be seen as hierarchically layered – each layer having a particular function that contributes to the function of the system as a whole. Complex adaptive systems have an often overlooked property, described by the philosopher and physicist George Ellis [20], as top-down causation that drives the system's emergence behaviour. Top-down causation entails the passing down of information from higher levels to lower levels – this information constrains the activities lower ones can do, and thereby limits its emergent bottom-up possibilities (**Figure 5**).

The interplay between top-down and bottom-up feedback is essential to the viability of an organisational system; it allows for the necessary adaptive responses of an organisation to the changing internal demands and external challenges from its environment. While top-down instructions are necessary they nevertheless have risks that can lead to dysfunctions and failures in or of an organisation.

The function of a complex adaptive organisation requires leadership that understands the concepts of dynamics in complex adaptive systems. The effectiveness of leadership endeavours to create the right level of system constraints – too loose, and participants do not have enough information of what to do, too tight, and participants at one level suddenly will have no longer any information to guide their activities.

Leaders need to understand what shop floor participants require to effectively and efficiently do their work. Understanding arises from discourse between participants, feedback, and resultant actions [21]. Knowing what is needed then guides the setting of top-down requirements/constrains that allow the bottom-up emergence (the most adapted way of doing things) of achieving the organisation's goals. (Note: this describes leadership and must be distinguished from (micro) management. Leaders have trust in the capabilities of the members of their organisation to do the right thing right – paraphrasing Peter Drucker [19].)

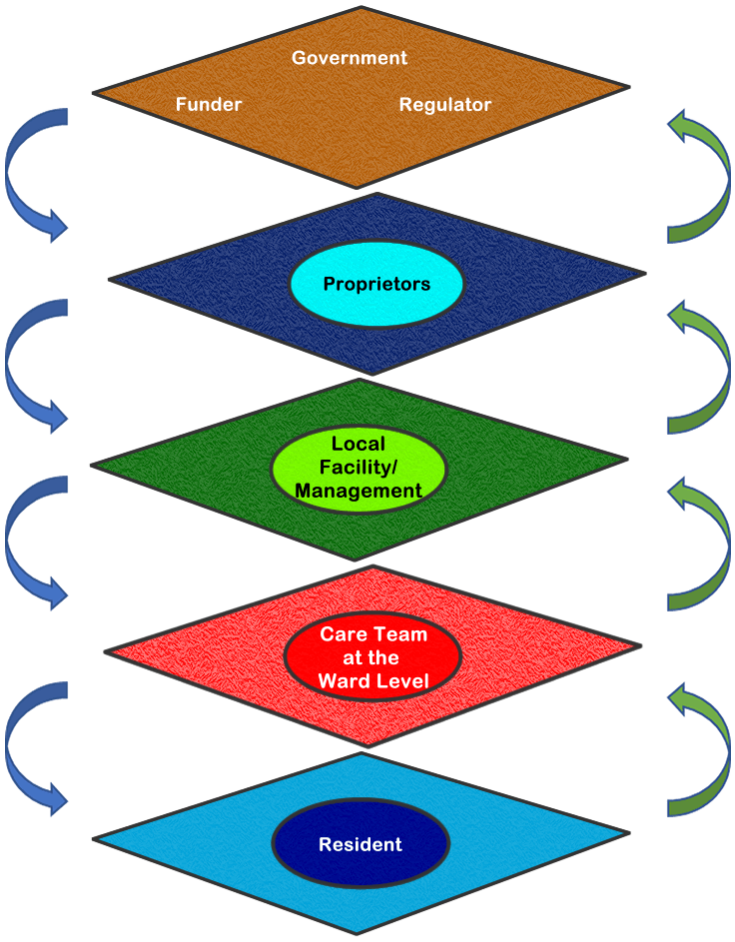


Figure 5 – Organisations are hierarchically layered interdependent systems

Hierarchies of an organisation are networked

Core relationships can be represented for each layer; however, such a visualisation could be misleading where it omits a representation of the interdependencies between layers. Organisations are layered, consisting of horizontally and vertically integrated networks, where any activity at any layer impacts the dynamics of the organisation as a whole. Each activity causes a perturbation of the organisation as a system, mostly without making it unstable as long as all work towards achieving the goals of the organisation within the frame of its purpose (**Figure 6**).

Nevertheless, organisations can be seen to unexpectedly gyrate due to internal or external forces in the short or medium term, and unforeseeably, become unstable and/or collapse over a longer term based on some – retrospectively identifiable – activity at a particular point in the system. Such instability is notable when governments

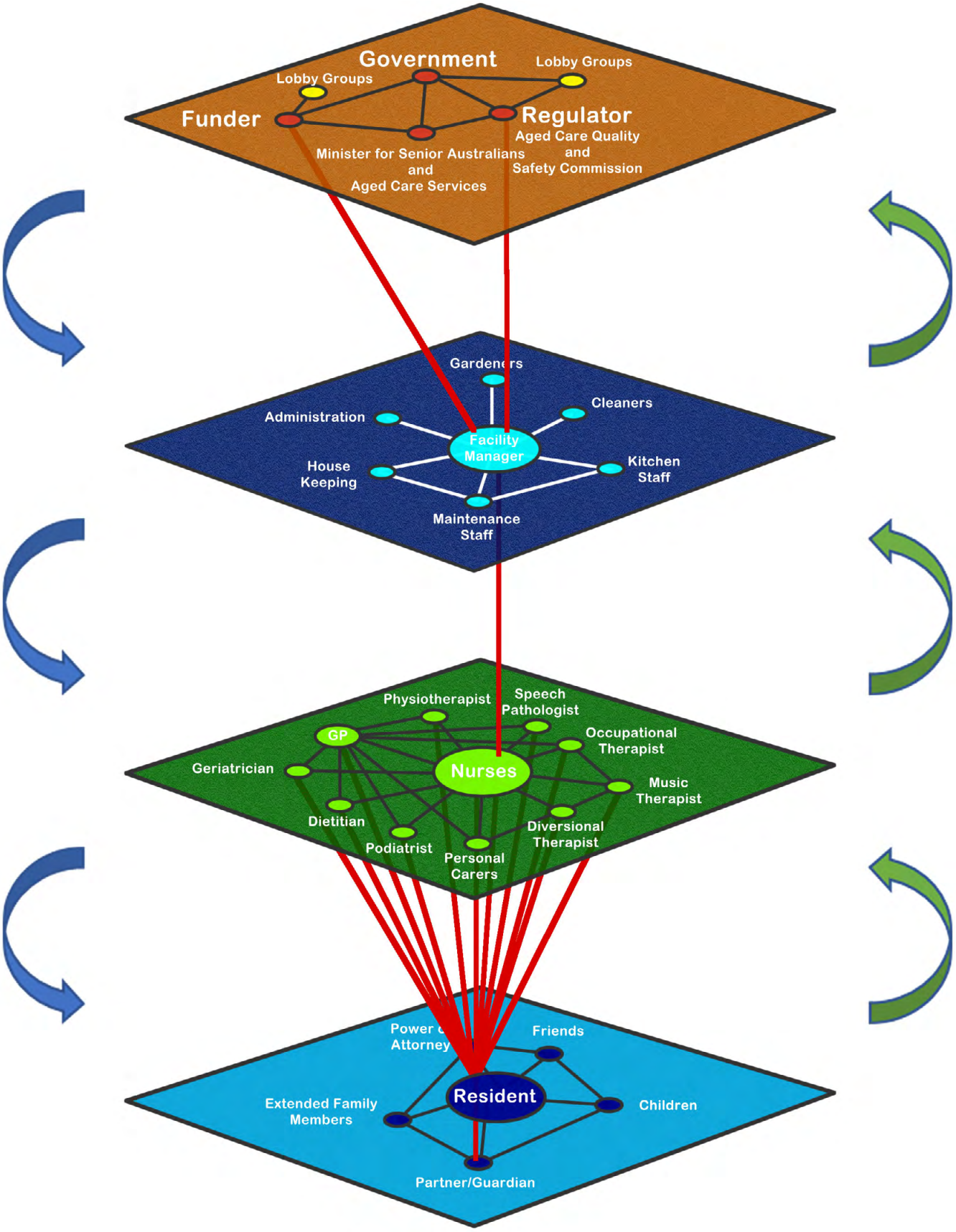


Figure 6 – Organisations are interdependent networked systems

unexpectantly seek public interest interventions in an organisation's normal activity. The risk of such interventions may be reasonably foreseen or not.

Interdependencies among organisational agents determine its dynamics

Detailed *influence and causal loop diagrams* provide a visualisation of the interactions between the multiple agents in an organisation. In particular, they allow for an understanding of the positive and negative influences actions have on other agents, and how such influences result in feedback loops that are either enhancing or destabilising for the system (**Figure 7** – two different ways of presenting influence and causal loop diagrams; for illustration only).

System and influence maps can depict key interdependencies, or they can be very detailed focusing on a specific domain.

The image on the left in **Figure 7** depicts a detailed map for a specific problem, while it shows all the linkages; it does not easily represent the influences across system levels. The image on the right in **Figure 7** is less granulated, just illustrating the key domain influences within the system as a whole.

How we think determines how we act

The way we think what an organisation is also determines how we act and interact within the organisation and its environment. The different ways of thinking about an organisation not only shapes its internal structures but also predicts its dynamics – the differences and implications are summarised in **Figure 8**. A key point here in terms of leadership relates to the need for some to give up – perceived – privileges, for others to become confident to speak up, and being supported in raising issues of concern.

1.5. Key agents at different levels of a hierarchically organised aged care system

Our literature review identified the *key stakeholders* in the aged care system as (from the top down):

- the government setting policy (defining the purpose)
- financing agencies (a government instrumentality)
- regulatory agencies (a government instrumentality)
- nursing home proprietors (for-profit, not-for-profit, state/local governments)
- external providers such as community aged care specialist and the hospital
- local support staff such as chefs, cooks and catering staff, landscapers, maintenance and administration staff
- visiting health care providers such as GPs, geriatricians, psychiatrists, mental and behavioural health workers

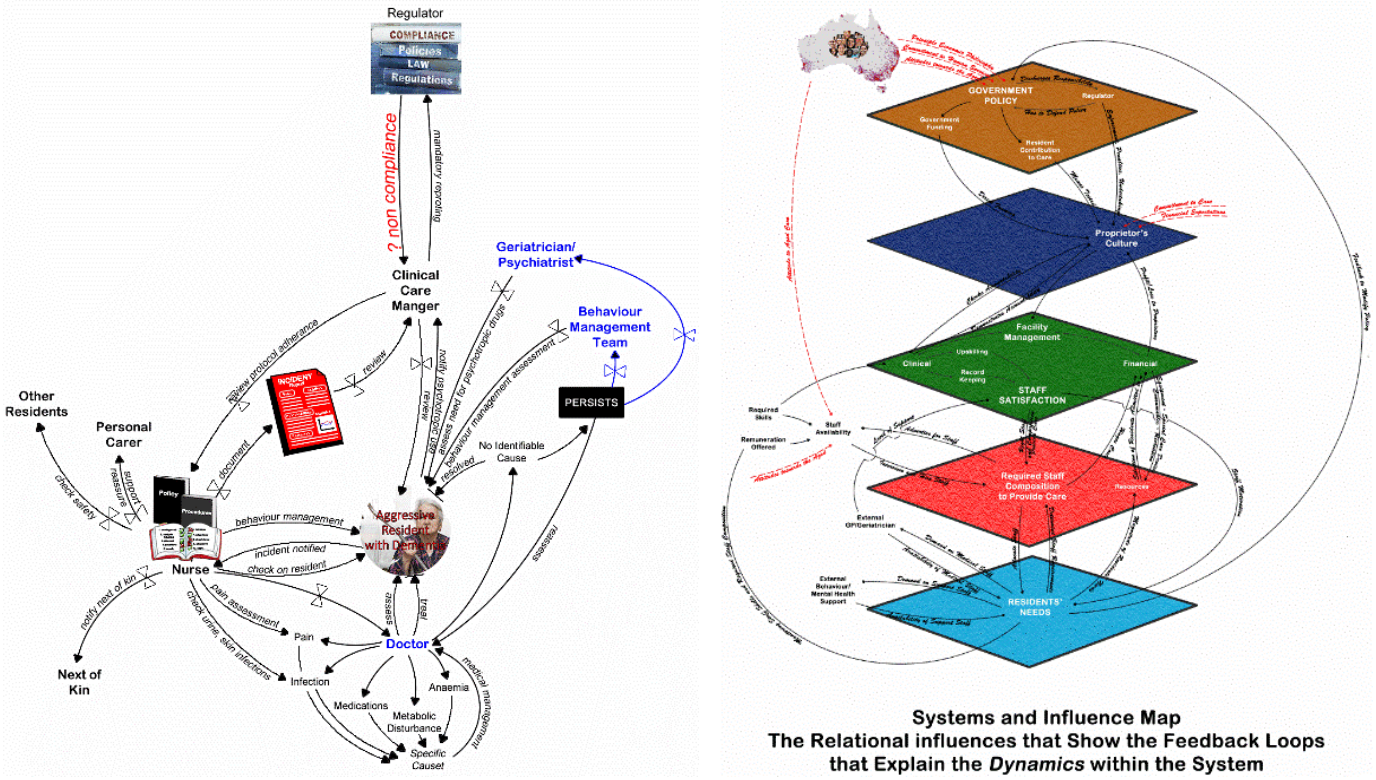


Figure 7 – Two illustrations of influence and causal loop diagrams – the details depend on the scale and nature of the problem under investigation

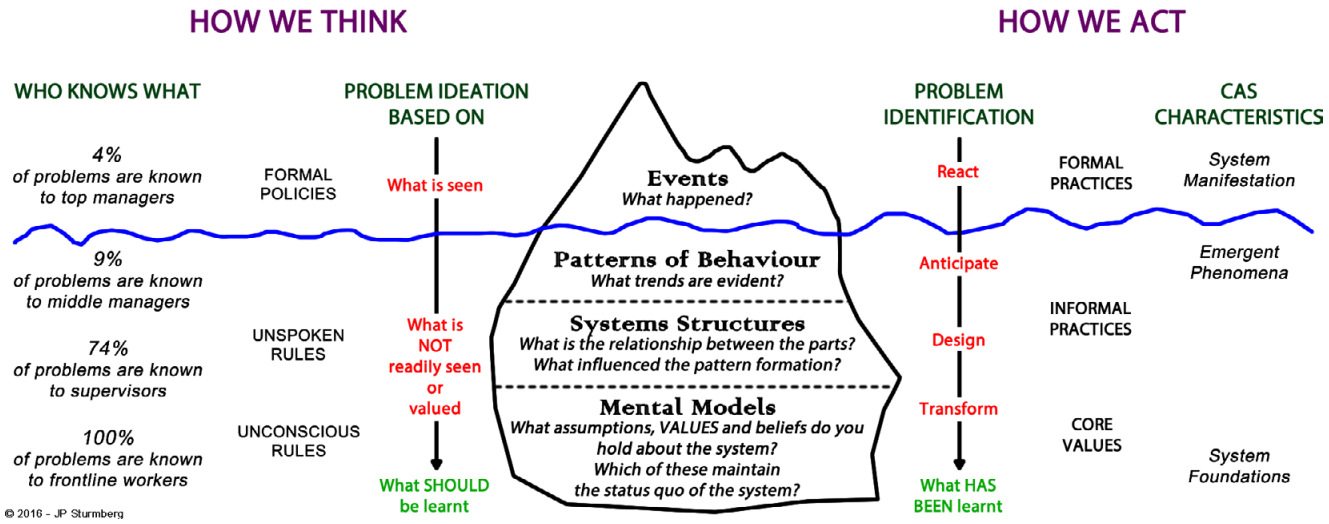


Figure 8 – The iceberg metaphor of understanding an organisation and the impact on its function.

Note: Top level managers don't know the majority of problems encountered by the members of the organisation. Their responses typically are reactive rather than explorative (reproduced from [3]).

- the nursing home's care staff – comprising of personal carers, enrolled and registered nurses, diversional therapists, physiotherapists, dieticians, podiatrist, speech pathologist, and others
- residents and their family members.

While this analysis arises from within the Australian context, its findings are applicable to nursing home care around the world – by its very nature nursing home care is essentially based on the same physical structures and organisational principles [7].

2. Methodology

This research received Ethics Approval from the Human Research Ethics Committee of the University of Newcastle - Australia (H-2021-0129). This case study was designed to use three complementary approaches to the exploration of the complex nature of the Australian residential aged care system (**Figure 9**).

First, we used a literature review to review what is already known on the topic nationally and internationally, secondly, we used semi-structured interviews to explore the various stakeholders' understanding of the structure, dynamics, and interdependencies of the residential aged care system as identified from the literature and the researchers' experiences within the system, and lastly, we intended to conduct a design workshop to get stakeholders to work together in the design of an ideal residential aged care system. The third stage of the project could not be implemented because of COVID delays and restrictions.

2.1. Stakeholder consultation

We assumed that most stakeholders would not be familiar

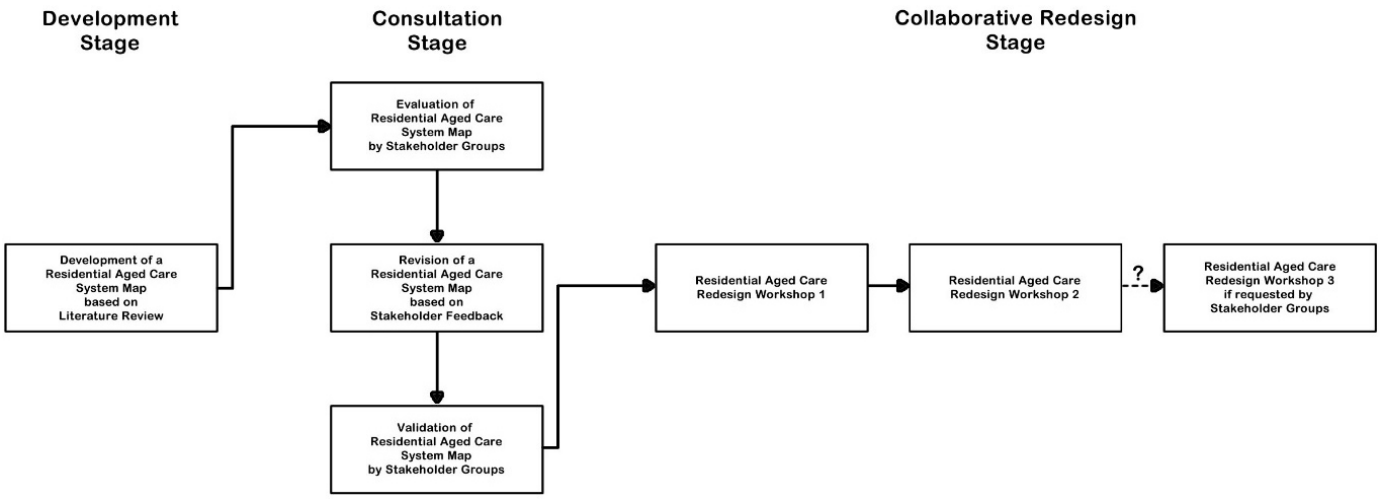


Figure 9 – Research design

with systems thinking and systems methodologies. We envisaged that individual stakeholders would describe some systemic features based on their own work experiences, but that none would intuitively describe their part in the residential aged care system from a system-as-a-whole perspective. We designed an interview schedule that prompted stakeholders to look at the systemic relationships of their issues and concerns (**Appendix 1**).

Initial interview

We designed a systems and influence map of the residential aged care system based on our practitioner observations working in the residential aged care system and our literature review. To not overwhelm participants, we firstly only presented them with the layer reflecting their part in the system. We then presented, in a stepwise fashion, the layers below and above and elicited participants' reactions to the interdependencies of their issues and concerns with those of these stakeholders. The final step showed the whole system for further comments. This part of the process aimed as much at validating our system representation as identifying important agents and connections we may have missed.

The final part of the interview focused on understanding what solutions stakeholders had in mind to improve the performance of their own system layer as much as what might improve the system-as-a-whole.

Follow-up

We sent our short report to participants for validation and comment.

2.2. Design of a seamlessly integrated aged and nursing home system

Design is concerned with resolving "[problems] between the state of affairs as it is and the state it ought to be" [22]; design thinking thus applies the principles of design to the way people see things working. Redesign is a means to the enhancement of users' experiences, especially their emotional ones [23], it is seen as an essential tool for simplifying and humanising [23] the way we live, work, and engage with our environment. Because of the COVID-19 limitations and ethics delays we used the information gained from our interviews to redesign the system following the principles developed by the Design Council methodology [24] (**Figure 10**).

2.3. How did your approach/ ensure the diverse perspectives of the full range of stakeholders were considered?

We approached 17 stakeholder groups of whom four agreed to participate in this study. The participating organisation covered all stakeholder groups except for the regulator who declined to participate:

- COTA – Council of the Ageing (resident and community perspective)
- RACGP – Royal Australian College of General Practitioners (primary medical care perspective)
- Australian Nursing and Midwifery Federation (nursing perspective)
- Mercy Health (a provider).

2.4. What are the key findings about the methodology or approach?

Visualisation of a system that involves stakeholders at very different levels of organisation is mandatory to get as full an appreciation of the system-as-a-whole as possible. It helps

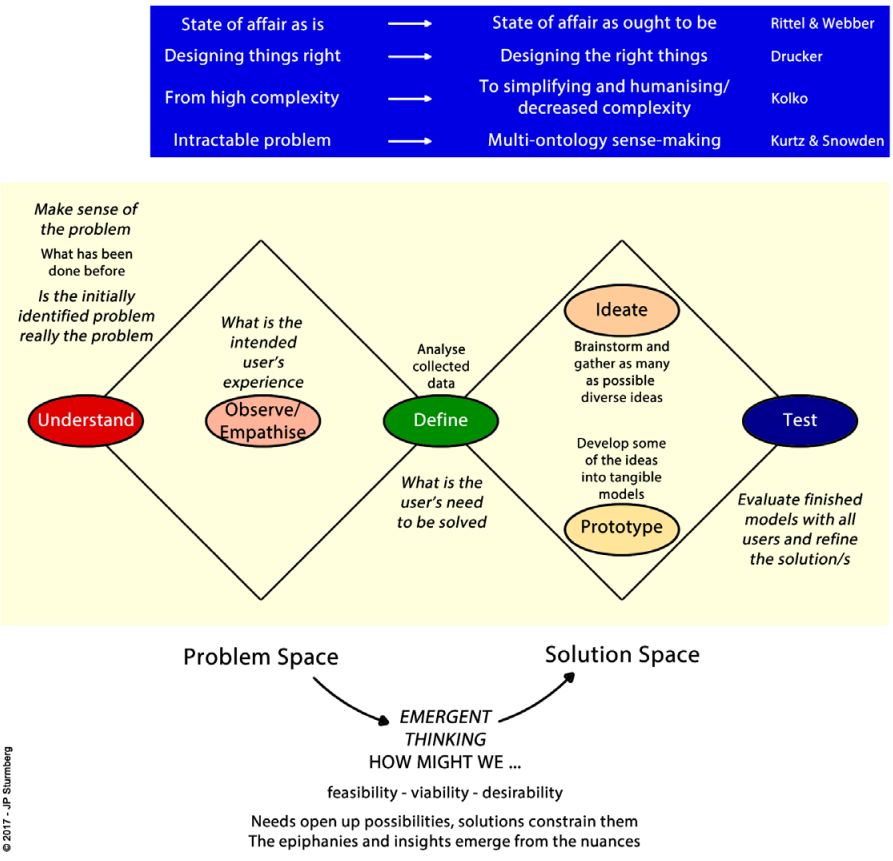


Figure 10 – 'Designing' – Overview of the design methodology – philosophy and implementation (reproduced from [3])

all stakeholders to see the interdependencies more easily and more clearly, and thereby paving the way for meaningful collaborative work to realign/redesign the system and as a result resolve its systemic failings.

3. Analysis

Our analysis is based on multiple sources of evidence. We conducted relevant literature searches on:

1. systemic failures in residential aged care [search terms: (nursing home care OR residential aged care OR nursing home) AND (organisational failure OR institutional failure OR systemic failure); limited to English language articles]
2. review of reports by government, regulators, corporations, and inquires
3. interviews with stakeholders
4. direct observations as clinicians providing services to residential aged care facilities.

It emerged that besides of the issues of resourcing and the nature of local care environments and care delivery, the issues of:

1. governance and accountability
2. clinical information flow about residents' health status, care needs, and the early pre-emptive recognition of potential tipping points for deterioration require more detailed exploration to ensure the safety of nursing home care.

3.1. What do you think is/are the root cause(s) for the safety incident (for example, complexity, poor regulation, cascade effects)?

As described in the Introduction section, we see the nursing home system as a hierarchically layered, interdependent, complex adaptive organisational system. The failings of nursing home care arise from the systemic cascading influences in a complex adaptive organisation which functions based on a complex adaptive system's inherent property of top-down causation.

Summary of the systemic causes of failings in the nursing home care system

The overarching problem – The failure to see the system-as-a-whole

Government layer

- While the system has a clearly defined purpose – maintaining residents well-being and independence,[1] the Australian government has outsourced the design, finance and oversight of the system to 'at-arms-length' government-controlled instrumentalities.
- The Australian Government views nursing home care primarily as a 'consumer good', rather than a necessity of final resort to receive care that allows the desired maintenance of well-being, independence, and dignity.
- Lack of separation of roles – the government defines the overall role of aged care, while at the same time, through statutory entities, maintains controlling function in system finance and regulation using
  - fixed budget financing
  - governance and accountability – a reactive system with a punitive regulatory culture.

Proprietor level

- Economic considerations control decision-making.

Facility level

- A lack of staff in terms of (a) numbers, (b) skills, and (c) overall composition.

Ward (delivery) level

- Staffing is insufficient to be commensurate with residents' needs.
- A lack of supervision and on the job upskilling.

Perpetuating external factors

- negative perceptions on ageing
- negative perceptions on aged care as a career path
- an unhealthy relationship to dying and death.

Overview of the aged and nursing home system

Before exploring the systemic issues of the aged care system, we need to understand its key structures and relationships (**Figure 11**). Two issues are immediately obvious:

1. Aged care, as a system, is markedly influenced by its social context:
   - **a.** attitudes towards the aged
   - **b.** commitment to human services/attitudes towards aged care
   - **c.** political economic philosophy
   - **d.** organisational subsystems' attitudes and expectations.
2. A high level of variability in needs:
   - **a.** to provide 'good care' and 'good outcomes'
   - **b.** as residents' frailty results in rapidly and often unexpected change in demands.

1 *Aged Care Act* 1997 – Section 2.1 (1)(a)(iii) – the need to ensure access to care that is affordable by, and appropriate to the needs of, people who require it

– Section 2.1 (1)(c) to protect the health and well-being of the recipients of aged care services;

– Section 2.1 (1)(g) to encourage diverse, flexible and responsive aged care services that:

(i) are appropriate to meet the needs of the recipients of those services and the carers of those recipients; and

(ii) facilitate the independence of, and choice available to, those recipients and carers

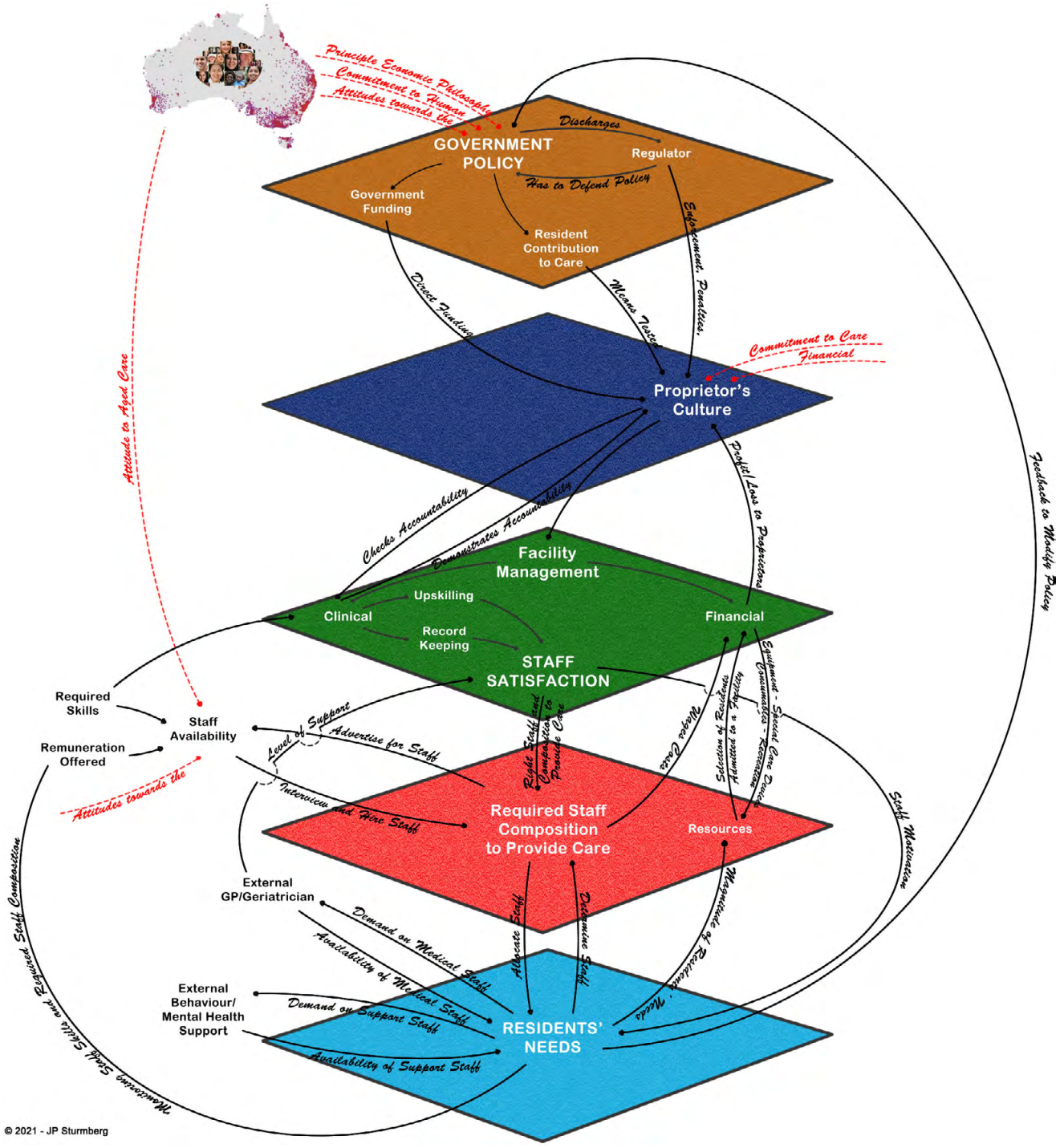


Figure 11 – Key interdependencies in a seamlessly integrated aged and nursing home system

Understanding key roles and responsibilities

As outline above (1.3), a complex adaptive system functions based on top-down causation to enforce the bottom-up work that needs to be done. Top-down causation entails that higher level pass on information that (a) convey what work should be done, and (b) limit the possible ways it can be done (**Figure 12**).

Translating this into the nursing home system means that the top layer's role (government) is to keep the system's focus on its key purpose (meeting the care needs and aspirations of the frail elderly in care), and the provision and enforcement of instructions of behaviours the agents of the system must adhere to. In addition, the top layer also must provide the required resources to the lower levels so they can do the work that needs to be done.

The proprietor level provides the physical infrastructure of a nursing home as well as employing the necessary staff to deliver the

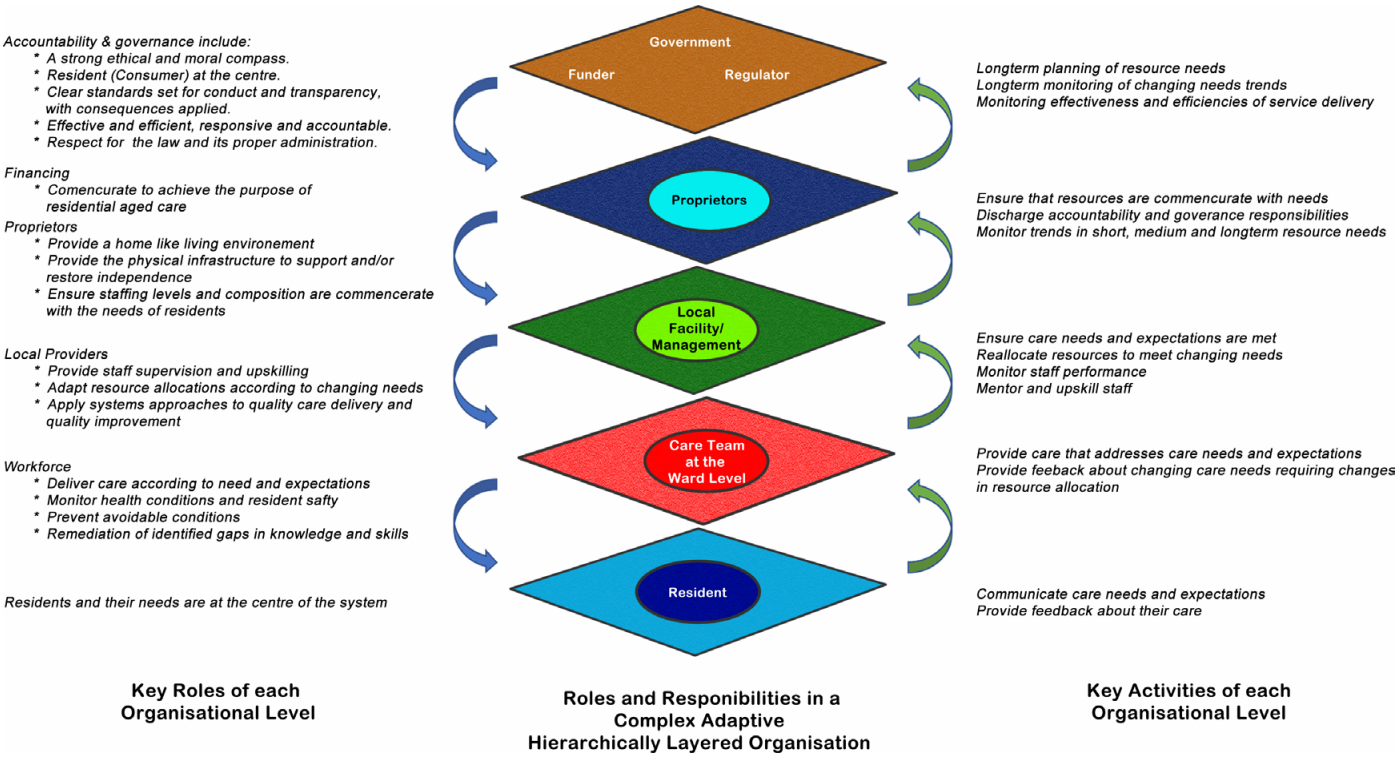


Figure 12 – The top-down key roles and responsibilities and the bottom-up emergent key activities in a seamless integrated aged care system.

required care. It is the related facility management level that is responsible for implementing care and monitoring the quality of the work done – in particular, it is the role of management to constantly adapt resource allocation (staff and physical) to the constantly and often rapidly changing care needs of individuals.

The care team level delivers the needed care, but also aims – to the limits possible – to stabilise and/or minimise disease burden and prevent health risks arising from a person's frailty. Staff also has the responsibility to identify and mediate its own knowledge and skills gaps arising in their working environment.

The bottom-up emergence within an organisational system is based on feedback – what are the ever-changing requirements to achieve the outcomes defined by the organisation's purpose.

Every resident will provide input about their care needs and aspirations which must be met by care staff. Care staff in turn need to communicate the changing needs of each person to ensure the adaptive provision of workforce and physical resources. It is for the nursing home's management to provide required resources, but also to ensure these are applied in the most effective and efficient way without compromising care outcomes. In addition, management needs to ensure that staff is mentored and upskilled where needed to not endanger the quality of care, or worse, threaten people's safety.

Proprietors are ultimately responsible for ensuring the quality, effectiveness, efficiency, and safety of their facilities. They must both ensure accountability and governance requirements are met, internally to their organisation and externally the regulator. They also must ensure that funders provide the required financial resource to achieve the system's purpose. Their feedback allows overall forward planning of policy and financing frames to maintain the overall nursing home system focused on achieving the system's purpose – to provide individuals with care that meets their needs and aspirations.

The key characteristic of any seamlessly integrated organisation is its scale-free nature, that is, it does not matter at which level one works, all work is focused on achieving the system's purpose.

Analysis of the residential aged care system in Australia

The aged care system is the responsibility of the Australian Government. Its legislation constitutes the overall framework of the system (for excerpt of the *Aged Care Act* 1997 [25] see **Appendix 2**) and specifically:

- defines its purpose and thereby its expected outcomes
- provides its financing
- provides oversight (governance and accountability).

While all aged care is the responsibility of the Federal

System failures

Government policy sets the scene – it views and promotes aged care under a commercial umbrella in language and approach.

The government is micromanaging aged care. The government's prime responsibility is the definition of the overall purpose of the aged care system.

Financing and governance must be independent from government to define its financial and governance/ accountability needs.

Government, it does not directly own or operate any community or nursing home facilities. The provision of aged care is outsourced to a mix of corporate, not-for-profit organisations, and State and Local Government entities (**Table 1**). The aim of aged care services are subjectively defined in terms of well-being and independence, that is, focusing on quality of life [6] (**Table 2**).

However, the person-focused intention for the aged care system is undermined by the government's view that those requiring nursing home care are consumers [2] despite the Aged Care Act talking about people with need or recipients of care [25]. This terminology subtly prioritises a commercial over a caring culture for the sector.

Governance and accountability

In general terms governance and accountability is a framework to ensure that policies are implemented as intended (**Table 3**). This takes the forms of an oversight and accountability framework, the former looking at defensibility, the latter as avoiding adverse events as well as demonstrating the achievement of the desired outcomes (**Figure 13**).

Corporate governance refers to the processes by which organisations are directed, controlled, and held to account. It encompasses authority, accountability, stewardship, leadership, direction, and control exercised in the organisation [31]. All Australian government agencies, including regulators, are subject to Audit Office scrutiny of financial and corporate governance performance, and of the provision of public funding.

Sound governance arrangements enable a regulator such as the Australian Government regulator, the Aged Care Quality and

Service providers [26]

845 approved residential aged care providers

2,722 residential aged care services
217,145 residential aged care places

Entities providing residential aged care services [26]

	Religious	Charitable	Religious/ charitable	Community based	For profit	State/ territory govt	Local govt	Total
Australia	50,273	40,505	77	28,421	89,439	7,255	1,175	217,145
% of Total	23.2%	18.7%	0.0%	13.1%	41.2%	3.3%	0.5%	100.0%

Spending on residential aged care [26]

Government	$ 13.4 billion AUS $69,055 per resident
Residents	Variable – negotiated between resident and provider (not subsidised)

Overview of residential aged care provider services [27]

Under the *Quality of Care Principles 2014*, approved providers of residential aged care are required to provide a range of care and services to residents, whenever they may need them. The type of care and services provided include:

- hotel-like services (for example, bedding, furniture, toiletries, cleaning, meals)
- personal care (for example, assisting with personal care, eating, mobility, communication)
- clinical care (for example, wound management, administering medication, nursing services, rehabilitation support, allied health services, provision of devices)
- social care (for example, recreational activities, emotional support, behaviour management support).

All care and services are required to be delivered in accordance with the resident's care needs and clearly outlined in their resident agreement and care plan.

Table 1 – Residential aged care services in Australia [2020]

Objectives for aged care services as summarised by the Productivity Commission's report on aged care services [6]
The aged care system aims to promote the well-being and independence of older people (and their carers), by enabling them to stay in their own homes or by assisting them in residential care. Governments seek to achieve this aim by subsidising aged care services that are: • accessible — including timely and affordable • appropriate to meet the needs of clients — person-centred, with an emphasis on integrated care, ageing in place, and restorative approaches • high quality. Governments aim for aged care services to meet these objectives in an equitable and efficient manner.

Table 2 – The purpose of a residential aged care system

What is governance? [28]
Governance is the process through which state and nonstate actors interact to design and implement policies within a given set of formal and informal rules that shape and are shaped by power. This Report defines power as the ability of groups and individuals to make others act in the interest of those groups and individuals and to bring about specific outcomes [29] [30]. Depending on the context, actors may establish a government as a set of formal state institutions (organisations and rules) that enforce and implement policies. Also depending on the context, state actors will play a more or less important role with respect to nonstate actors such as civil society organisations and business lobbies. In addition, governance takes place at different levels, from international bodies, to national state institutions, to local government agencies, to community and business associations. These dimensions often overlap, creating a complex network of actors and interests. Source: World Development Report 2017 team.

Table 3 – Defining governance

Safety Commission, to meet its responsibilities and be accountable for its decisions and actions. They also assist a regulator to meet many of the community's expectations, which helps build stakeholder and public confidence.

Operator governance involves the systems, frameworks and practices of the board and the leadership team to set an aged care organisation's objectives; to oversee and supervise the work done to achieve those objectives; and to control the organisation. Governance includes clarity of decision rights, and how decisions are made, recorded, and communicated [32].

Characteristics of good governance include:

- a strong ethical and moral compass
- consumer at the centre
- clear standards set for conduct and transparency, with consequences applied
- effective and efficient, responsive, and accountable
- respect for the law and its proper administration.

Differences between regulator and operator notions of governance lie in their understanding of government accountability for user outcomes, operator stewardship responsibilities such as safeguarding operator assets, and the delivery of quality aged care to required standards.

Aged care system operators, providers, and other system stakeholder participants such as suppliers should achieve the same standard of governance expected of the Australian Care Quality and Safety Commission itself in its regulation of the system. There is an expectation that regulators will discharge their responsibilities efficiently, effectively, and fairly.

Regulator expectations of aged care system operators can be expressed in more detail, coinciding with aged care roles and responsibilities. Providers are responsible for meeting the expected standards and other legislative requirements. They are also expected to "have governance systems in place to assess, monitor and drive improvements in the quality and safety of the care and services they provide" [33].

Government financing

While the aged care system is under the control of the Australian Government in terms of its policy thinking, in reality it is driven by economic thinking as a [discretionary] consumable. The government expects those needing aged and/or nursing home care to behave like (clearly euphemistically) a consumer to shop around for the best deal when in fact requiring care in a nursing home is a step of unavoidable last resort based on physical, emotional, social, and/or cognitive needs.

The Australian Government created the Aged Care Financing Authority

System failures

Financing is primarily driven by a commercial mindset where free choice and competition determines price.

'Institutionalised' aged care becomes a necessity rather than a choice. Its financing, regardless of ideology, must be guided by the needs of those who require such care for the final period of their life (days to years).

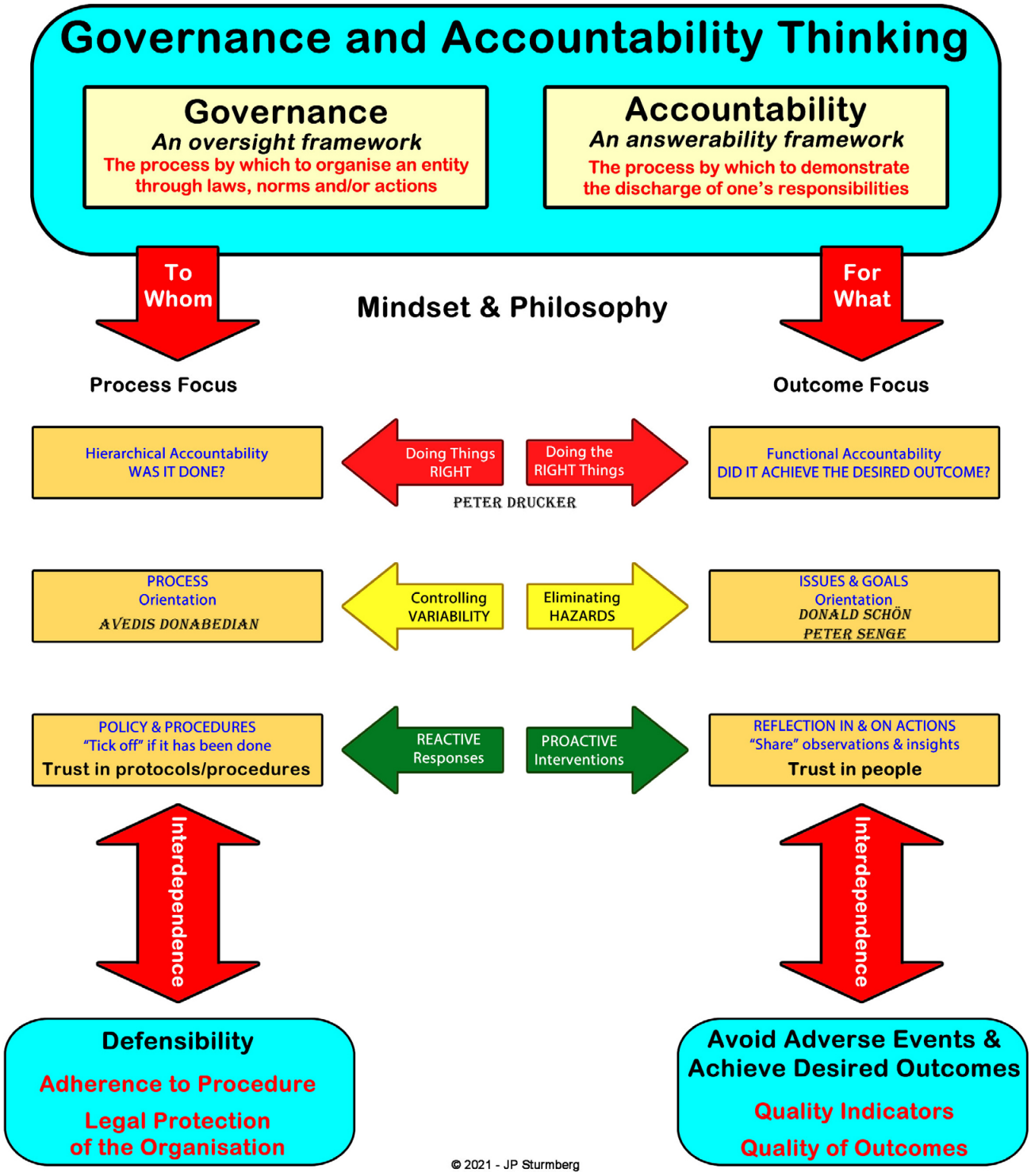


Figure 13 – Two ways of thinking about accountability

(ACFA) [34] – a government instrumentality – to develop a financing approach based on market economic doctrine. So, the ACFA views a financially sustainable residential aged care market as being based on 11 attributes to frame a profitable and sustainable aged care sector where consumers make choices – limited by government policy rules, but these can be easily modified at any time. The policy intention is one of putting more and more of the financial burden on the ones requiring care, not as a willing market participants but as – by now – vulnerable individuals needing care (**Appendix 3 – Table 1**).

The Australian Government has passed legislation and has policy settings which are designed to fund the operation of the nursing home care system, alongside

licensed private operators. The 2021 Report of the Royal Commission into Aged Care Quality and Safety [16] has made several recommendations accepted by the Australian Government [35]. These attempt to apply economic thinking to consumers who wish to secure residential places within nursing home facilities and thereby, exercising some control as recipients of nursing home care. However, the nursing home system can be seen in economic terms only as a series of imperfect markets, where little consumer choice prevails, and markets are distorted by concentration at the profitable provider end and frequent government intervention.

On 1 March 2021, the Health Minister announced $A14.1 billion funding in 2020–21 towards nursing home care, up from $A9.2 billion in 2012–13 and reaching an estimated $A17.1 billion by 2023–24. In response to the Royal Commission report, the Australian Government has immediately invested an extra $A189.9 million for nursing home care providers "to provide stability and maintain services while the government considers the report's recommendations". This equates to about $A760 per resident in metropolitan residential aged care and $A1,145 for those in rural, regional and remote areas of Australia (**Appendix 3 – Table 2**).

The Australian ACFA has listed 11 Attributes (such as Attribute 5 "Ensure appropriate overall funding and a sound arrangement for allocating subsidies"). intended to guide its aged care funding [34]. These are designed to vet applications and recommend aged care funding for individuals with medically diagnosed conditions, rather than those requiring care simply because of age or frailty. Perhaps not unsurprisingly the government provided an extra $A90 million for aged care facilities "facing financial challenges", which could be seen as one indicator of system failure.

The Regulator

The Aged Care Quality and Safety Commission is charged to oversee the publicly subsidised aged care sector. The Commission's remit is general and broad [36], having caused a lot of anxieties among proprietors and facility managers. Many of the recent – rather prescriptive and compulsory – changes have arisen from the findings of the Royal Commission into Aged Care Quality and Safety [36]. The issues aired in the hearings were horrific, however, they created a perception that the sector is "one big crate of rotten apples" whereas the reality is that these incidents happened only – and repeatedly – in a few settings (**Tables 4–6**).

The tasks of the Regulator

It might help to adopt Dewing and Russell's time-honoured definition of regulation as "state intervention in private spheres of activity to realise public purposes" [37]. Following this, Yeung [38] says "regulation refers to state intervention in economic and social activity, aimed at directing or encouraging behaviour valued by the community, so as to facilitate the pursuit *of collectivist goals is* encouraging behaviour valued by the community, so as to facilitate the pursuit of collectivist goals which might not otherwise be realised, and which constitutes a

System failures

The Regulator is also 'micromanaging' aged care. Its assessment protocols are process focused, not allowing for adaptive responsiveness in light of changing needs.

Its interactions are preserved to be primarily punitive, rather than identifying and helping with improvement.

As the national regulator of aged care services subsidised by the Australian Government, our role is to approve providers' entry to the aged care system, to accredit, assess and monitor aged care services against requirements [process focus], and to hold services to account for meeting their obligations [how are they defined]. We seek to resolve complaints about aged care services and to provide education and information about our functions. We also engage with consumers to understand their experiences and to provide advice to providers about working with consumers in designing and delivering best practice care.

Table 4 – The role of the Aged Care Quality and Safety Commission [2]

The Quality Standards are made up of eight individual standards:
1. Consumer dignity and choice
2. Ongoing assessment and planning with consumers
3. Personal care and clinical care
4. Services and supports for daily living
5. Organisation's service environment
6. Feedback and complaints
7. Human resources
8. Organisational governance
Each of the Quality Standards is expressed in three ways:
• a statement of outcome for the consumer
• a statement of expectation for the organisation
• organisational requirements to demonstrate that the standard has been met.

Table 5 – Requirements – Quality standards

All government-subsidised residential aged care services must collect, and submit to the department, data against three quality indicators (from the previous voluntary program since 2016):

• pressure injuries
  • percentage of care recipients with pressure injuries, reported against six pressure injury stages
• use of physical restraint
  • percentage of care recipients who were physically restrained
• unplanned weight loss
  • percentage of care recipients who experienced significant unplanned weight loss (5% or more)
  • percentage of care recipients who experienced consecutive unplanned weight loss
• falls and major injuries
  • percentage of care recipients who experienced one or more falls
  • percentage of care recipients who experienced one or more falls resulting in major injuries
• medication management
  • percentage of care recipients who were prescribed nine or more drugs
  • percentage of care recipients who were prescribed antipsychotic medications.

Table 6 – National Aged Care Quality Indicator Program [14]

form of 'public law' in the sense that it is generally for the state (or its agents) to enforce the obligations which cannot be overreached by private agreement between the parties concerned".

Regulation may be seen as a form of management control, accompanied by the imposition of sanctions for undesirable behaviour. Regulation may take many forms, including self-regulation where rules are formulated without government involvement, quasiregulation that involves the development of rules or arrangements where the government has played a major role in their development and enforcement (but which do not form part of explicit government regulation), co-regulation, and symmetric regulation (binary, do/don't forms).

Compliance focuses on target populations of regulation, the extent to which they comply with them or with government policy objectives regulation, and why they do so. Combining commonly seen regulator activities of persuasion and punishment – regulatory compliance constitutes obedience by a target population (such as nursing home operators) to regulatory rules.

The aged care regulator's responsibilities are specified in the legislation [27] – the Aged Care Quality and Safety Commission's Imposed Rules and its associated Aged Care Principles [39]. These responsibilities encompass quality of care, user rights, accountability, and allocation of places (location and bed numbers) [40].

Build-in conflicts of interest

Of concern is that the regulator is charged with potentially conflicting tasks [40]:

- giving potential operators the right to provide aged care services
- enforcing a particular view on how to deliver services
- being the adjudicator of imposing sanction or withdrawing their right to operate.

Defining standards

The regulator has created Quality Standards [41] to underpin its regulatory approach (**Table 5**). While well intended, its assessment criteria are not congruent with the primary outcome defined in the *Aged Care Act* 1997 [25]:

- To promote a high quality of care and accommodation for the recipients of aged care services that meets the needs of individuals
- To encourage diverse, flexible, and responsive aged care services

The wording of assessment criteria entails high levels of ambiguity, such as:

- Consumers say …
- The workforce can describe …
- Evidence that … (referring to documents, manuals, procedural handbooks)

In addition, the regulator also proclaimed the unprecedented right to inspect any facility at any time without an appointment.

Compliance

These approaches are codified in the Aged Care Quality and Safety Commission's compliance model (**Appendix 4 – Figure 1**) and its responds to issues with a variety of regulatory action rather than advisory approaches [40].

Spooked by the Royal Commission into Aged Care Quality and Safety, the regulator has now mandated the reporting of what it regards as quality indicators of nursing home care (**Table 6**) [42, 43]. The indicators are valid descriptors of residents' condition, however, in most cases they relate and define the consequences of increasing frailty of individuals who require nursing home care.

Nurse and quality care managers rightly question how meaningful 'percentage of care recipients with … ' are as a quality indicator of the care provided.

Indeed, the time it takes to meet these reporting demands detracts from the time available to attend to residents' medical, social, emotional, cognitive, preventive, and rehabilitative needs.

Thus approaches – by default rather than by intention – create an environment of uncertainty and distrust. Among staff it provokes the perception that the main purpose of the regulator is that of 'finding fault'. The creation of a climate of fear inhibits what the *Aged Care Act* demands – diverse, flexible, and adaptive responsiveness of service delivery that meets the needs of individuals.

Approved providers of Australian Government-funded aged care services must comply with responsibilities specified in the legislation, Aged Care Quality and Safety Commission Imposed Rules, and associated Aged Care Principles. These responsibilities encompass quality of care, user rights, accountability, and allocation of places.

Consequences of regulatory ambiguity – the example of the 'Serious Incident Response Scheme [44]

Regulatory ambiguity and the cloud of fear create – though not necessarily intended – significant risks to residents, staff, management, and proprietors. A not uncommon event in a nursing home setting should give rise to serious considerations of the benefits or otherwise of global enforceable demands such as the Serious Incident Response Scheme.

A male/female resident with marked dementia wonders the dark corridor of his/her nursing home wing in the early hours of the morning. He/she intends to go back to bed but enters another resident's room, despite each resident's door having personalised signage. This female/male resident is not affected by cognitive loss. The intruding resident lifts the sheets off the bed to go back to bed. While doing so he/she touches the female/male resident's thigh which wakes her/him up in a fright. She/he gets out of bed and calls for help. The attending nurse redirects the intruding resident back to his/her room at the other side of the corridor, and he/she goes back to bed. Beside of the immediate scare, the female/male resident do not regard this incident as a sexual assault.

Any form of touching any resident – by staff or fellow residents – is inappropriately defined by the regulator as sexual assault requiring immediate mandatory reporting. Is this an appropriate definition given the context?

Neither the nurse nor the management felt that this constitutes a sexual assault as it represented an incidental and unintended touching of a resident by a resident with dementia who intended to go back to bed. However, the quality team of the facility feared the consequences of not following the precise instructions of managing 'a sexual assault' and asked the police being called to investigate the event. The police concluded that this incident does not fit any criteria of a sexual assault (**Figure 14**).

This may be the correct implementation of a protocol, however, one needs to consider the effects of the reporting and investigating processes on all involved.

- No injuries or harm has occurred to the female/male resident besides of the immediate scare.
- She/he did not perceive the incident to be a sexual assault.
- There were no provoking factors triggering the behaviour.
- The event caused probably unnecessary embarrassment, upset, and worries for each resident's next of kin.
- The incident – having been precautionarily escalated by management to a sexual assault – has personal consequences to care staff, as well as consequences for all other residents under their care. Staffs' time – principally the nurse's time – is taken up with more paperwork, phone calls, and meetings with management.
- Given the limited time nurses have to provide care, any time taken up by noncaring issues reduces the time available for care, which in turn increases the risk of adverse events for all other residents.

These approaches create an environment of uncertainty and distrust and create the perception that the main purpose of the regulator is that of 'finding fault'. The creation of a climate of fear inhibits what the *Aged Care Act* demands – diverse, flexible, and adaptive responsiveness of service delivery that meets the needs of individuals (**Table 7**).

Proprietors

Nursing homes are run by a variety of organisations – the largest providers are for-profits (41.2%), followed by religious (22.2%), charitable (18.7%), and community-based organisations (13.1%); a minor contribution to residential aged care comes from religious charitable, state/territory governments, and local governments (**Table 1**).

Over the past 10 years the number of residential aged care beds has steadily grown, with the biggest increase in the private sector and a steady decline of the government run sector (**Appendix 4 – Figure 2**).

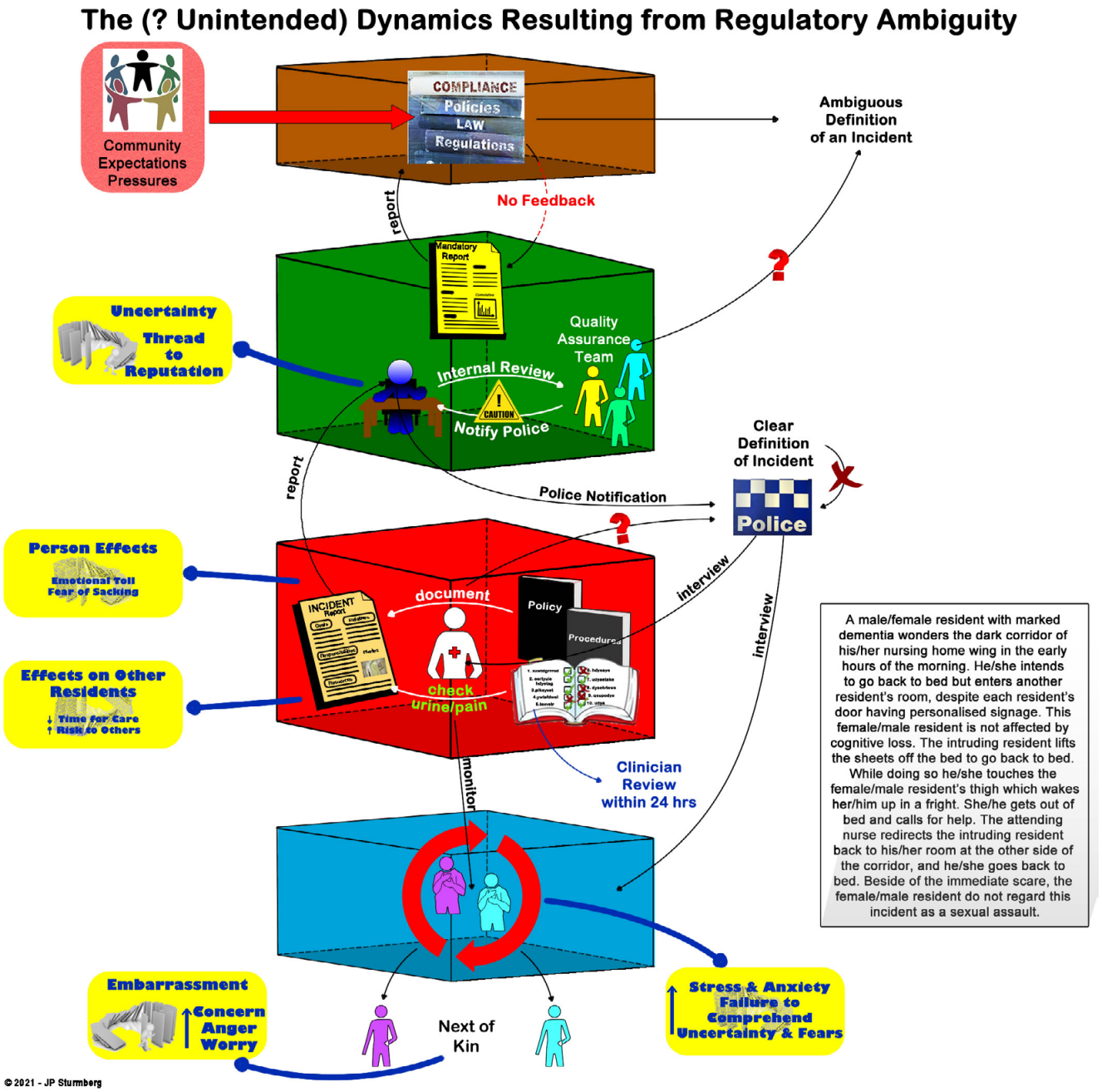


Figure 14 – The intent and the unintended consequences of ambiguous regulations

System failures

Proprietors have failed to achieve effective governance.

Proprietors are curtailed by limited government funding to meet their obligations of providing flexible and adaptive care that meet the needs of individuals.

Commercial interests are not separated from care needs interests.

Facilities, and in particularly private ones, are also getting bigger [45–47], largely driven by financial viability concerns [48] and are becoming more hospital like [47]. However, mounting evidence indicates that small cluster facility models are not only financially viable but also deliver better person-focused outcomes – increased quality of life, lower emergency department visits and lower hospitalisation rates, better quality of care (No of bedridden patients, catheter use, pressure ulcers) [1, 49–51]. The difference in staffing arrangements between the two models, based on the US experiences, are summarised in **Figure 15.** A recent Australian study showed significant per-person per-year nursing home savings of 16% between clustered domestic and standard models of care, with an even higher 21% saving in total health care cost (nursing home, medical and hospital costs) [49].

The Serious Incident Response Scheme (SIRS) aims to:
• strengthen aged care systems to reduce the risk of abuse and neglect • build providers' skills so they can better respond to serious incidents • enable providers to review incident information to drive improvements in quality and safety • reduce the likelihood of preventable incidents from reoccurring • ensure people receiving aged care have the support they need.
Under the SIRS, there are eight types of reportable incidents:
• Unreasonable use of force – for example, hitting, pushing, shoving, or rough handling. • Unlawful sexual contact or inappropriate sexual conduct – such as sexual threats or stalking, or sexual activities without consent. • Psychological or emotional abuse – such as yelling, name calling, ignoring a consumer, threatening gestures, or refusing a consumer access to care or services as a means of punishment. • Unexpected death – where poor quality clinical care is provided to a consumer resulting in their death, or where the actions of a consumer result in the death of another consumer. • Stealing or financial coercion by a staff member – for example, where a staff member coerces a consumer to change their will to their advantage, or steals valuables from the consumer. • Neglect – for example, withholding personal care, untreated wounds, or insufficient assistance during meals. • Inappropriate use of restrictive practices – where restrictive practices are used other than in the circumstances set out in Part 4A of the Quality of Care Principles, such as without prior consent or without notifying the consumer's restrictive practices substitute decision-maker as soon as practicable, where restrictive practices are used in a nonemergency situation, or when a provider issues a drug to a consumer to influence their behaviour as a form of chemical restraint. • Unexplained absence from care – where the consumer is absent from the service without explanation and there are reasonable grounds to report the absence to the police.

Table 7 – The newly added requirement of Serious Incident Response Reporting

Workforce

Nursing home care involves three separate but interrelated domains (**Table 8**):

- Personal care – provided by personal care assistants (PCA) and assistants in nursing (AIN)
- Medical care – provided by registered (RN) and enrolled nurses (EN), mental health nurses, physiotherapists, podiatrists, dieticians and physicians (primarily GPs, on a consulting basis geriatricians, psychiatrists), and
- Social care – provided by lifestyle therapists, diversional therapists, and volunteers such as musicians, artists, or animal handlers.

The workforce must meet people's needs to achieve desirable (and increasingly regulated) outcomes. People's needs are highly variable depending on their level of physical frailties and the degree of cognitive decline. Marked cognitive decline is frequently associated with troublesome behavioural issues necessitating greater demand on staffing levels and staff skills. Many residential aged care facilities now use their own screening and admission criteria before accepting a new person into their care. As a consequence, potential individuals perceived to potentially be 'too difficult' or 'too troublesome' miss out, the corollary are increasing carer stress in the home environment, and many hospital beds being blocked by patients unable to be discharged into residential aged care

[https://www.smh.com.au/national/nsw/hundreds-of-elderly-patients-occupy-nsw-hospital-beds-in-queue-for-aged-care-20150402-1mdr1q.html].

Staffing levels

The *Australian Health Care Act* 1997 [25] applies a minimalist approach to staffing levels – it requires that providers: maintain an adequate number of appropriately skilled staff to ensure that the care needs of care recipients are met. Under this requirement staffing levels can be as low as 1 RN per 100 residents. Minimum staffing level requirements are consistent with those of other comparable countries, and in all cases are longstanding (**Appendix 3 – Table 3**).

Staff composition

Staff composition must be commensurate with people's needs. However, as with staffing levels, staff mix requirements are only loosely defined as have to be appropriate [25]. Appropriateness is as much a 'rubber band' definition as it is dictated by the often rapidly changing care needs of an individual. Staff composition for a physically frail ward must by necessity be different to a ward

System failures

Aged care is tacitly portraited as an undesirable professional domain where "you go if you are a failure".

Staffing levels and skills mix are not aligned with care needs.

The size of care units fails the needs and the respect of dignity of the most vulnerable individuals.

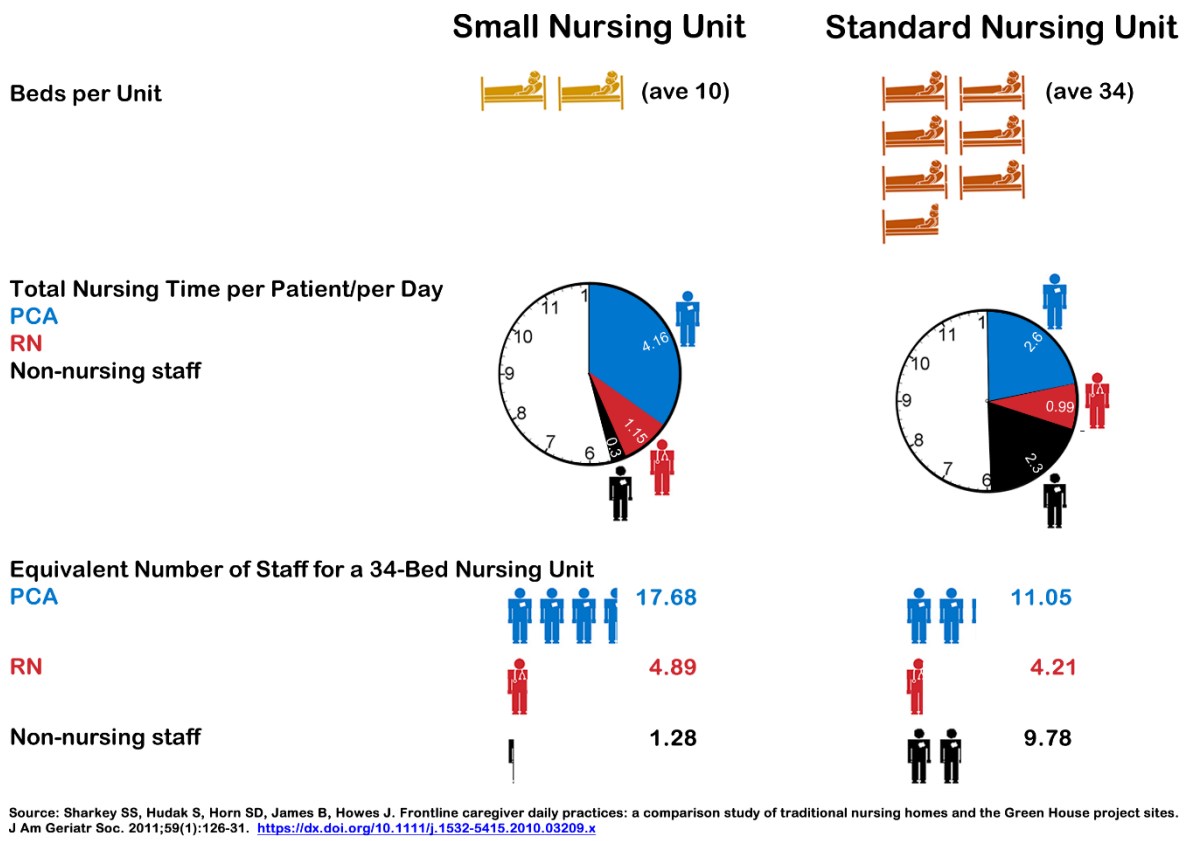


Figure 15 – Staffing level differences between small cluster and standard nursing unit design (compiled from [1])

Note: In the Cluster Nursing Model PCAs will deliver tasks currently provided by non-nursing staff, this entails they may require upskilling

- Nursing homes employ 277,671 people (14% increase from 2016).
- 93% of all jobs in the residential aged care sector are permanent part-time positions (equivalent of 129,151 full-time equivalent positions (32% increase from 2016)).
- Type of staff:
  - 70% Personal Care Workers (PCA and AIN)
  - 23% nurses (RN and EN)
  - 7% allied health professionals.
- 52% are under 40 years of age – 61% RNs; 42% ENs; 52% PCAs (35% increase from 2016)
- 49,475 (35%) identify as being from a CALD background (26% increase from 2016).

Table 8 – Summary of Nursing Home Workforce Characteristics [10]

caring for residents with advanced dementia.

The nursing home workforce is largely a part-time workforce (**Figure 16**). A significant increase in full-time equivalent staffing to nursing home patient ratios (1.79 to 1.42) coincided with the proceedings of the Royal Commission into Aged Care Quality and Safety [36] (**Appendix 3 – Table 4**).

Staff skills and experiences in geriatric nursing

Many residential aged care facilities rely on industry sponsored overseas trained nursing staff. Many of these staff members have been trained in acute care nursing relevant to the needs of their countries of origin, arriving in Australia with little to no geriatric training or experience. Equally many PCAs, AINs, and ENs are from low socioeconomic and non-English speaking backgrounds, many of whom also have family based caring responsibilities.

These staff characteristics have a doubly negative impact – they inhibit communication between carers and residents, and they dampen staff's confidence in their work, especially as there is limited supervision and few upskilling opportunities.

Staff stability

The nursing home workforce is extremely casualised with 93% of the total workforce employed under permanent part-time arrangements [10].

The high level of casualisation makes employment in the nursing

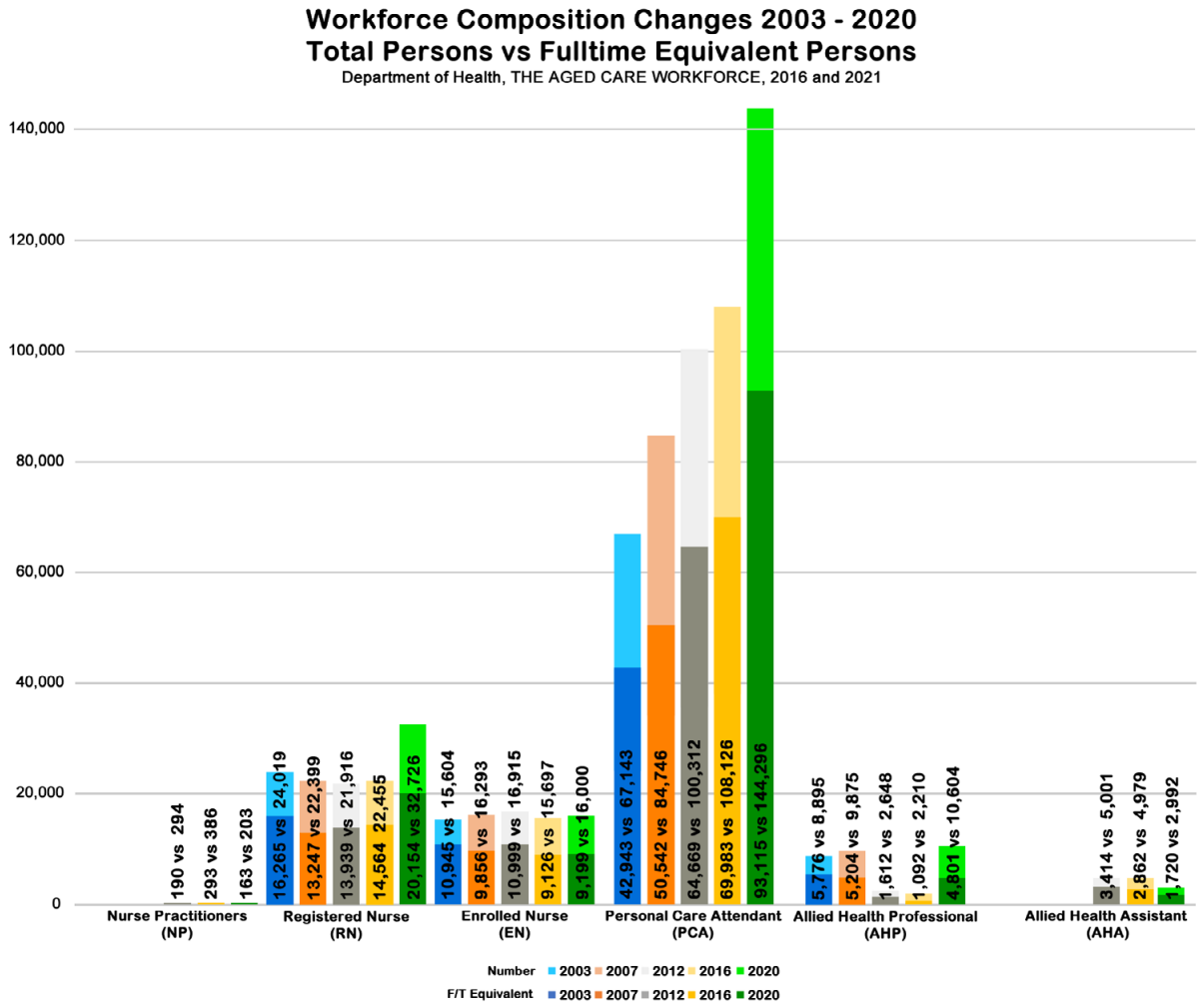


Figure 16 – A 'stable' workforce in an increasing demand environment (modified from [9, 10])

Note: the peak in the 2020 columns coincided with the proceedings of the Royal Commission

home setting unreliable and unstable, forcing many staff members to work in multiple facilities to simply 'get by' [10]. In addition, residential aged care facilities are a physically and emotionally demanding work environment, offering limited career pathways, and are generally perceived as being an undesirable workplace where you go if you cannot find any better job. This is reflected in a 29% staff turnover (25% AH; 28% EN, PCA and AHA, 37% NP and RN) [10]. The top five reasons for leaving the workplace (about 75% of all reasons excluding place of residence) are lack of work challenges, low pay, issues with management, not enough work hours available and the job being too stressful (**Table 9**, **Table 10**) – it is a uniform pattern across most other western countries [4].

Staff stability is further worsened by a high level of job vacancies – in November 2020 there were 9,404 vacancies with 51% of facilities looking for PCAs, and 38% for RNs [10]. As a consequence, nursing homes have to hire agency staff to cover the shortfall and to maintain adequate staffing to care for its residents when there is an acute shortfall in staff, or vacancies are long term (**Figure 17**) [9].

Like any other service industry[2] the nursing home system needs redundancy in staff numbers and skills sets to be able to respond – more or less instantaneously – to changing care needs in various parts of a residential aged care facility.

Information management

Current information management systems are fragmented with software packages focusing on domain specific aspects without linking all relevant information needed to make possible seamlessly integrated care.

Residents

Over the past 20 years there has been a steady rise in the number of the elderly entering nursing home care. Changes in Australian

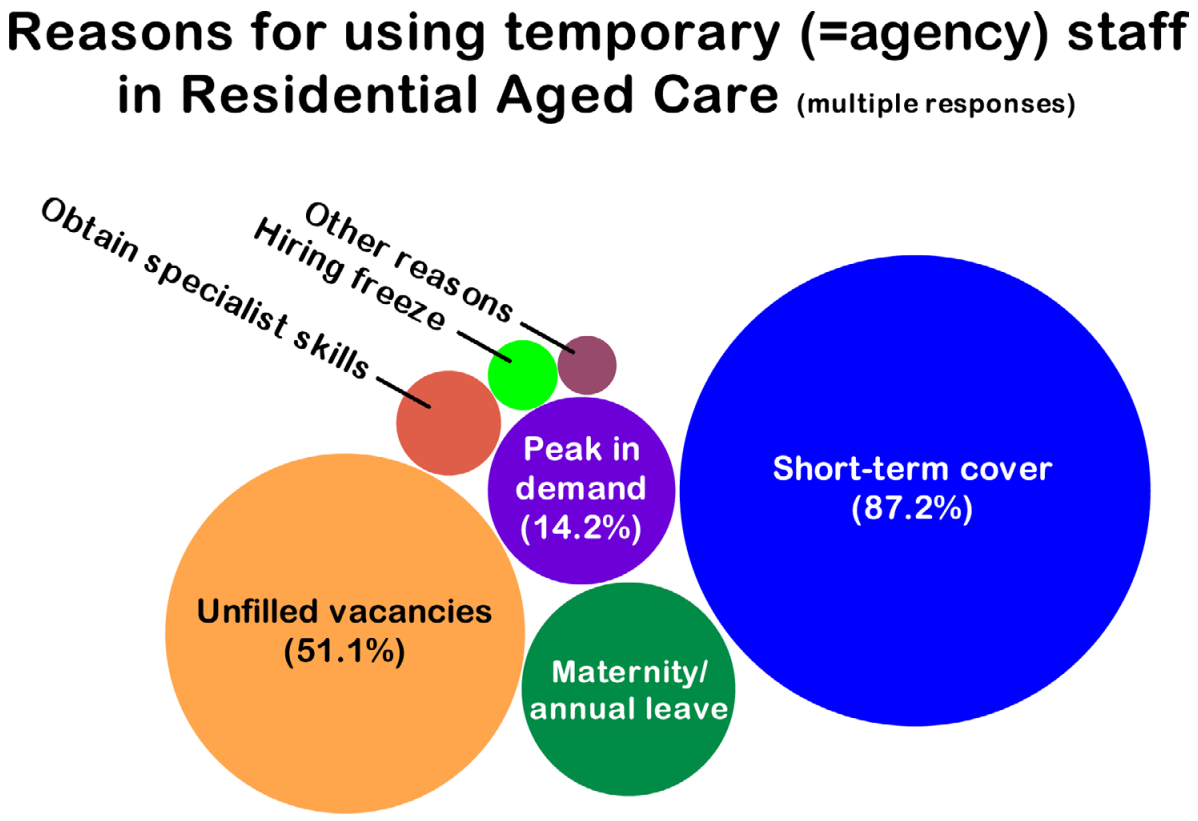
2 For example, hotels run optimally at 80% occupancy when fully staffed.

Most important reason	RN	EN	PCA	AH
To find more challenging work	15.4	12.3	6.2	15.8
To achieve higher pay	11.2	6.4	4.8	9.5
To avoid managers/management I did not get along with or like	9.8	8.3	3.7	4.3
To get shifts or hours or work I wanted	7.7	14.8	17.5	10.0
The job was too stressful	6.8	2.6	3.4	2.7
Moving/Distance to work	24.2	29.5	40.0	27.8
All others	24.9	26.1	24.4	29.9

Table 9 – Main reason for leaving residential aged care – 2016 (%) [9]

Occupation	Percent of workforce	Educational requirement	Remuneration (range)
Nurse Practitioners (NP)	nil – 0.2%	Master's degree	$39.70–40.88/hr
Registered Nurses (RN)	1.4% – 14.7%	4-yrs University	$26.93–57.25/hr
Enrolled Nurses (EN)	14.4% – 11.6%	1-yr University	$24.11–25.36/hr
Personal Care Attendants (PCA)	56.5% – 68.2%	Certificate III – 5 weeks	$21.62–26.26/hr
Allied Health Assistants (AHA)	5.3% – 7.6%	TAFE, variable	App $21–32/hr

Table 10 – Average Staff Composition [10], Educational Requirements and Staff Remuneration [52-54] in Australian Residential Aged Care Facilities



Source: NILS, *The aged care workforce, 2016*, compiled from tables 4.20, 6.23

https://gen-agedcaredata.gov.au/Resources/Dashboards/Australia-s-aged-care-workforce

Figure 17 – Reasons to hire agency staff

System failures

Ageing and the inevitable need for help in older age is not a point of public, private or professional discussion.

People need to devise – in good time – a plan for their care wishes and their end-of-life care.

Quality of care assessment fails to measure the outcomes that matter.

population trends and composition mean that residents have concurrently become older and significantly more frail (**Figure 18**). The increases in morbidity levels in general, and combined with mental health conditions such as dementia, have led to increases in care needs, which in turn increased the workload of full-time, part-time, and casual nursing home staff. Inevitably, residents' higher levels of frailty are associated with shorter survival [55].

Morbidity levels

Nursing home residents are affected, on average, by 6–8 different physical long-term health conditions, and about half are affected by dementia. The number of impairments rise with age and are substantially higher for individuals with dementia. Accordingly, the need for help with physical activities is high across most domains of activities of daily living (**Appendix 4 – Figure 3**).

Nursing home residents care needs have progressively increased since 2010. About half of all residents have high needs with activities of daily living, about half have high levels of cognitive and behaviour care needs, and about 40% have complex medical care needs (**Appendix 4 – Figure 4**). *Aged Care Funding Instrument* (ACFI) [56] data show a commensurate increase in care needs.

What matters most is personal well-being

Personal well-being, while acknowledged to be important,

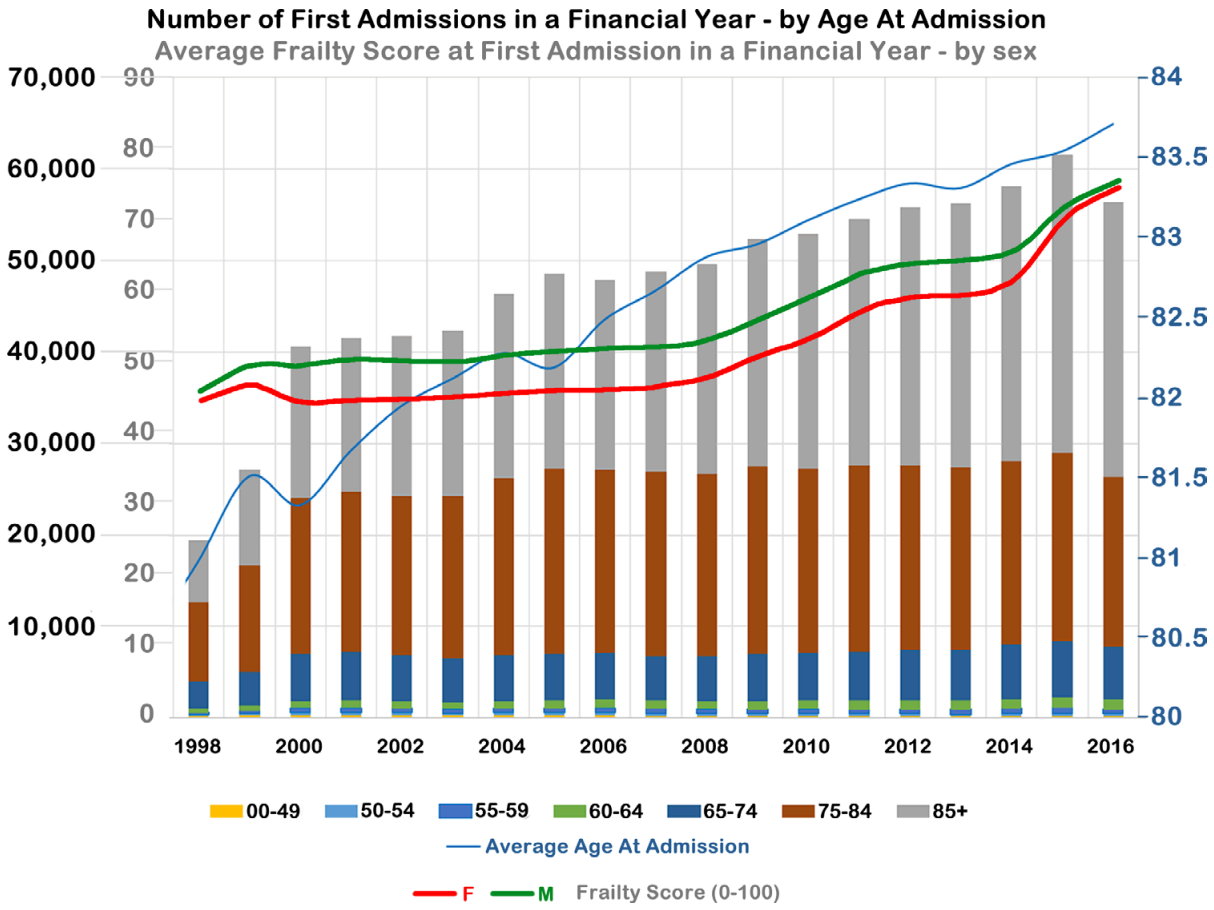


Figure 18 – Changing characteristics of residents admitted to residential aged care.

Figure compiled from: Cullen, D. Estimating key parameters for long term care insurance in Australia. NATSEM Seminar Series, 9-May-2017. https://www.governanceinstitute.edu.au/events/natsem-seminar-series/461/estimating-key-parameters-for-long-term-care-insurance-in-australia, last accessed: 28-Aug-2021

is not proactively been taken into account; however, it should be the key outcome measure for the performance as the system at the delivery as well as the system-as-a-whole level. The Person Wellbeing Index (PWI) is a validated tool to assess a person's well-being trait and mirrors a person's enduring positive mood that reflects the person's thinking and feelings in general (feelings of satisfaction and contentment). The PWI measures seven domains – Standard of Living, Personal Health Rating, Achieving in Life, Personal Relationships, Feeling of Safety, Community Connection, and Future Security [57].

The Adult Social Care Outcomes Toolkit (ASCOT) is a validated tool to measure social care-related quality of life [58]. The ASCOT items were rephrased for comprehension in a nursing home setting and measures eight domains of social satisfaction – Control of Daily Life, Personal Appearance, Food and Drink, Safety, Social Contact, Use of Time, Clean and Comfortable Environment, and the Way of being Treated [5].

PWI and ASCOT scores correlate well and provide a good overview about the overall quality of a nursing home's care. Interestingly, higher and lower satisfaction levels arise from appreciations of specific domain scores (**Figure 19**).

The PWI score:

- in Settings A and C the high PWI score related to very high satisfaction with Safety, Standard of Living, and Future Security
- in Setting B the low PWI score related to very low satisfaction with Personal Relationships and Future Security
- however, lower scores in scales can be compensated for by others – the low scores in Setting B were compensated for by high scores in Community Connection, and the low score on Personal Health Rating in Setting E by high scores in Personal Relationships.

The ASCOT scores:

- in Settings A and C the high ASCOT score related to very high satisfaction with Way of being Treated, Clean and Comfortable Environment, and Personal Appearance
- in Setting B Satisfaction the low ASCOT score related to low satisfaction with Use of Time and Control of Daily Life, however, these lower scores were compensated by higher scores on Way of being Treated [5].

3.2. The consequences of the current system failings

All systems always deliver what they are designed for. The system is designed to be a 'nonsystem' – it is not a seamlessly integrated whole. As the analysis outlined

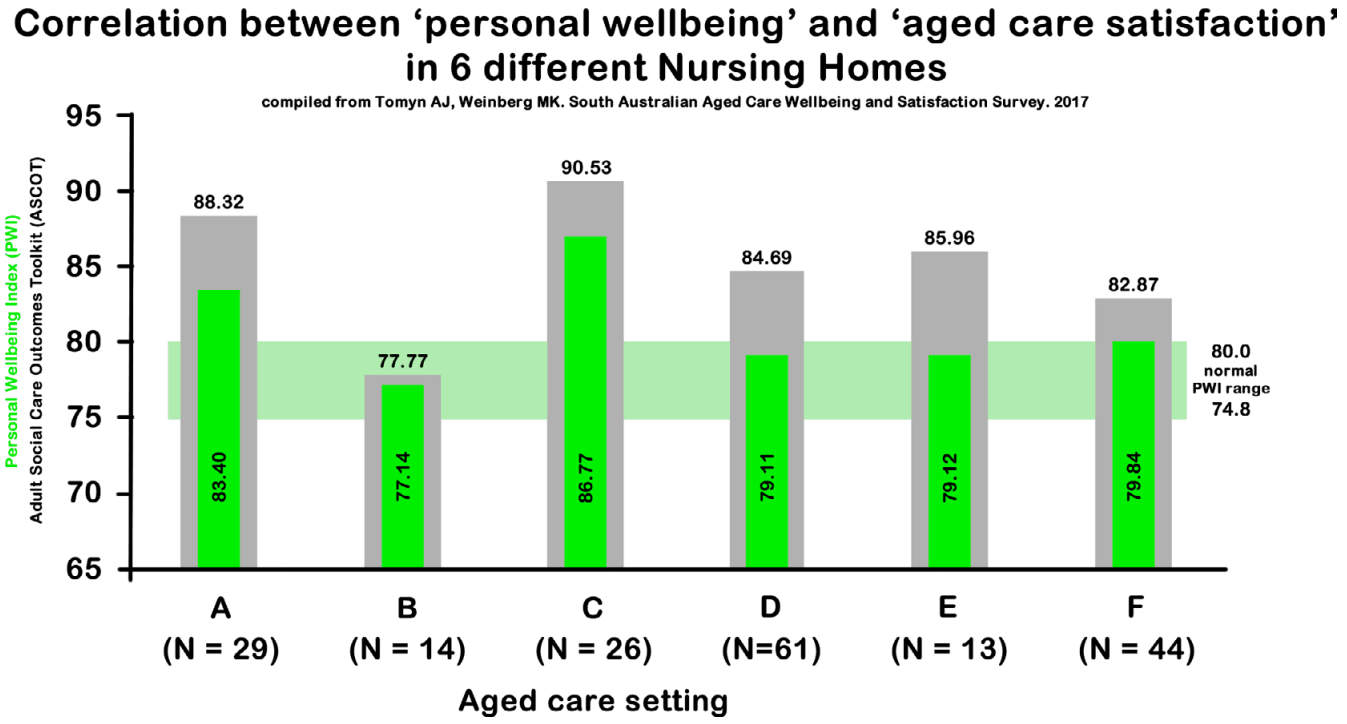


Figure 19 – Personal Wellbeing and Satisfaction in Aged Care [5]

Source: Tomyn AJ, Weinberg MK. South Australian Aged Care Wellbeing and Satisfaction Survey. Part A: The Report July, 2017. Australian Centre on Quality of Life, Deakin University, Australia in association with the South Australian Innovation Hub – Quality of Life Group; 2017. https://storage.googleapis.com/wzukusers/user-18581602/documents/59c9a9b371d26Y5zmS6P/Aged%20care%20wellbeing%20and%20satisfaction%20report_Part%20A_The%20Report_Revised.pdf

The importance of simple (or operating) rules

To fully understand the dynamics of an organisation as-a-whole, one must appreciate the importance of simple rules on the behaviours and ultimately outcomes of an organisation. Simple rules are collectively agreed upon guidelines that inform how all members of the organisation interact with it internal and external environments. An organisation's simple rules should preferably be explicit, and generally there are around three to five. Whether by conscious agreement or by unspoken assent, members of a CAS appear to engage with each other according to a short list of simple rules. Those simple rules shape the conditions that characterise the dominant patterns of a system.

in the previous part has shown, there are probably three different systems operating in the aged care domain, each having a different agenda. Or put more bluntly – the current aged care system is designed to fail its constituency, as it has no universally accepted focus (purpose). To understand what drives the current system to fail the people it is charged to care for requires an understanding of its "simple (or operating) rules" (see Ch 1.3).

Applying the concepts of simple rules to the current aged care arrangements reveals three different sets – one each for the government level, one for the proprietor level, and another for the nursing home level.

The simple rules for the government level:

- address all identified issues to the maximum extent permitted
- responsibility is accepted for actions, where there is a clear direction or a delegation of authority
- all areas of government are resource-constrained, hence doing more with less is required.

The simple rules for the proprietor level:

- apply business principles in decision-making
- stay within the regulator's rules
- avoid overt resident complaints.

The simple rules for the nursing home level:

- respect residents unfettered autonomy regardless of consequences
- always strictly follow the regulator's rules, independent of context
- look after yourself[3] – minimise your personal suffering
- be creative with using the available limited resources in the care of residents.

The consequences of the current system design

The current system configurations and dynamics do not measure up to its constituted purpose (as defined by the *Aged Care Act* 1997 [25]) – leading to key deficiencies:

- because of constant time pressures, suboptimal care impedes residents' quality of life
- inexperienced, undertrained, overworked, and undervalued aged and nursing home staff
- stressed staff:
  - constantly being on guard – not enough time (at times resources) to do the work required, especially the 'make or break' paperwork audited by the regulator
  - emotionally drained – high rates of abuse by incapacitated residents and by (at times) unrealistic family member expectations, as well as having to cope with grief
- regulatory oversight and interventions that fail to improve and humanise care delivery
- financial unsustainability to provide the expected level of care by aged and nursing home services.

Specifically, and in order of system hierarchy, and remembering the key properties of complex adaptive organisational systems (**Figure 20**), the central issues at the different layers are:

Government:

- The system, despite its clearly defined purpose, does not provide its stakeholders with a clearly defined focus for its work and the outcomes expected to be achieved.
- Nursing home care is primarily viewed in an economic frame – as a consumer good – rather than a common good necessity – some of us will require nursing home care as a last resort to maintain our dignity and well-being.
- Lack of clear separation of roles:
  - It is the government's prerogative to define the overall role of aged care reflecting community expectations.
  - Financing of the aged care sector is linked to a budget item line rather than – at arms-length – determined by the needs of care recipients.
  - Regulation (governance and accountability) of the aged care system is neither at arms-length – nor independent from government. The regulator's current – perceived as punitive – approach fails

3 Employer sponsored visa holders (a large proportion of nursing staff) are bonded to do their time in residential aged care; any misadventures can lead to deportation (enforces a mental mindset of: do your prison time and move on).

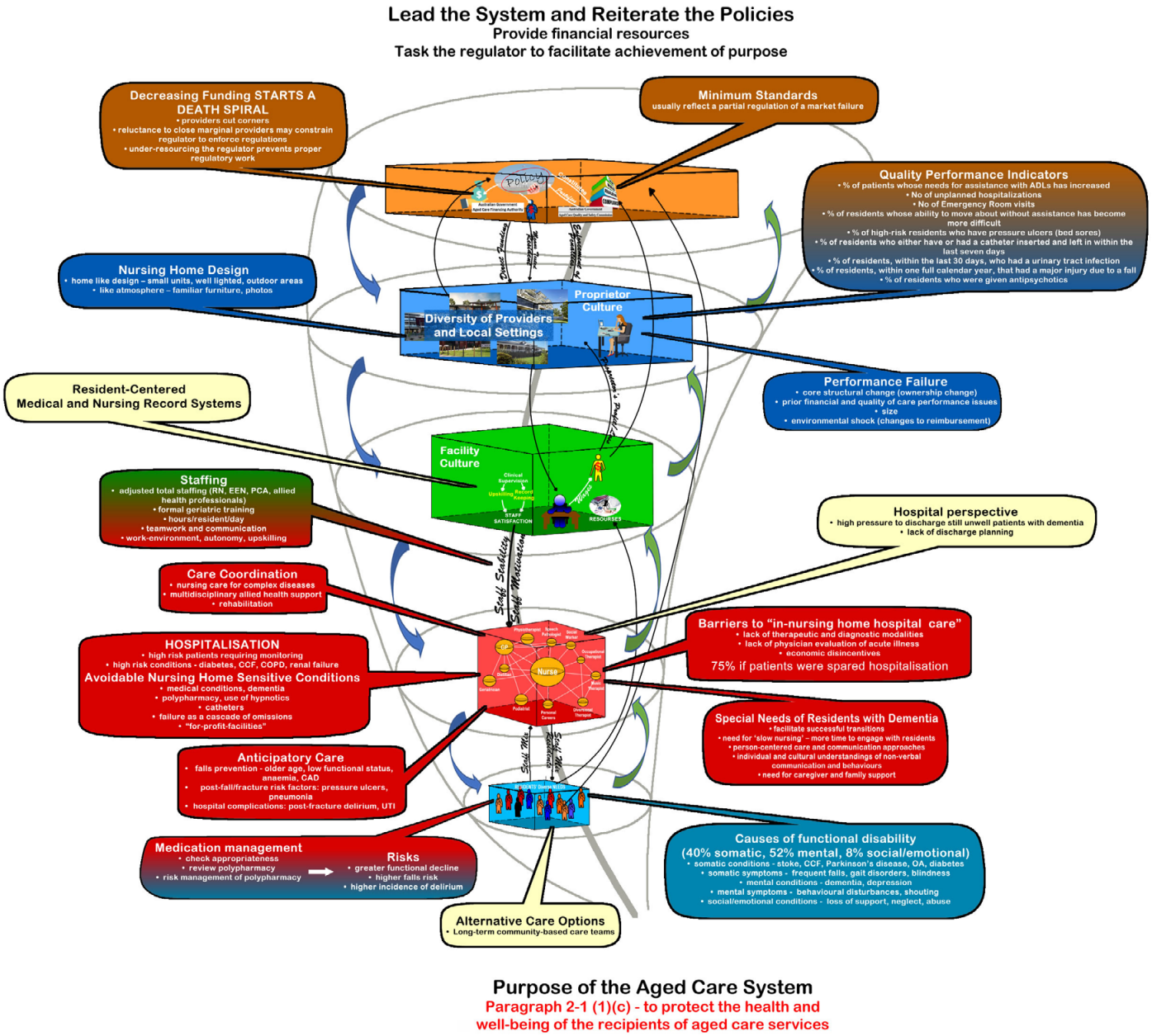


Figure 20 – Summary of the key – but overlooked – interdependencies towards a seamlessly integrated nursing home system

to foster an improvement and learning culture by "directing or encouraging behaviour valued by the community, so as to facilitate the pursuit of collectivist goals which might not otherwise be realised" (**Figure 21**).

Proprietor:

- Proprietors' decision-making is inherently conflicted between their care obligation and their economic interests.
- There are disincentives to experiment with emerging best-practice models.

Nursing home:

- There is a negative perception of nursing homes as a desirable workplace.
- There is a lack of staff stability in terms of:
  - numbers of staff
  - staff skills
  - overall staff composition.

Nursing home ward:

- The staffing is insufficient to be commensurate with residents' needs.
- There is a lack of supervision and on the job upskilling.
- Staff communication abilities are insufficient.

Resident level:

- Lack of planning for 'old age':

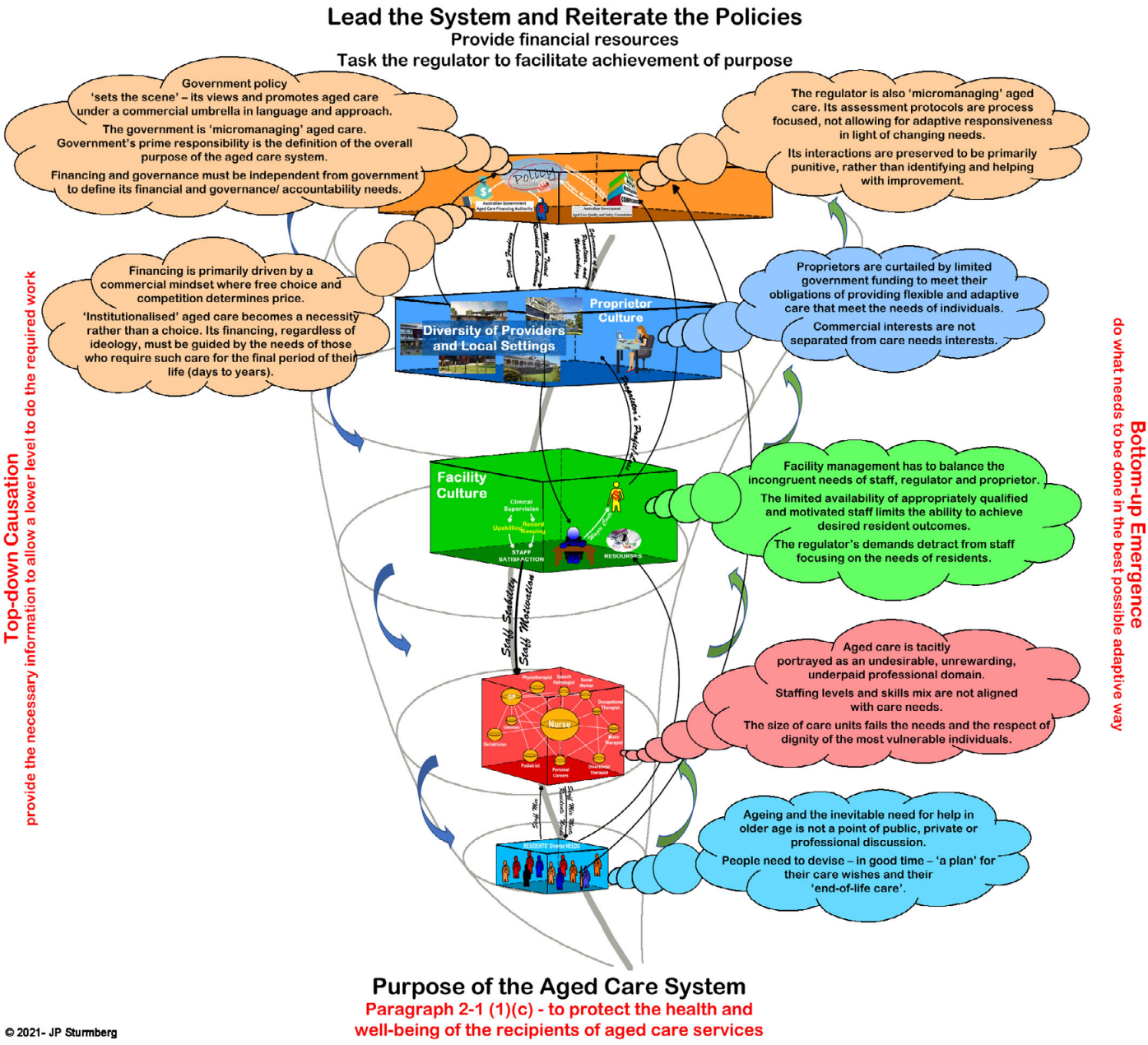


Figure 21 – The Key Responsibilities of Stakeholders in the Aged and Nursing Home System

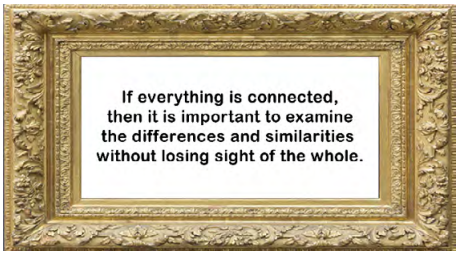
- advanced care directive
- end-of-life care directive.

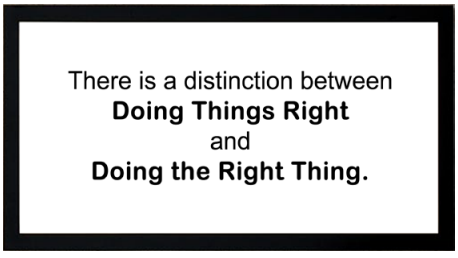
External factors that negatively shape the aged, and in particular the nursing home sector include:

- negative perceptions on ageing
- negative perceptions on aged care as a career path
- an unhealthy relationship to dying and death.

4. Learnings

We ought to embrace the insights of two of the great thinkers of recent times Alexander von Humboldt (1769–1859) and Peter Drucker (1909–2005).





4.1. What are the key findings for the subject?

One cannot divorce the ethical from the instrumental domain of care. It is important for all stakeholders to see that their actions and decision-makings must always be considered in their entire context. *Doing things right* – in its instrumental sense – does by no means equate to *doing the right thing*. These understandings are of utmost importance for the design, governance, and accountability frameworks and care delivery models for the aged and nursing home system – the care environment is constantly, and often abruptly, changing which entails that doing the right thing demands adaptation, while maintain the overall focus on the system's purpose. By implication it means that there is more than one way of doing things right, an insight that needs to be conveyed and supported to nursing home facilities and their staff.

The sector must move away from what has previously been a programme-based, siloed, and output-focused approach to caring for our elders. The establishment of a holistic and integrated model requires that stakeholders act in partnership to ensure that our elders achieve those **outcomes** that all of them desire – to live with dignity, choice, and continue to derive a sense of self-worth as contributing members of society.

The System is NOT a learning organisation

The systems failings are primarily the failings of enforcing the outcomes defined in the *Aged Care Act,* 1997 – the system lacks a 'system-as-a-whole' approach. Having an overall focus is essential to guide the function of the organisation; only having such a focus allows the emergence of a learning organisation that exhibits high levels of self-awareness and adaptability. In particular, learning organisations expect and accept that failures will occur, and 'welcome' them as opportunities to learn and adapt.

Crucially, learning organisations have a leadership frame that gives permission to adapt in light of emerging – unforeseeable – challenges so that the desired outcomes can be achieved.

The key – negative – consequences for the system as-a-whole are:

- Because of constant time pressures, suboptimal care impedes residents' quality of life.
- At large, aged and nursing home staff are inexperienced, undertrained, overworked, and undervalued.
- Staff are constantly stressed:
  - always on guard – not enough time (at times resources) to do the work required, especially the 'make or break' paperwork audited by the regulator
  - emotionally drained – high rates of abuse by incapacitated residents and by (at times) unrealistic family member expectations as well as having to cope with the frequent experiences of grief.
- Regulatory oversight and interventions fail to improve and humanise care delivery.
- Current aged and nursing home service arrangements are financially unsustainable to provide the expected level of care.

Accountability and governance thinking determines the behaviour of the system

Accountability and governance within the Australian aged care system are not well aligned with the purpose of the system, achieving good quality of life during the final period of a frail person's life (by extension this problem equally applies to home care of the elderly, and is a major dismissed issue for medical care: should every possible intervention be offered and/or implemented?)

Accountability and governance doctrines have pragmatic impacts on the culture and adaptability, and thereby viability, of an organisation. A regulator needs to be seen as tough but fair in light of the work required and the outcomes to be achieved. The principal beliefs underpinning regulatory approaches shapes the focus of those regulated and has unavoidable consequences on their behaviours – do they trust in their organisation's leadership to be supportive of their work, in bringing to the forefront risks that require attention, and in times of crisis facilitating open discussions to identify how things went wrong and how these same failures can be avoided in the future (**Table 11**).

Supporting the stability of the current system is an outputs framework – though bureaucracy regards it as an outcomes framework – that fails to take account of the task domain that in turn determines what outputs can be created, and ultimately if those outputs contribute to the outcomes that matter. The model is primarily motivated by a bureaucratic/political concern of ensuring equity, effectiveness, and efficiency, but also act as an instrument of power and control (**Figure 22**).

While effectiveness and efficiency are undoubtedly important concerns; as primary drivers, they fail to focus everyone's attention on what really matters – the achievement of the

	Control-focused	Responsiveness-focused
Belief	One can't trust people	We trust that: • people take responsibility if allowed to do so • people learn from each other Mistakes/Mishaps are learning/improvement opportunities.
Focus	Who is wrong (individual focus) • a • b Retribution	What is wrong (system focus): • process failures • early warning signs. Improvement
Consequences	Authoritarianism Distrust Limiting engagement Risk aversion Hiding issues/failures Stagnation	Distributed leadership Trust Initiation to solve problems Calculated risk taking Openly discuss problems Innovation
Braithwaite [7] summarises the differences as: • Protocols kill initiative under an atomistic pile of paper. • Excessive demands for a task orientation distract attention from the people-oriented outcomes that matter. • Protocols and guidelines create health and regulatory bureaucracies that miss the big picture* by being excessively systems oriented. • Subjective assessments are reliable – and in constant use to improve outcomes in other service industries.		
* Braithwaite's description of the status quo: "In nursing home regulation today we find public mandating of the preparation of all manner of compliance plans, often combined with a requirement for committee meetings associated with them, with obligations to provide minutes of such meetings to inspectors and the risk of citations from inspectors if these processes are not working. Examples are nursing home plans for quality assurance, individual care plans for all residents, in-service training plans, staff planning, building design, infection control, pharmacy, social services, even grooming plans. In some jurisdictions, with some of these there are public requirements that outsiders be required to participate on committees that revise plans and monitor continuous improvement, as in US state rules that require family members of residents to be invited in writing to quarterly care planning meetings for their loved one."		

Table 11 – Accountability and governance doctrines shape the culture of an organisation

principal purpose of the aged and nursing home care system as stipulated in the *Aged Care Act* 1997 [2]. On the other hand, a system focused outcomes framework takes account of:

- what needs to be achieved
- the circular nature between the goal to achieve, and the – necessarily emerging – tasks to achieved it (**Figure 23**).

Intrinsic workforce problems

Nursing homes require dedicated staff with high levels of clinical and caring capabilities [59, 60], and its staff mix must constantly adapt to the rapidly changing needs of its residents. However, there is a general shortage of potential staff, compounded by nursing's homes being seen as undesirable workplace with high workloads and poor pay levels. For-profit and not-for-profit ownership have an impact on staffing levels, with evidence that in for-profit environments wages are higher but staffing levels lower, and that quality of care is lower and adverse outcomes higher than in not-for-profit settings [4]. These interdependencies of staff dynamics and outcomes are easier understood through an influence diagram as depicted in **Figure 24**.

The nursing home workforce is not fit for purpose

There is general acknowledgement that the nursing home sector is understaffed, underskilled, and undervalued; however, there are very different views on how to fix that problem. While the nurse federation argues for fixed resident fix that problem. While the nurse federation argues for fixed resident to staff ratios [61], others argue that this is neither resulting in better outcomes nor that it is affordable [62]. These voices argue that aged care residents require more social rather than more nursing care, and that available evidence points to nursing related care being rarely missed. It – in our view – underestimates the medical care needs based on residents' increasing complex health needs and frailty (one could easily argue, based on residents' morbidity and frailty, that nursing homes provide ongoing low acuity hospital care). While we agree with the notion of flexibility in staffing, a report by a consulting firm arguing as forcefully as this one must also provide

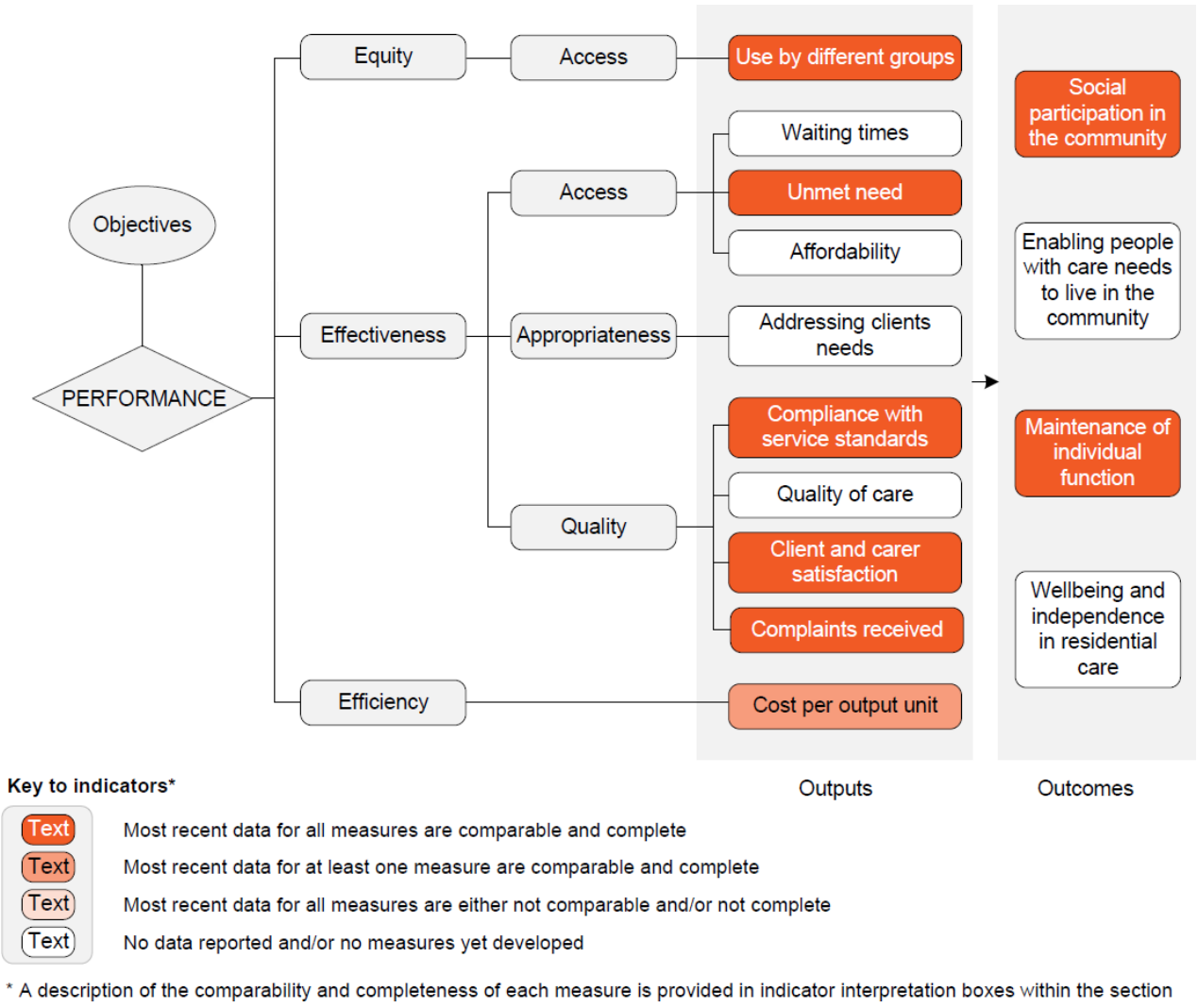


Figure 22 – Outcomes framework. Productivity Commission Report on Government Services 2021. 14 Aged care services. https://www.pc.gov.au/research/ongoing/report-on-government-services/2021/community-services/aged-care-services, last accessed 28-Aug-2021 [6]

suggestions as to which criteria should be used to determine staffing levels and mix [62].

Our professional observation indicates that the most important missing team members are social workers (to support families and staff and help to navigate the system) and psychologists (to help with residents' and families' distress, as well as debriefing the inherent emotional stresses experienced by staff).

Government providing more money is not a policy response

The aged and nursing home systems are underfunded, however this is not the key problem for the sector. Simply throwing more money (**Appendix 3 – Table 2**) at the dysfunctional system is not going to fix its fundamental systemic structural and dynamic dysfunctional interdependencies.

The government, represented by the Minister for Senior Australians and *Aged Care* Services on behalf of the community, is charged to lead and oversee the aged and nursing home system. To successfully discharge their responsibilities the Minister needs to embrace a complex adaptive policy agenda to create a seamlessly integrated adaptive sector that delivers the outcomes enshrined in law (**Figure 25**).

The York Framework

The Royal Academy of Engineering encouraged the use of *The York Framework* to understand the complexities of a system failing (**Figure 26**). In our view, it appears rather linear and static, and unable to adequately capture the dynamics that result in system failures. Ultimately the failures almost always arise in the context of human interactions, either directly by frankly making a mistake, or indirectly by someone feeling disempowered to speak up about issues of concern.

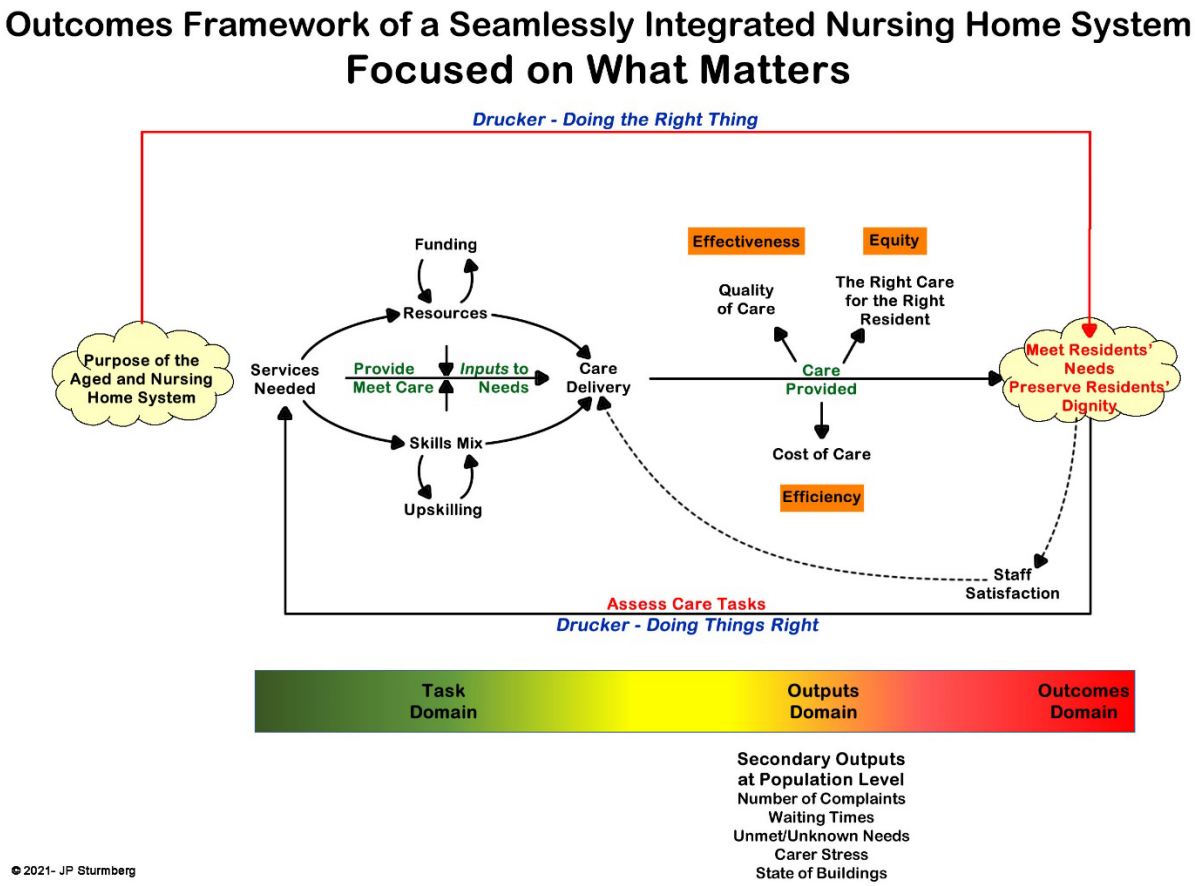


Figure 23 – A dynamic outcomes framework for an outcomes-focused dynamic adaptive aged and nursing home system

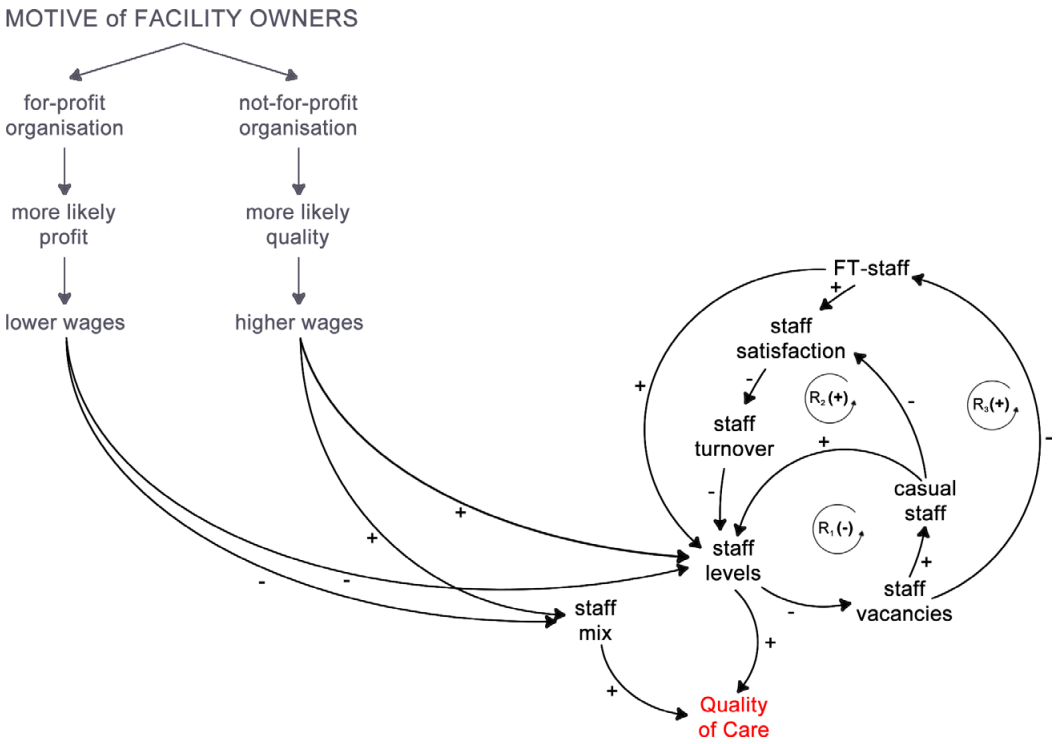


Figure 24 – Causal loop diagram of staffing dynamics (total numbers and mix) on quality of care (based on data by Allan and Vadean [4]). Note: R1 shows that filling staff vacancies with casual staff maintains a certain staffing level, however, as R2 and R3 indicate staff levels for both casual and FT-staff are perpetuating instability of staffing levels. Equally, staffing dynamics are influenced by external factors like facility ownership.

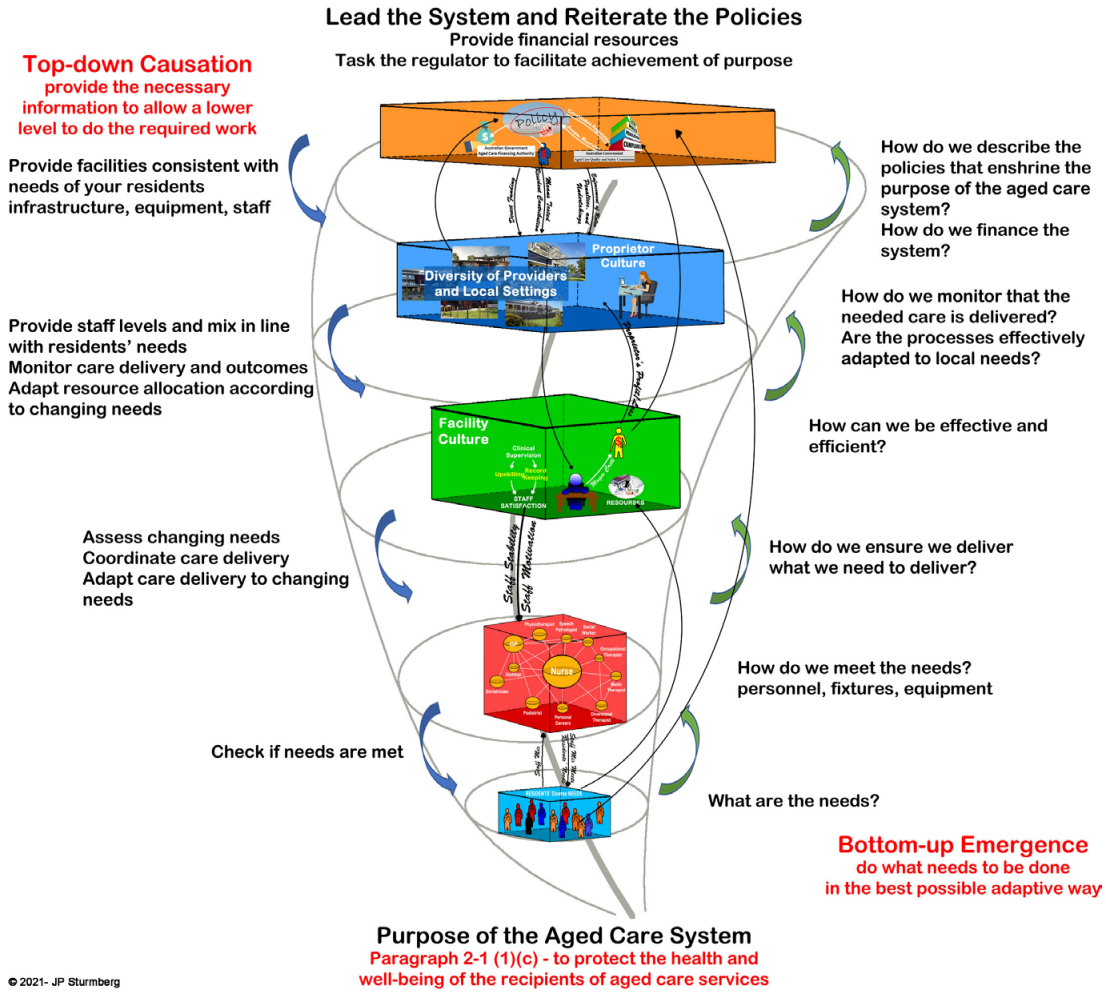


Figure 25 – A systemic framework to design policies to achieve the proclaimed outcomes of the aged and nursing home system

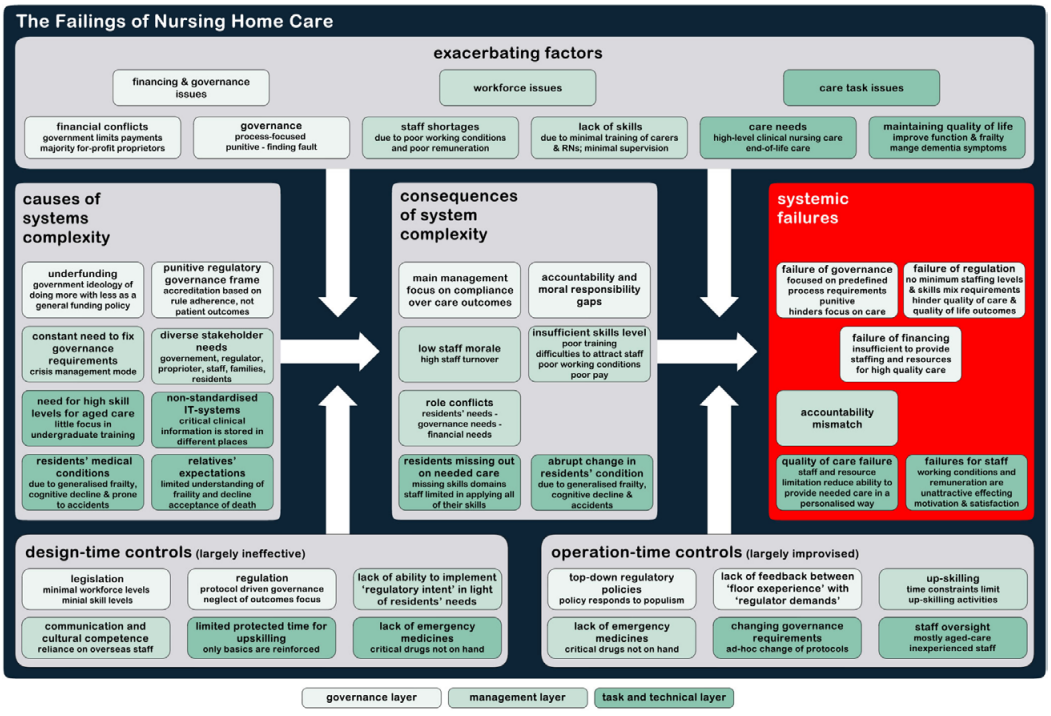


Figure 26 – *The York Framework* of system analysis

The human dimension is critical to prevent disastrous failures and requires a leadership focus on building a culture of openness and trust in which risk mitigation can emerge naturally as part of the work required to achieve the system's desired goals.

5. Looking to the future – Route to impact

> *We cannot get to where we dream of being tomorrow unless we change our thinking today.*
>
> Albert Einstein

5.1. Who are the target audience(s) for the findings?

Our findings target all levels of the aged and nursing home care system.

- Bottom layer of the system – the overall message to residents and families is: what you experience in your care, or the care of your relative, is primarily the outcome of a poor system design, rather than ill will or incompetence of carers, nursing staff, or a facility's management.
- Middle layer of the system – the key message to carers, nursing and other support staff as well as facility management is: you are 'the meat in the sandwich' – you are in a difficult position as you have to manage the demands from above (finance and regulation), and the needs from below (residents' and families' needs and expectations).
- The top system level must appreciate that their policies (understood as information) not only convey the purpose of the system, but also maintain the focus of the system both about economic efficiency as well as operational outcomes (do what matters and do it well). The key top-level failing is wanting to micromanage the bottom level without adequate appreciation of the work that needs to be done.

Systems always deliver what systems are designed for

As all systems always deliver what they are designed for, we need to find a universally accepted focus (purpose) for the nursing home system that achieves the outcomes we aspire to as citizens and potential nursing home residents. This is only achievable if we think differently about nursing homes and the services they ought to provide in terms of meeting the needs and maintaining the dignity of the most vulnerable section of the elderly in our community. In simple terms, it means to adopt new simple rules that can refocus the system on what matters.

New simple rules must refocus on WHAT MATTERS:

The purpose of the aged care system

The needs and aspirations of each resident

Permission to adapt to rapidly changing resident needs

The resourceful application of limited financial resources

Accountability in the context of the system as-a-whole

It also entails to acknowledge the need for culture change, and so, to assemble a facilitating leadership team – one that helps "those who have to do the work to find their locally feasible solutions" [21]. Organisational culture is the locus of individuals' learned behaviours [63]. Thus, testing their understanding of the simple rules is a good first step and might even lead to improvements! Influential leadership will guide the application of rules-based behaviours in a mutually satisfying way to achieve the organisation's purpose [64]. It necessitates some giving up of – perceived – privileges, for others to become confident to speak up, and being supported in raising issues of concern (**Figure 8**).

A systems-based approach

Four concepts need to be considered in the redesign towards a seamless integrated nursing home system.

1. Clearly define the focus (purpose) of the system.[4]
2. Stakeholder interdependencies must align to achieve the system's purpose.
3. The system must entail effective feedback to enable adaptation in a constantly changing environment.
4. Ensure the top-down system constraints are just right to allow everyone to do their job in the most effective and efficient way to achieve the system's purpose.

Applying these four concepts allow for the proper top-down consideration of who – at each level in the system hierarchy – has to create what kind of constraints to achieve the conditions for the seamlessly integrated function of the nursing home system. At the same time, it allows each level to determine the bottom-up requirements to effectively, efficiently, equitably, and sustainably provide the services that meet residents' needs and maintain their dignity.

A new set of simple rules

Simple rules or how to rules are the operating principles (tacit or outspoken) that determine the dynamics and the achievements of a system. They provide the necessary guidance for decision-making to all agents regardless of their place and role in the system.

Developing a new set of simple rules is a deliberative process – it must take into account the system's values and its purpose.

4 This is already defined by the *Aged Care Act 1997*

Aged and nursing home care is about providing frail people with the necessary support that meets their needs and maintains their dignity. Suggested simple rules to achieve an effective, efficient, equitable, and sustainable aged and nursing home system are:

Potential new simple rules may be:

First and foremost, focus on the purpose of the system – to provide care that achieves residents' desired quality of life and maintains their dignity.

Adapt your responses to emerging challenges – within your level of expertise and responsibilities.

Share your concerns.

Engage in the problem-solving processes.

Be resourceful within the financial constraints in the care of residents.

Transforming organisations

Organisations urgently need to implement a systemic approach to define and represent themselves to all their internal and external stakeholders (**Figure 27**). The principles are as follows:

- Our focus (purpose) is *xyz* is represented through a vortex.
  - Everyone at every point in the organisation is reminded that their work/decision-making needs to align with the core reason why the organisation exists.
- Our internal structures at various levels are represented by a hierarchical network map.
  - Everyone in the organisation understands where they are situated within the organisational layers of the organisation.
- Our internal relationships at various levels, and most importantly, across levels are represented in a systems and influence map.
  - Everyone in the organisation sees how they relate and interact with all other members within and across the organisation.
- Our external relationship (or operating environment) are represented by understanding who our key external stakeholders are.
  - Everyone in the organisation sees who exerts influence on the organisation, and how the organisation may influence its environment.

Having defined the purpose and the core relationships of the organisation, this then allows specific responsibilities to be added into each chart. However, these are not static, they constantly change under changing conditions and thus must be regularly reviewed and updated as required.

Adopting an outcomes-focused framework to monitor the performance and achievement of an organisation

Section 4 outlined the differences between an outputs-focused and an outcomes-focused oversight framework (**Figure 23**). The *Aged Care Act* stipulates, and nursing home residents rightly expect, that their care is focused on achieving quality of life and the maintenance

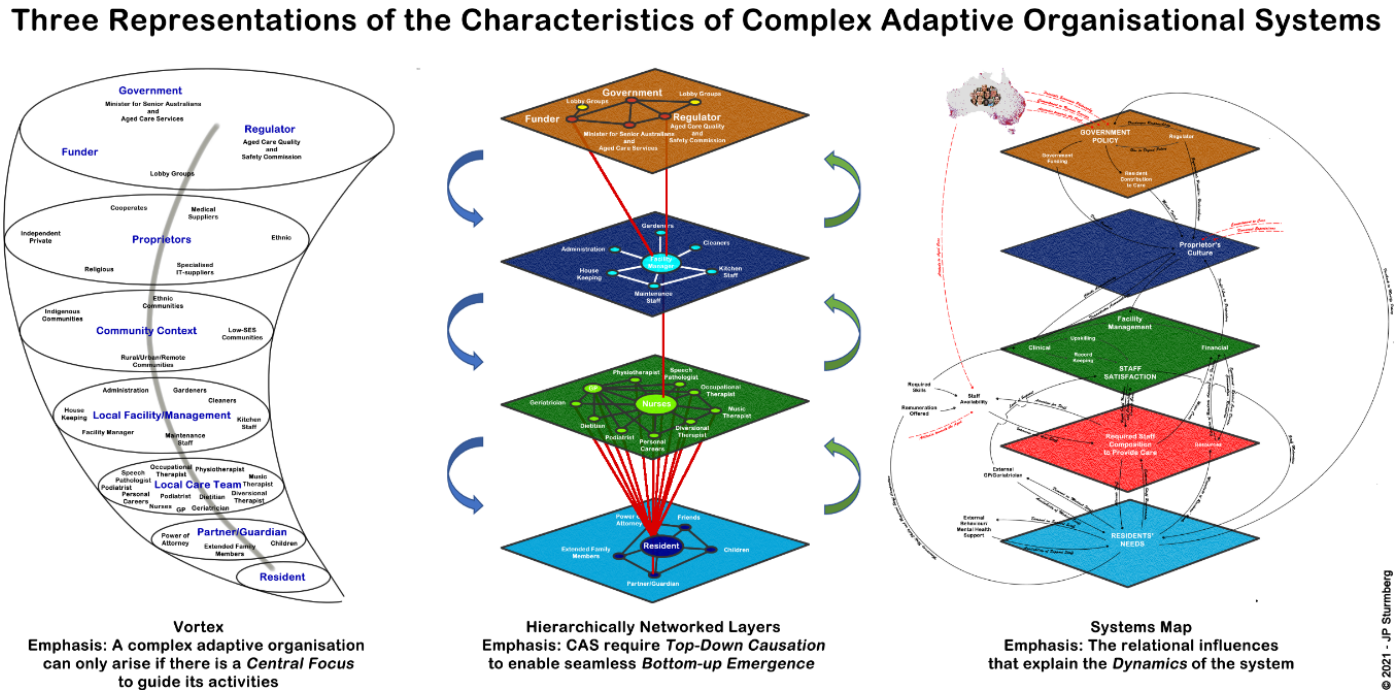


Figure 27 – Template to define the complex adaptive nature of an organisation

of their dignity through meeting their care needs. Hence, oversight – the task of the regulator – needs to focus on **what matters**, it must be outcomes, not solely process/output, focused.

It is the outcome to be achieved that determines the services required, which in turn determine the resource needs and the skills mix of staff to deliver the required care. Delivering the required care must be effective, efficient (addressing primarily policy concerns) and equitable which closes the perpetual loop that ensures ongoing high-quality care.

How to resolve the governance and accountability tensions – the need to refocus on what matters

The governance and accountability frameworks, as stated above, need to shift and resolve their current built-in ambiguities which have created a culture of fear rather than of support and guidance. Effective and efficient oversight frameworks clearly state what matters, how to assess what matters, and by what means to achieve what matters. Clarity is required to allow staff to most effectively, efficiently, and equitably spend their limited time to manage the often rapidly changing needs of residents under their care, as illustrated in **Figure 28**.

How to finance an outsourced 'common good' like aged care – for-profit or not-for-profit service provision

Society throughout history has contemplated the nature and the purpose of 'common good' provisions[5,6]. Adam Smith argued that to realise common interests, society should shoulder common responsibilities to ensure that the welfare of the most vulnerable is maintained [65], and John Rawls pointed out that the common good is the core of a healthy political system – common goods are provided equitably to everyone's advantage [66].

The promotion of neoliberal doctrines, starting in the 1970s, have blurred the otherwise longstanding notion that healthcare, and by implication healthcare towards the end of life, is provided for the benefit of society at large. The idea that healthcare can be broken down into distinctive bits that have a "distinctive value and thus can be sold at a price" has led to an "industrious understanding" of healthcare as the "delivery of a series of defined products". This view negates that the effects of healthcare as-a-whole arise from the interdependent impacts of "global care" and "instrumental care" for specific conditions (**Table 12**).

These shifting appreciations allowed the emergence of for-profit and not-for-profit providers in health and aged care. However, and often overlooked in this debate is that the status of a provider organisation necessitates different objectives. While both want to be efficient in the way they provide care, corporations – by law – in the first instance have a duty to shareholders to work towards profit maximisation, whereas not-for-profit entities are free to focus on the most effective way to apply their resources to deliver care outcomes for stakeholders.

Moving forward

The most effective and efficient way to get to where we want to be is through a collaborative redesign process. Redesigning is as much a philosophical approach re-examining the purpose and the value of the system, as it is a pragmatic technical exercise in brainstorming and testing new approaches.

A blueprint for the redesign of the aged and nursing home system might entail the following – interconnected and interdependent – steps and considerations. This blueprint takes account of the key systemic features of complex adaptive organisations:

- The need to know the purpose of the organisation.
- An appreciation of the hierarchically layered network structure of an organisation.
- The top-down impact of constraints on limiting the emergent bottom-up abilities to do the work that needs to be done.

The success of an organisation relies on understanding and harnessing the feedback loops that exist within and across the networked layers of an organisation. Organisational leadership is dispersed across the organisation, and leaders distinguish between the – top-down – focus on determining WHAT needs to be done, and HOW it is done. Leadership trusts their staffs' aptitudes and sense of responsibility and explicitly grants – bottom-up – permission to conceive (and adapt) HOW that work will be done (**Table 13**).

Acknowledgement

The study has been funded by a grant from the Royal Academy of Engineering (CFCS1B100001) and received ethics approval from the University of Newcastle (H-2021-0129).

5 That which is seen as best for a whole community and not simply for any individual or small group within that community. This may be seen in purely utilitarian ways, but it may be founded upon natural law theory. The ideas behind law and democracy assume that the common good is something that can be achieved, or at least should be pursued. (The Free Dictionary – https://financial-dictionary.thefreedictionary.com/Common+Good+(organization))

6 Common good, that which benefits society as a whole, in contrast to the private good of individuals and sections of society. (Britannica – https://www.britannica.com/topic/common-good)

Ambiguities of Focus Cause Unavoidable Tensions

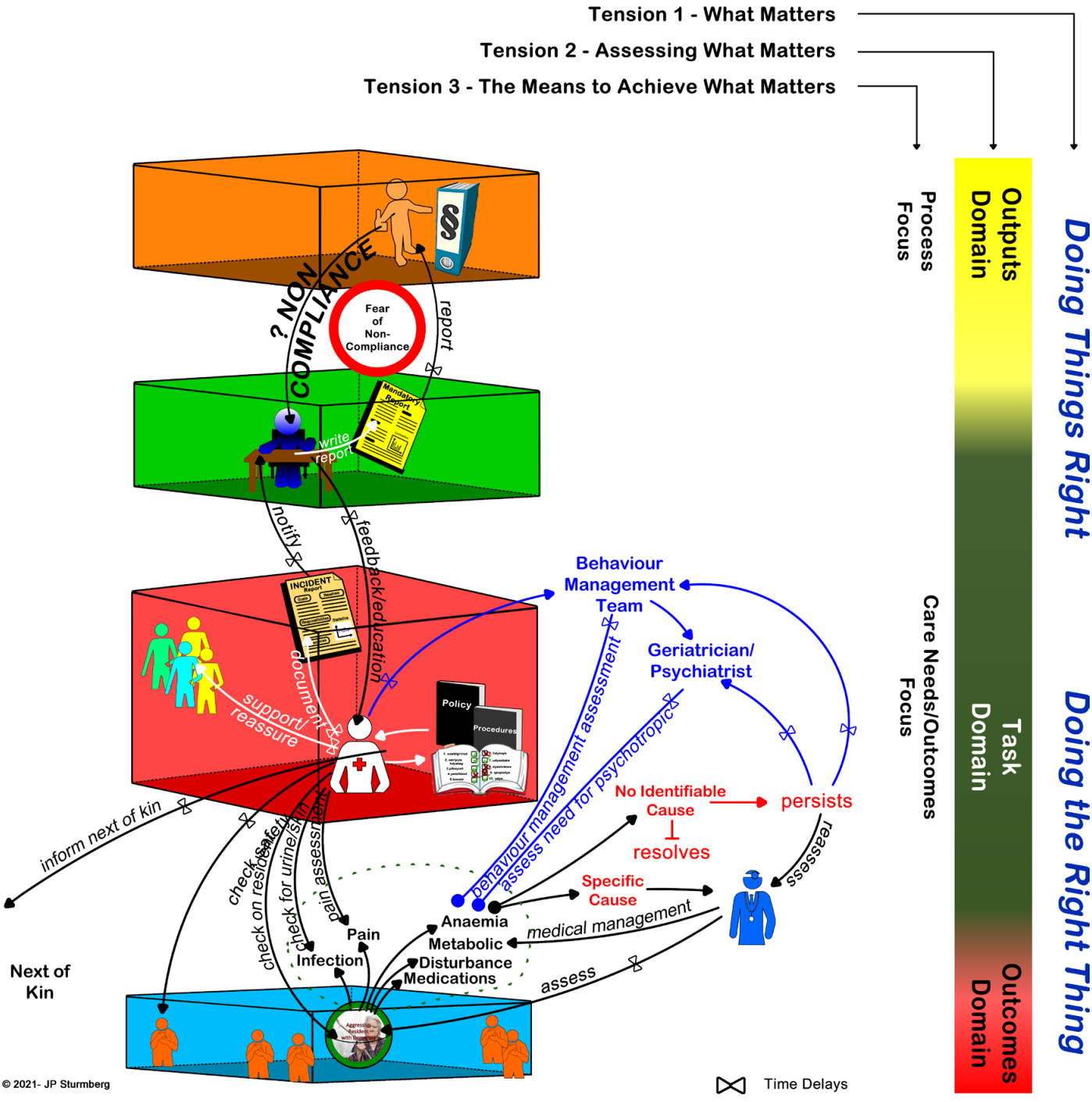


Figure 28 – Responding to a critical resident incidence

This system and influence diagram clearly illustrates the central role of the nurse in managing a critical resident incident and its multiple, and multi-layered consequences, as much as the impacts and roles of external agents. Care staff in the first instance are outcomes driven, where the desired outcomes define the necessary tasks to be attended to. The failure to recognise that outcomes should determine output and process measures create tensions resulting in uncertainties and fears – both of which hinder system improvement.

Category definition	Select examples
1. Policy and coordination: Formation of national policies, institutional capacities, and coordination mechanisms	• Planning and management of emergency preparedness and response • Health security and environmental risk policies and strategies • Community engagement and management • Institutional capacities and plans • Coordination platforms/systems • Sector and subnational policies and strategies
2. Regulation and legislation: Full range of legal instruments	• Regulation of the safety of medicines and medical devices • Legislation • Environmental regulations and guidelines (such as for biodiversity, water, and air quality) • Accreditation of health facilities and providers
3. Taxes and subsidies: Financial instruments to influence individual and market behaviour	• Taxes on products with health impact to create market signals leading to behaviour change
4. Information collection, analysis, and communication: Collect and analyse information, and monitor population-level change	• Human and animal disease, environmental and risk (such as, AMR, chemicals and radiation) surveillance • Communication and dissemination • Community behaviour change communication • Research and development • Monitoring and evaluation
5. Population services: Services that impact all of society and are fundamental to public health	• Sewage treatment and control • Vector control • Medical and solid waste management • Emergency response operations

Table 12 – Common goods for health [61]

We thank the participants of the following stakeholder groups for their time in sharing their perspectives on the aged and nursing home system: COTA, Nurses Federation, RACGP, and Mercy Health.

And lastly, we thank Kerry Lunney and Thomas Jun for their support and advice.

Addendum – Questions not covered in the main document

2. Methodology

2.4. What specific tools (if any) for studying complex systems did you use?

Our approach has been grounded in system thinking as our starting point. We then used system mapping and influence diagram techniques to map the structural relationships of the key agent within the residential aged care system and their interdependent relationships. System and influence diagrams reveal the multiple feedback loops that explain the behaviour of the system, and they also highlight potential leverage points for system interventions. These intervention points can be meaningfully interrogated in terms of their effects on other agents across the system as a whole.

Participant feedback on our short reports confirmed that it represents the system as it stands.

We intended to conduct a redesign workshop with all stakeholders, however, COVID and delays with getting ethics approval for this study from Newcastle University have put this outside the study's timelines.

2.6. What were your assumptions and what are the weaknesses of your research/approach? For example, when it comes to analysing accidents that have already taken place there is a certain degree of hindsight or discipline biases. This should be clearly stated, discussed, and to an extent tackled.

We assumed (rightly) that by presenting stakeholder groups with a system map helped to elicit broader views on appreciating their position, problems and

Table 13 – Comparison between top-down and bottom-up considerations

<table>
<tr><th>Top-down considerations

What needs to be done to realise the purpose of the system: meeting the needs of residents and maintain their dignity</th><th>Bottom-up considerations

How do we organise the work that needs to be done to realise the purpose of the system: meeting the needs of residents and maintain their dignity</th></tr>
<tr><td colspan="2">Government level

Governments are there to enact laws that meet the governed's needs and aspiration, and ensure that these laws are adhered to. Society, as clearly articulated during the Royal Commission into Aged Care Quality and Safety, desires an aged care system that, if unavoidable, provides for their needs in old age – as much in the community as in the nursing home setting. They expect these services to be readily accessible and affordable at a time of need, and they expect that these services are provided in a manner that meets their needs and respects their dignity.

To focus the aged and nursing home system to achieve the agreed outcomes requires some principled decision, in particular

• To have a true arms-length separation between defining and maintaining the purpose of the aged care system and the related oversight functions of that system of:

a. finance

b. governance and accountability.

• To enshrine – within the overarching frame of the system – that the practical decision-making (such as when to get up, when and what to eat, etc) at the nursing floor level has the permission to be flexibly adapted by appropriately qualified nursing home staff.</td></tr>
<tr><td>1. Create an independent finance body, at arms-length from government, that would need to develop a new set of finance arrangements.

2. Clarify the provider roles and obligations

The government decided not to be the direct service provider of aged care. It has outsourced the sector to external entities who are both, owners of the premises, as well as service providers. These entities therefore have on the one hand a commercial interest to generate profits, on the other an obligation to use the provided funding for the care of residents. The redesign discourse needs to:

a. separate these inherently conflicted roles

b. determine how to recompense property ownership

c. define how to apportion funding for management and care provision.

3. Create an independent regulator, as the 'system governor', at arms-length from government, would need to:

a. have the responsibility to licence providers of aged care

b. be staffed by people with sufficient experience in aged and nursing home care to:

i. assess if staff provides the best possible adaptive care that meets their residents' needs and respects their dignity

ii. have a primary focus on advising nursing home staff on opportunities to improve care

iii. assess that management meets its fiduciary duties

c. be required to only use its statutory powers of sanctioning or redeeming provider licences as a last resort.</td><td>1. Creates a society-wide culture that explicitly:

a. promotes the value of older people in society

b. facilitates a discourse that humanises death and dying

c. supports and incentivises the various health and social care professionals to make aged care a desirable career path.

2. The finance body would:

a. consider the costs associated with the care needs of nursing home residents

b. consider the capital costs of providing the necessary infrastructure for the nursing home system

c. consider funding arrangements in light of the disparate community-level needs across the diversity of communities and geography

d. ensure that funding is used effectively, efficiently, and equitably for the care of all citizens in need of nursing home care

e. consider potential conflicts of interests at the proprietor/provider level that might require new arrangements.

3. The regulator would

a. assess and report on the performance of nursing homes

b. maintain a rich toolbox of resources from which providers can choose improvement activities and strategies

c. assess and report on the fiduciary duties of management.</td></tr>
</table>

Top-down considerations What needs to be done to realise the purpose of the system: meeting the needs of residents and maintain their dignity	Bottom-up considerations How do we organise the work that needs to be done to realise the purpose of the system: meeting the needs of residents and maintain their dignity
Proprietor level Nursing home ownership and nursing home service provision are different entities.	
1. Proprietors as owners would: **a.** build (or upgrade) facilities that are both homely (supporting a small cluster care model) and as much as functionally hospital-like to enable proper and compassionate care throughout the stages of the end-of-life journey. 2. Proprietors as service providers would: **a.** adopt a less than 100% occupancy to 100% staff ratio (other service industries, like hotels work on a 80% occupancy to 100% staff ratio) to have the necessary build-in redundancies and flexibilities to provide care that meets residents' needs and maintains their dignity **b.** employ the required staff – in terms of numbers, types, and qualifications – required to meet residents' needs and maintain their dignity **c.** provide the necessary consumables and aids or resources to meets residents' needs and maintain their dignity **d.** provide in-house training and upskilling of all staff members in clinical knowledge and skills, leadership skills and the efficient use of (always scarce) resources.	1. Proprietors as owners would: **a.** monitor the state of properties **b.** upgrade facilities according to changing resident needs and most effective and efficient care provision. 2. Proprietors as service providers would: **a.** monitor that the resident's needs are met **b.** monitor the effectiveness and efficiency of resource use **c.** adopt service delivery models so they best meet the needs and dignity of residents.
Facility level	
1. Management of a nursing home would: **a.** assess the needs of residents. **b.** identify resource requirements – staff and equipment **c.** coordinate care delivery **d.** identify renovation/rebuilding requirements.	1. Management of a nursing home would: **a.** ensure the needs of residents are known and resources are allocated accordingly **b.** ensure the service provider organisation adjusts resource needs according to changing residents' needs **c.** identify skills shortages and implement upskilling programmes **d.** identify rebuilding requirements **e.** monitor and report quality outcomes measures for clinical accountability purposes **f.** monitor and report on financial and personnel management for governance accountability purposes.
Nursing unit level	
1. Staff in each nursing unit would: **a.** check that resident's needs are met.	1. Staff in each nursing unit would: **a.** identify residents needs and aspirations **b.** adapt care according to changing needs **c.** identify systemic risks in the ward environment **d.** identify skills and/or staff shortage.
Resident level	
	1. Residents and their families would: **a.** freely and without fear of retribution articulate their needs **b.** provide the necessary feedback on how well these needs are managed.

solutions and resulted in a greater appreciation of how their particular interests related to the rest of the system.

We feel that an in-person consultation process would have enhanced those conversations.

3. Methodology

3.3. Why did it make sense for the people in the system to make the decisions they made, or behave in the way they did at the time?

People in the system acted upon the prevailing simple (or operating) rules that drive the behaviour of an organisational system. They determine how its agents interact within the organisation and the outside agents within its environmental context.

Chapter 3.2 and 5.1 describe the simple rules of the failing residential aged care system with potential simple rules for a residential aged care system that is – across all levels of organisation – focused on its purpose, the care needs of the residents in its care.

4. Learnings

4.2. Could the complexity have been better governed and managed?

The key deficiency of the sector is its failing to see and understand the system's interdependencies. The Australian Government is responsible for aged care but largely has abandoned its role. The implementation of the *Aged Care Act 1997* has been outsourced to third parties in such a way that have created conflict of interest settings:

- funding and governance has been shifted to government instrumentalities
- the provision of nursing home capacity and the provision of care – usually to the same private sector – third party.

There are inherent differences in priorities for private sector proprietors, creating conflicts of interest between profitability and quality of care. These conflicts are typically resolved at the level of the least common denominator in favour of the commercial interests (the regulation of the sector was written by the largest corporate aged care provider at the time of privatisation under a previous conservative Australian Government).

4.3. What is their applicability to other systems or domains?

Common good institutions require common good funding, regulation, and operation. Setting up or redesigning such organisations *a priori* requires all-stakeholder consensus about their purpose and their goals. These in turn need to be clear to all members of the organisation and need to be constantly reiterated to keep everyone's eyes on the ball.

4.4. What is new or novel in your findings?

Understanding and describing organisations as interdependent hierarchically structured complex adaptive systems

Multidimensional organisations can be much better described and understood by applying and appreciating the properties of complex adaptive systems – the need for the organisation to define and work towards it's *a priori* agreed purpose, applying the insight that complex adaptive system function based on top-down causation, and the need to provide permission to adapt one's approaches to emergent changes in one's environment.

System visualisations

Traditionally systems have been visualised in 2D system diagrams (**Figure 29**). Adopting 3D visualisations of a system offers greater clarity of the structure of an organisational system and the interconnections within and across its various layers, as well as the dependencies with external agencies (**Figure 30**).

4.5. How future proofed is the output against changes in context or scale?

As the structural nature of the nursing home system – a government responsibility in terms of providing a necessary community service, but also financing and governance – is a stable feature of OECD Developed Countries, its key linkages will remain stable. In a structurally stable system, the interactions within the system will create changing dynamics impacting on its effectiveness, efficiency, equitability, and sustainability.

The greatest danger to the safety of nursing home care is loss of focus – forgetting that the system is there to deliver/achieve quality of life and the maintenance of dignity for those unfortunate enough to require such care. This needs to be underpinned by risk management practices which are correctly implemented according to international best practice.

4.6. Transferable learnings for safer complex systems

Every problem is a 'problem of the whole'. Group discussions must foster the frank and open sharing of insights, overcoming the prevailing approach of seeing problems narrowly as 'what *went* wrong' in the immediate rather than 'what *is* wrong' in relation to the system as-a-whole – policy settings, funding, design, management, governance, and accountability.

4.7. What are the authors' key learnings for themselves?

We made the initial assumption that participants would more readily see the complexities within the system by presenting them with a fully developed system map and influence diagram. Pretesting showed that most are overwhelmed being presented

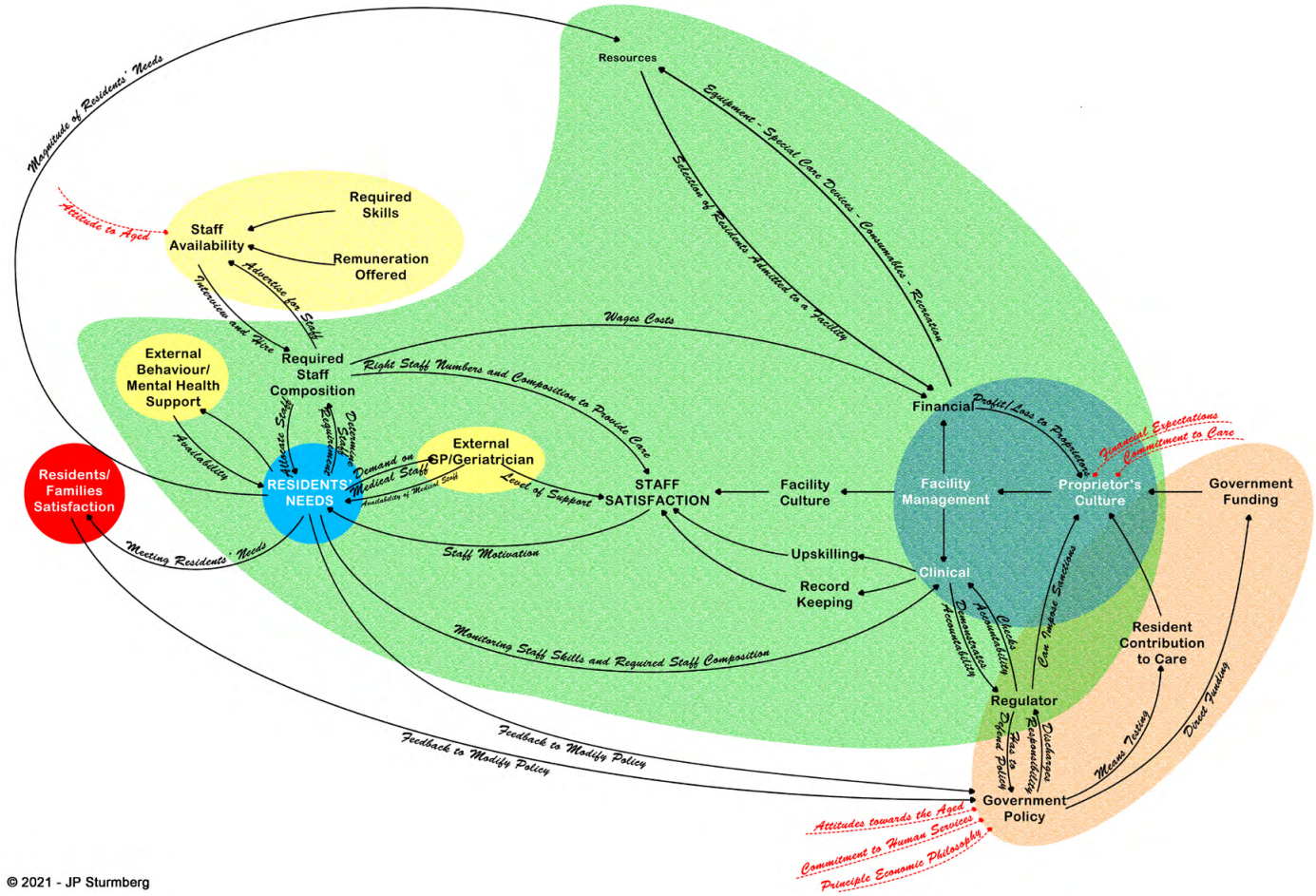


Figure 29 – The classical 2D representation of a system

with a complete system map. We revised our visualisations to present the information in a stepwise fashion – showing each layer at a time. We then asked participants to indicate what linkages they saw themselves, before revealing the linkages to the neighbouring layers as evident from our research. Only in the final step did we show the whole system interdependencies (**Appendix 1**).

We discovered how governments work – they 'talk the talk' but rarely 'walk the walk'. The *Aged Care Act 1997* clearly defined the purpose of aged care services; however, they absolved their oversight role by creating semi-independent statutory bodies who are free to devise their own interpretations of what should happen an in what way.

We also learned that our idea of better visualising a system – notably in 3D – offers a much more powerful way of conveying the systemic features of a large multilayered organisational system, such as aged care, to people who never had considered a systemic view. This is important to us as we finally have found a way to improve communication of complex problems in a way that allows buy-in from those most closely connected to the system and its problems.

5. Looking to the future – Route to impact

5.2. What are the key messages for the target audience(s)?

1. It is imperative for agents to visualise their complex adaptive organisation:
   - **a.** for agents to understand its focus
   - **b.** for agents to understand their external environment and system's contextual settings
   - **c.** to help all to – *a priori* – assess the impact of their actions on the organisation as-a-whole.
2. Focusing first and foremost on local nursing home care problems and their possible solutions.
3. The system needs redundancy in staffing levels to be able to respond to changing care needs in various parts of a residential aged care facility.
4. Consider the benefit of implementing valid risk management processes and procedures.

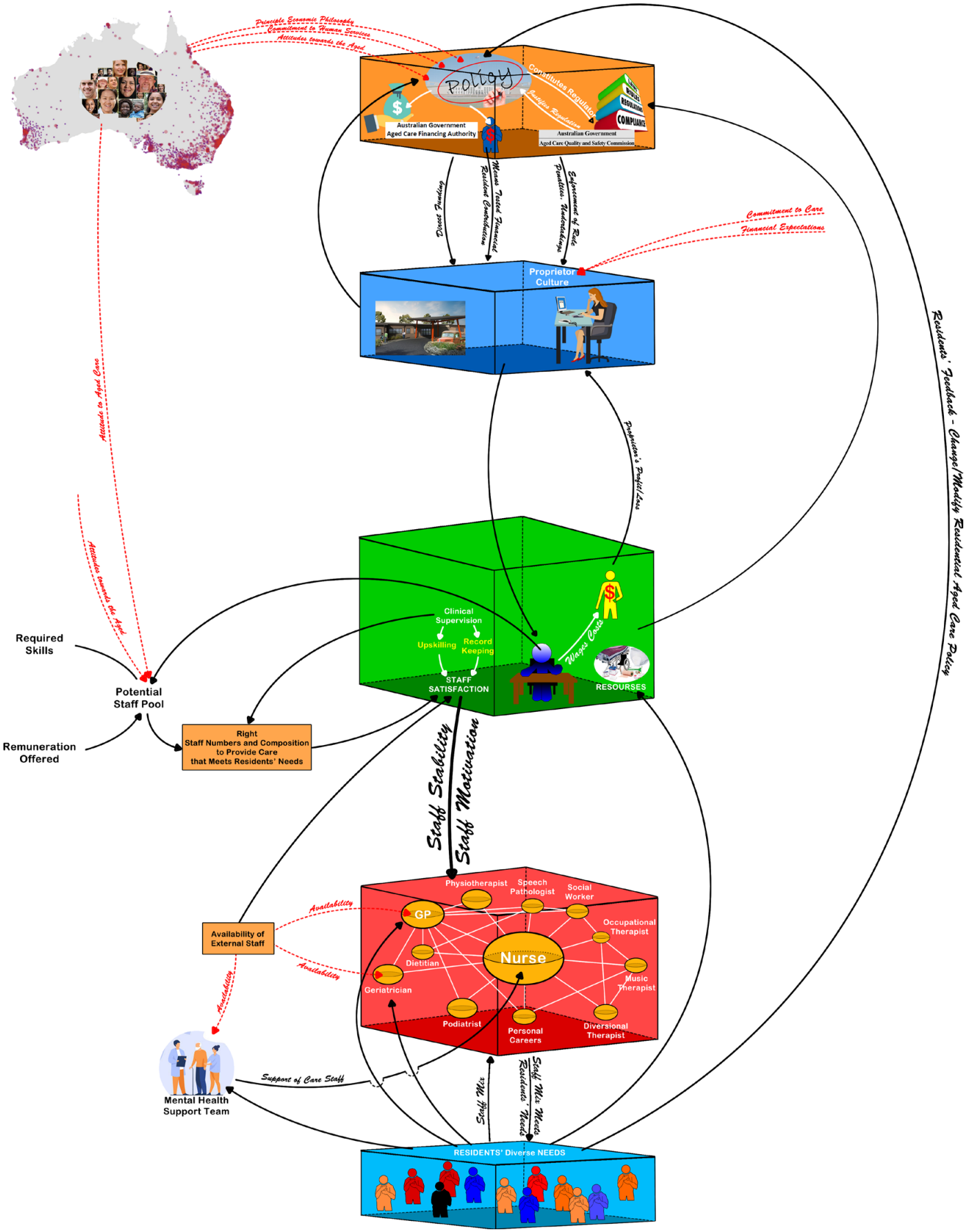


Figure 30 – 3D representation of the nursing home system

5.3. What actions do we want them to take that will improve safety?

- There is a need to reconsider the systemic structures and roles and responsibilities for the aged and nursing home system. It requires the leadership by the Minister (as invested in them by law) to make the system as a whole effective, efficient, equitable and sustainable – **Figure 31** suggests a blueprint based on the analysis described above.
- As terms matter, the system should use the term *nursing home* rather than residential aged care, as well as using the term *resident (or patient)* rather than consumer. As the analysis has shown, those residing in a nursing home are there because of the severity of their illnesses and their frailty, otherwise they would be living – independently or with some supportive care – at home. Appropriate care for people with high levels of illnesses and frailty demands high level sophisticated nursing and social support care from a multidisciplinary care team.
- All involved have to make the aged and nursing home system a *learning organisation*. In a learning organisation, inevitable mishaps (including disasters) are appreciated as opportunities to learn and adapt processes, responsibilities, and leadership.
- Achieving points 2 and 3 require staff to resident ratios as well as staff mix ratios that are aligned with meeting the needs of residents (see **Figure 34**).
- Develop and adopt an integrated electronic medical record system that provides a one-click overview about the state of a resident's health state [67]. A systems-based approach which relies on better and up-to-date IT systems for the recording and retrieval of pertinent data will greatly assist system governance and in answering regulator queries. Minimum specs for such a resident-centred and clinically relevant system are provided in **Table 14**. Seeing the dynamic changes in residents' clinical, social, emotional and care need parameters is imperative for their safe and effective clinical care (**Figure 32**).

5.4. What would success look like?

Success entails adaptations at all system levels:

1. Government
   - **a.** would enforce that meeting the needs of residents in living the life they would want to live is delivered, which includes. among others, when and what to eat, how to dress, and which activities to engage with
   - **b.** would provide the required financial resources to effectively, efficiently, equitably, and sustainably provide such care to all citizens who require aged and nursing home care
   - **c.** would create a new regulator who advises on opportunities for local level care improvements, and having a rich toolbox of resources for providers to choose from
   - **d.** would instruct the regulator to only use its statutory powers of sanctioning or redeeming provider licences as a last resort
   - **e.** would ensure that the regulator as the 'system governor' is scrutinised from the outset for its adoption of evidence (emerging from actual participation in the system) in the design, effective implementation, modelling, and monitoring against best practice.
2. Providers
   - **a.** would upgrade or build facilities that are both homely as much as functionally hospital like to enable proper and compassionate care throughout the stages of the end-of-life journey
   - **b.** would provide the required staff, consumables, and aids resources to meet residents' needs
   - **c.** would provide in-house training and upskilling of staff members in clinical knowledge and skills, leadership skills and the efficient use of (always scarce) resources.
3. Management
   - **a.** would lead and coordinate the activities of provider organisations at the local level
   - **b.** would make possible changing resource needs between residents, care staff, and proprietors.
4. Staff
   - **a.** would provide care in an adaptive fashion to the highest level of practice
   - **b.** would identify systemic risks at the ward level and jointly facilitate its resolution.
5. Residents and their families
   - **a.** would freely and without fear of retribution articulate their needs and provide the necessary feedback on how well these needs are managed.
6. Effective and efficient service delivery requires redundancies, a good example are hotels which operate at 80% occupancy with 100% staff (or 100% occupancy with 120% staff)

5.5. How could we measure our progress?

The pessimistic view sees the system as being at a tipping point – largely driven by the regulator demanding unreasonable resident management approaches without understanding the inside of the

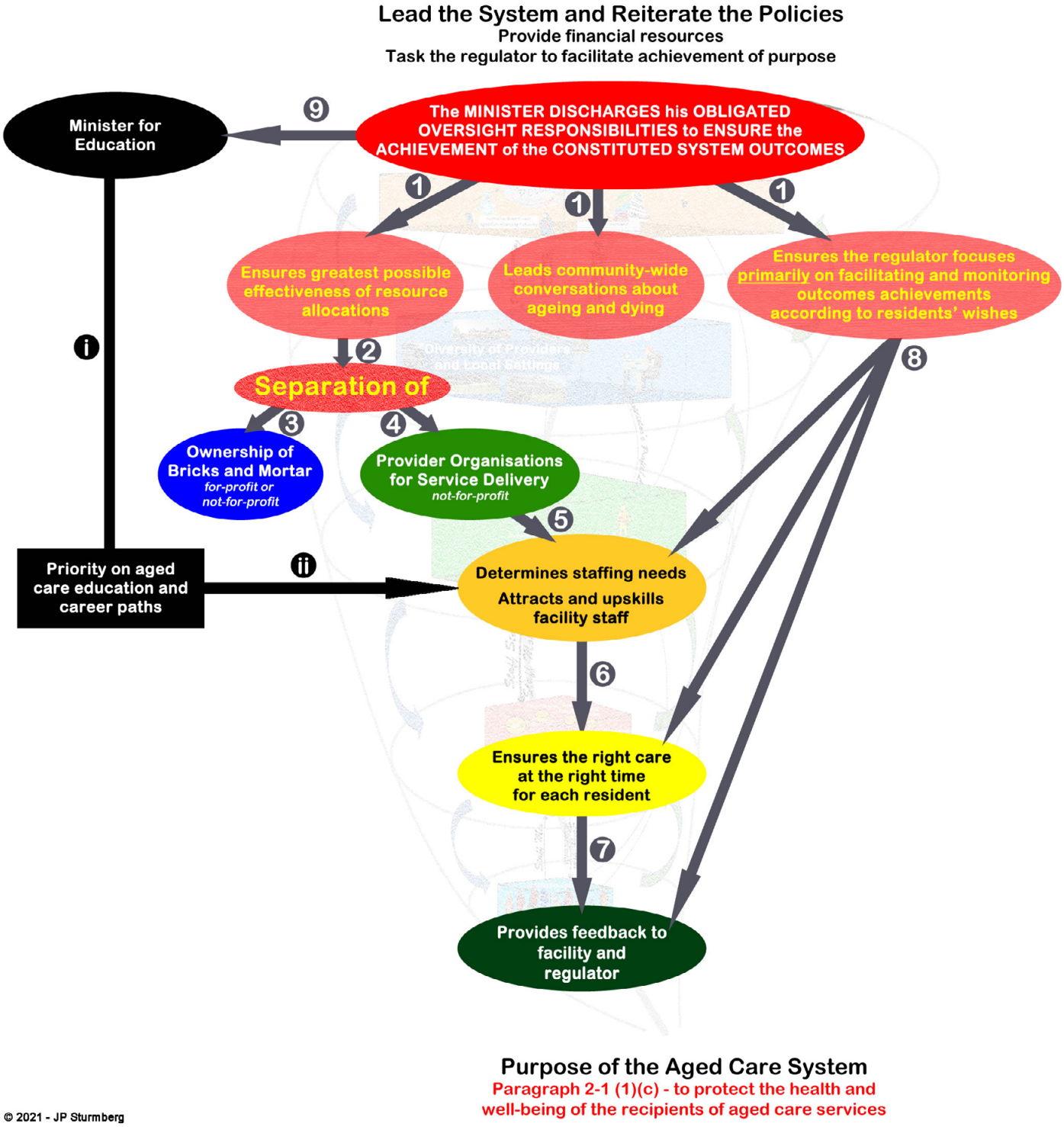


Figure 31 – The required leadership to restore an outcomes delivering aged and nursing home system

The Minister has the overarching oversight function for the system (1) which entails to firstly ensure the effective and efficient use of resources , (2) secondly ensuring the regulatory focus facilitates the achievement of the system's outcomes (8), and thirdly, to lead the public discourse on ageing and dying (1). Ensuring the most effective and efficient use of limited resources requires the removal of conflict-of-interest arrangements between (2) facility ownership (for-profit and/or nor-for-profit) and (3) from service provider organisation (4). The latter ought to be strictly not-for-profit, so that all resources can be expended on care delivery (5)–(7) . The Minister also needs to coordinate with other portfolio holders to ensure that aged-care related needs can be met, for example, alert the Minister of Education (9) about the need to prioritise aged care education (i) so that aged and nursing home staffing needs can be met (ii).

Vital signs	BP, HR, Temp, weight, sat%
Clinical observations	mental state, pain
Nursing issues	wound and wound care, in/continence, feeding, sensors
Physiotherapy	rehabilitation, falls prevention, aids, general fitness
Disease monitoring	diabetes, anticoagulation
Medical	diagnoses, medications, allergies, sensitivities
Advanced care needs	

Table 14 – Minimum specifications of an integrated nursing home record system

system, and having the power to force adherence as they also have the power to shut nursing homes down (**Figure 33**).

On a positive side, two features would indicate progress in the right direction – one, staffing levels and mix that allow the provision of care matching the stated purpose of the Act (**Figure 34**), and two, a focus on outcomes measurements as described in Chapter 3 under the heading "What matters most is personal well-being".

5.6. What innovative, educational tool(s) would you advise safer complex systems to develop to support the dissemination of the learnings?

Tools to develop include mandated risk workshops, on a scheduled basis during quieter work times. At the operational level, workshops need to focus on nursing home care hazard and risk identification and risk treatment which are then documented in risk plans. Workshops should be led by a nurse practitioner or registered nurse who had satisfactorily completed risk management training. Contributions could also be sought from registered medical practitioners and other professionals with current practical system engagement.

Specific to this project, the Academy may consider supporting the development of a nursing home specific clinical care record system as outlined in the Addendum – item 5.3 and recommended by the Royal Commission (**Appendix 3 – Table 5**).

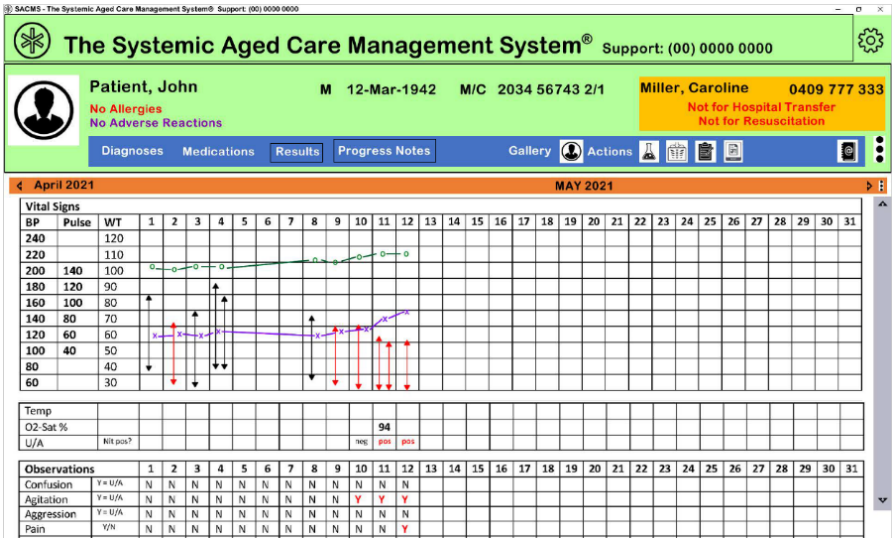


Figure 32 – Example screenshot of an integrated nursing home record system

5.7. Why have you selected these tool(s)? Why would they be particularly effective at reaching the target audience?

It is one thing to understand that things in a big system are complex, however, for most this is a nebulous concept that is hard to compute in your head. Providing visualisations that enable system agents to see where they are in the system, and how they relate to other parts opens a space in which to safely explore the reasons for the current state of affairs, as well as to contemplate the intended and otherwise easily overlooked (rather than unforeseen) consequences of change.

Those data include the fact that medical error not only occurs but seems unavoidable; that some medical error seems innocent even when severely damaging, whereas other medical error seems culpable; that the harm that results from medical error seems sometimes but not always to warrant compensation; that the error that causes harm seems sometimes but not always to warrant sanctions; and, finally, that the relationships among culpability, harm, compensation, and sanctions are obscure. To succeed, our theory must increase our understanding of why medical error occurs and must help us distinguish between culpable and innocent error – it must diminish the obscurity surrounding the relationships among harm, culpability, compensation, and sanctions. Finally, and most importantly, it must thereby provide a basis for a more rational societal response to the reality of error in clinical practice [68].

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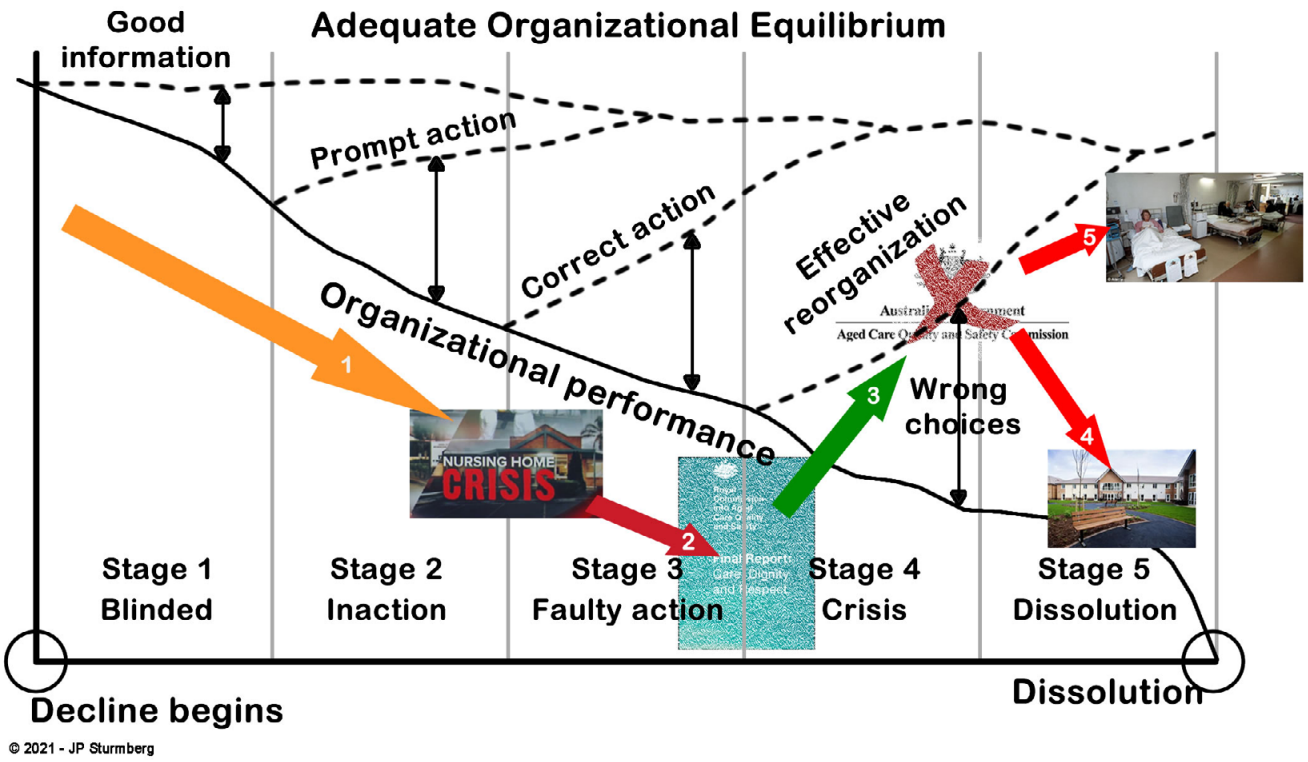

Figure 33 – The decline of an organisational system. Adapted from Weitzel W, Jonsson E. Decline in Organizations: A Literature Integration and Extension. Adm Sci Q. 1989;34(1):91-109. http://www.jstor.org/stable/2392987 [8]

(1) The nursing home system declines in terms of its operational performance without any significant actions being taken. (2) The Royal Commission investigated and published a report that tacitly embraced the need for systemic change. (3 The regulator responds in a panic imposing unreasonable reporting requirements detracting from the ability to provide the necessary care required. The unintended but foreseeable consequences: (4) Nursing homes started to carefully select patients that are least likely to cause issues resulting in being investigated by the regulator, which leads to (5) patients requiring nursing home placement unnecessarily occupying hospital beds preventing others (especially those waiting for elective surgery) to receive needed care in a timely fashion.

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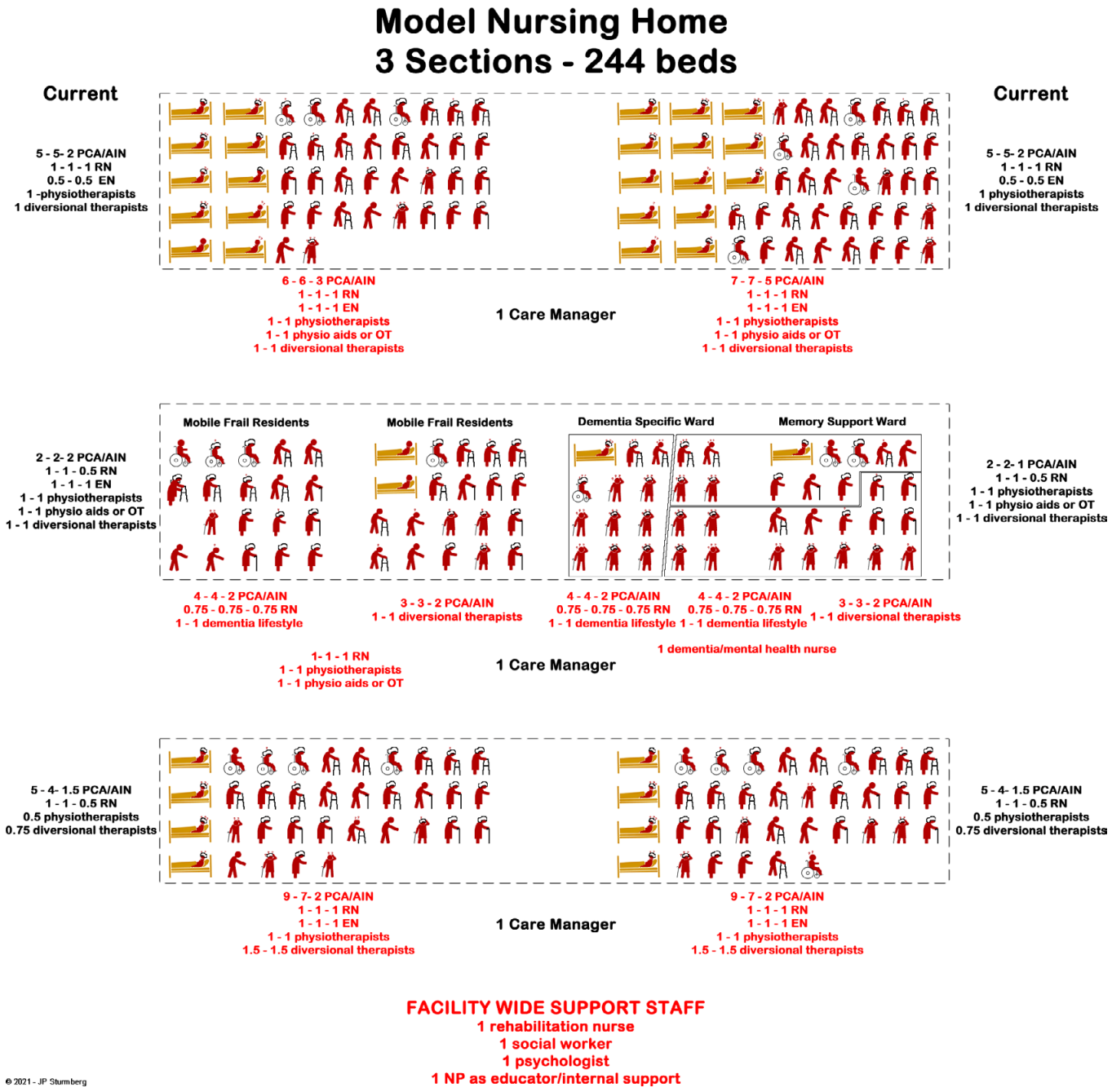

Figure 34 – Staffing levels and staffing mix to deliver care matching the stated purpose of the Aged Care Act 1997

The example is based on a nursing home with three separate sections, each caring for a particular cohort of resident with similar needs profiles. The desirable staff mix and numbers are displayed in red (numbers represent the number of staff for morning – afternoon – night shifts).

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Acknowledgements

This work was supported by a grant from the Safer Complex Systems mission of Engineering X, an international collaboration founded by the Royal Academy of Engineering (the Academy) and Lloyd's Register Foundation (LRF). The opinions expressed in this publication are those of the author(s) and do not necessarily reflect the views of the Academy or LRF. This research has been approved by the Ethics Committee, University of Newcastle – Australia (H-2021-0129).

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Appendix 1 – Interview schedule

Systemic failures in nursing home care: Interview questionnaire

Our research is interested in the many factors that influence the quality of the residential aged care system and what might need to change to make it more effective efficient and sustainable.

The central question

1. Our key question is: How do stakeholders of the residential aged care system understand its function and its failings?
   - **a.** How do you describe the system? And
   - **b.** What do you see as the *key instructions* that define the system and how do they affect its workings?

Biographical Questions

2. You are representing xxx.
   - **a.** What are your specific concerns about the Australian residential aged care system?
   - **b.** Which of these concerns do you think are the most important?
3. You mentioned xyz as key concerns. Why is that?

   PROMPT: Thinking of the different levels of the residential aged care system, in what ways do you think this issue impacts on the residential aged care system?

   PROMPT: How do these concerns relate to other parts of the system?

   PROMPT: In what ways do you think this concern should be addressed to make the residential aged care system more effective, efficient, and sustainable?

   [Repeat Q3 for the key concerns raised in Q2 –max of three?]
4. Overall, what do you think should be the key drivers for change to support improvements in the residential aged care system, and why?
5. All systems have their unique constraints.
   - **a.** As far as you are concerned, what are key constraints of the residential aged care system?

     PROMPT: if funding is the only response: Are there others that directly relate to your work?
   - **b.** How do these constraints impact on your work?

Phenomenological Questions

6. Since Australian government acceptance of the findings of the Royal Commission into the Aged Care Safety and Quality, the regulator imposed extra more stringent requirements on operators and providers. How are these changes likely to affect care delivery and quality of care?
7. Russ Ackoff says: "A system is a whole that cannot be divided into independent parts or subgroups of parts."
   - **a.** How does this description relate to your current and "future-expected" experiences with residential aged care?
8. The government has promised more funding for residential aged care system.
   - **a.** How does funding need to change to improve the system and to make it more effective, efficient, and sustainable?
   - **b.** What other changes are needed to lessen the constraints on [name the stakeholder]?

Grounded Theory Questions

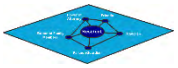
9. So, we are interested in learning about issues and challenges at the level of:

- residents – how residents and their carers manage in the residential aged care setting
- the ward – how care support is provided at a ward level
- the facility – how the residential aged care facility is managed and operated
- policy – how funding, regulation and accountability impact on the above.

and how actions at one level impact on another.

NOTE TO INTERVIEWER: Presentation of the layered system map of the residential aged care system

– participants will be asked Q 10a

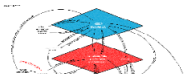
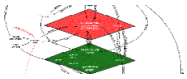
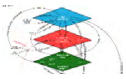


– participants will be asked Q 10b; draw descriptions as they emerge from the participant.

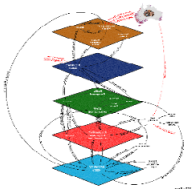
10. Looking at the layered diagram of the residential aged care system.
    - **a.** Have you ever seen this type of representation of the residential aged care system before?
    - **b.** What are some of the key linkages that impact on the function of residential aged care?

11. We have drawn more detailed system maps of the residential aged care system based on our experiences in the system and based on an extensive review of the literature.

NOTE TO INTERVIEWER: Presentation of our system map of the residential aged care system in stages

and then in total



a. Does seeing the complexities of the residential aged care system in this way effect your understanding of its function?

b. Is it meaningful to you?

c. Will it influence they way you advocate for system improvement?

12. Do you now see any further reasons why the residential aged care system's performance may be limited?

Appendix 2 – Objectives for aged care as defined by the *Aged Care Act* 1997

Division 2 Objects

2-1 The objects of this Act

(1) The objects of this Act are as follows:

(a) to provide for funding of aged care that takes account of:

(i) the quality of the care; and

(ii) the type of care and level of care provided; and

(iii) the need to ensure access to care that is affordable by, and appropriate to the needs of, people who require it; and

(iv) appropriate outcomes for recipients of the care; and

(v) accountability of the providers of the care for the funding and for the outcomes for recipients;

(b) to promote a high quality of care and accommodation for the recipients of aged care services that meets the needs of individuals;

(c) to protect the health and well-being of the recipients of aged care services;

(d) to ensure that aged care services are targeted towards the people with the greatest needs for those services;

(e) to facilitate access to aged care services by those who need them, regardless of race, culture, language, gender, economic circumstance or geographic location;

(f) to provide respite for families, and others, who care for older people;

(g) to encourage diverse, flexible and responsive aged care services that:

(i) are appropriate to meet the needs of the recipients of those services and the carers of those recipients; and

(ii) facilitate the independence of, and choice available to, those recipients and carers;

(h) to help those recipients to enjoy the same rights as all other people in Australia; Rectified Authorised Version registered 16/07/2019 C2019C00199

(i) to plan effectively for the delivery of aged care services that:

(i) promote the targeting of services to areas of the greatest need and people with the greatest need; and

(ii) avoid duplication of those services; and

(iii) improve the integration of the planning and delivery of aged care services with the planning and delivery of related health and community services;

(j) to promote ageing in place through the linking of care and support services to the places where older people prefer to live.

(2) In construing the objects, due regard must be had to:

(a) the limited resources available to support services and programs under this Act; and

(b) the need to consider equity and merit in accessing those resources.

Division 96

96-3 Committees

(1) For the purposes of this Act and the *Aged Care (Transitional Provisions) Act 1997*, the Minister:

(a) must establish a committee to be known as the Aged Care Financing Authority; and

(b) may establish other committees.

Appendix 3 – Tables

Table 1 – Attributes for sustainable aged care. A funding and financing perspective [34]

Achieve an agreed objective

Attribute 1. There is a shared view by all stakeholders as to what is meant by sustainability and the aged care arrangements to be sustained.

As the largest source of funding for aged care, the Government's priority may be on ensuring its expenditure on aged care is consistent with the sustainability of the Government's fiscal position, which may mean that the supply of aged care will be below demand for such services. Consumers may focus on whether all aged care needs and expectations, both current and future, are being met. Aged care providers prime concern may be on whether the arrangements support their overall financial viability.

Reframe society's attitude to ageing and aged care

Attribute 2: Society's attitude broadens from focusing on the cost of funding a largely self-contained aged care industry provides publicly subsidised care and support to older Australians, to seeing ageing as a continuum with individuals accessing a range of additional services to maintain the quality of their life as they age.

Clarify roles and responsibilities of Government, consumers and providers.

Attribute 3: The Government, consumers and providers are clear as to their roles and responsibilities in terms of aged care.

Establish confidence in policy settings

Attribute 4: Providers have confidence in the Government's policy settings, consumers have confidence in the quality of care they can access, and the Government has confidence in the robustness of its policy measures.

It is clear that for most consumers "quality" is not just a high level of clinical care, though that is essential, but is fundamentally about their quality of life, including choice and control in their lives.

Ensure appropriate overall funding and a sound arrangement for allocating subsidies

Attribute 5 (i): The overall funding pool – both Government subsidies and consumer contributions – for the support of Australians as they age is sufficient to deliver the level and quality of services sought on an ongoing basis.

Attribute 5 (ii): The funding tool for allocating subsidies is stable, efficient and equitable and adjusts in line with increases in costs.

The overall funding pool is unlikely to be sufficient and consistent with the Government's fiscal objectives unless those consumers who can afford to make a greater contribution to the cost of their care and everyday living expenses are required to do so.

Ensure incentives that deliver high-quality care

Attribute 6: The incentives created from Government funding and regulation are consistent with the objective of sustained, high-quality aged care, and avoids creating an environment where providers see the Government as their main client, and consumers having the mentality that they are entitled to Government support as they age.

The extent of Government intervention, including being the major source of revenue, means the Government will have a significant influence on the performance of providers, but it can also lead to a 'dependency' relationship where providers consider the Government as their client and concentrate excessively on increasing Government funding at the expense of doing all in their control to lift the quality of their services and improve their financial performance and viability. ...

Other incentives resulting from the funding and regulation of aged care that can be inconsistent with the objective of sustainability include:

- Provider's reliance on refundable accommodation deposits (RADs) as a source of financing can introduce complacency and inefficiency because there is no scrutiny on how effectively the funds are used;
- over reliance on RADs also represents a financial risk to both Government and efficient providers who can be levied for the prudential failures of their failed peers;
- the Aged Care Funding Instrument (ACFI) arrangements can incentivise providers to maximise ACFI payments rather than improve the health and wellbeing of residents;

Achieve a skilled and motivated workforce

Attribute 7: The training, diversity, skill mix, career pathways, remuneration and community recognition attracts the workforce needed to support older Australians.

> The strategy highlights the importance of ensuring the overall funding pool for aged care is appropriate, because bridging existing pay deficiencies and achieving the required growth in the size and skills of the workforce will have significant implications for the funding of the sector.

Promote competition to drive improvements in productivity, quality, innovation and efficient providers meeting consumer needs

Attribute 8: Providers have the opportunity to compete for all aged care services in a market-based environment, against the background of measures to protect the safety and quality of services available to older Australians, such that well managed, innovative providers that respond to consumer preferences expand and lesser performing provider's contract.

> At the core of this response is providers having the freedom and opportunity to compete, against the background of measures to maintain safety and quality standards. ...
>
> The challenge facing the Government is ensuring that its regulation of aged care does not inhibit competition and innovation but facilitates it while maintaining quality standards. ... change to the method of allocating residential aged care places would encourage a more consumer demand driven market.

Ensure equitable contribution by consumers for the cost of their aged care

Attribute 9: There is an appropriate balance between the Government subsidy for consumers who cannot afford the aged care services they require and those consumers who can afford to contribute to the cost of the care and support they want as they age, such that the overall cost of aged care to taxpayers is sustainable.

> If consumers are to make a larger contribution to their care, the annual and lifetime caps on consumer contributions will have to be reviewed, along with the cap on consumer contributions to their everyday living expenses.

Ensure adequate sources of finance to support the level of required investment

Attribute 10: The funding and regulatory arrangements for aged care provides an environment where well run aged care providers who are responsive to consumers can attract the financial capital needed to meet the investment levels required to serve an ageing population.

> A sustainable care and support industry will require adequate sources of finance for the investment needed, but it will also require an environment which facilitates this investment. Such an environment will require appropriate overall funding for aged care, confidence in the Government's policy settings, and the opportunity for providers to generate returns that are appropriate for the risk involved.

Establish effective prudential oversight

Attribute 11: Effective prudential oversight ensures stability in aged care and provides consumers with the confidence that their needs will be met, even in circumstances where providers have to cease operations.

Table 2 – Government's Financial Response to the Royal Commission's Final Report, Budget 2021–22 (https://www.health.gov.au/resources/collections/budget-2021-22#budget-at-a-glance)

The Government has announced as part of the package:

- $26.7 million over four years to develop a new Aged Care Act.
- $21.1 million over four years to establish the National Aged Care Advisory Council.
- $6.5 billion over four years to release 80,000 additional home care packages over two years from 2021–22.
- $798.3 million to provide greater access to respite care services and payments to support carers.
- $272.5 million over four years to support senior Australians to access information about aged care, navigate the aged care system and connect to services through the introduction of dedicated face to face services.
- $365.7 million to improve access to primary care and other health services in residential aged care.
- $301.3 million, primarily for the Aged Care Quality and Safety Commission.
- $200.1 million for a new star rating system to provide senior Australians, their families and carers with information to make comparisons on quality and safety performance of aged care providers.
- $78.4 million for Dementia Behaviour Management Advisory Service and the Severe Behavioural Response Teams to strengthen the regulation of chemical and physical restraints and to further reduce the reliance on these restraints.
- $3.9 billion over five years from 2020–21 to increase the amount of front line care (care minutes) delivered to aged care residents and who access respite services by 1 October 2023. This will be mandated at 200 minutes per day, including 40 minutes with a registered nurse – it still remains unclear if this is on average or per resident.
- $279.8 million over three years from 2020–21 to further support residential aged care providers through the continuation of temporary financial supports and the Viability Fund.
- $189.3 million over four years from 2020–21 to implement the new funding model, the Australian National Aged Care Classification (AN-ACC).
- $117.3 million to support structural reforms, including discontinuing of the current bed licence and the Aged Care Approval Round process from 1 July 2024 and the implementation of a new Refundable Accommodation Deposit (RAD) Support Loan Programme, including strengthened financial reporting requirements for residential aged care providers.
- $49.1 million for the current independent hospital pricing authority to help ensure that aged care funding is directly related to the cost of care.
- $216.7 million over three years from 2021–22 to grow and upskill the workforce and enhance nurse leadership and clinical skills through additional nursing scholarships and places in the Aged Care Transition to Practice Programme, to provide more dementia and palliative care training for aged care workers and to recruit aged care workers in regional and remote areas.
- $228.2 million to support the establishment of a single aged care assessment workforce for residential aged care from October 2022 and home care from July 2023.
- $106.5 million to introduce national consistent worker screening, register and code-of-conduct for all care sector workers including aged care workers.
- $91.8 million over two years from 2021–22 to support the training of 13,000 new home care workers.
- $9.8 million over two years from 2021–22 to extend the Care and Support Workforce national campaign.

Table 3 – Comparing staffing levels in Australia with those in the US, UK, Canada and New Zealand

Country	Staff to resident ratios	

Australia	• Australian *Health Care Act* (1997) [25] requires that providers "maintain an adequate number of appropriately skilled staff to ensure that the care needs of care recipients are met."
	• Current staffing levels can be as low as 1 RN per 100 residents.
	• In 1995 Victoria [69] introduced staff ratios for a small number of publicly owned aged care homes
	  • Morning Shift – 1 RN per 7 residents
	  • Afternoon Shift – 1 RN per 8 residents
	  • Night Shift – 1 RN for 15 residents.	

US – 2007 [70, 71]	**FEDERAL STAFFING** • 1 RN, 8 consecutive hrs/7days/wk & 1 RN/LVN (=EN) for 2 remaining shifts. • 1 RN who is Full-Time DON (5days/wk) • if fewer than 60 residents, DON may also be Charge Nurse. (For 100 residents, LN.30 hours [= 18 min) hr per resident/d would be required.)	
	Staffing level requirements vary widely between states	
	General requirements	***Higher level requirements***
	Sufficient staff	for example, California
	No requirement	Each facility shall employ sufficient nursing staff to provide a minimum daily average of 3.2 nursing hours per patient day.
	Licensed staff (RN, LPN/LVN)	
	For 1–60 occupied beds: 1 RN Day 7days/wk and 1 RN Evening 5 d/wk and 1 LPN all shifts when RN not present *For 60+ occupied beds*: 2 RNs Day 7d/wk and 1 RN Evening & Night 7 days/week	*For 1–59 licensed beds*: 1 RN/LVN 24 hours/day *For 60–99 licensed beds*: 1 DON RN Day full-time (may not be charge nurse) and 1 RN/LVN 24 hours/day *For 100+ beds*: 1 DON RN (may not be charge nurse) and 1 RN 24 hours/day
	Direct care staff	
	No requirement/minimal requirement, for example, 3.0 hr per resident/d of which 2.0 hr per resident/d by LNA (CNA)	3.2 hr per resident/d Do not double hours of RNs/LPNs and exclude hours of DON Regulations in process: Day: 1 LN:20 patients, 1 CNA:9 patients Evening: 1 LN:25, 1 CNA:10
	Abbreviations: **LPN/LVN** – equivalent to PCA/AIN; **LN** – either RN or EN; **CNA** – equivalent to AIN/PCA	

<table>
<tr><th>Country</th><th>Staff to resident ratios</th></tr>
<tr><td>US – 2021 [72]</td><td>
Standards for long-term care facilities, Commonwealth of Massachusetts (2021)

Facilities providing Level II care [= residential aged care] shall provide:

(a) A full-time director of nurses.

(b) A full-time supervisor of nurses during the day shift, five days per week for facilities with more than one unit. In facilities with only a single unit, the director of nurses may function as supervisor. A SNCFC shall provide a full-time supervisor of nursing during the day and evening shifts seven days a week, who shall be a registered nurse and shall have had at least one year of nursing experience in paediatrics, preferably with the developmentally disabled population.

(c) A charge nurse as required by 105 CMR 150.007(C)(3), 24 hours per day, seven days per week for each unit.

(d) Sufficient nursing personnel to meet resident nursing care needs based on acuity, resident assessments, care plans, census and other relevant factors as determined by the facility. On and after April 1, 2021, sufficient staffing must include a minimum number of hours of care per resident per day (PPD) of 3.580 hours, of which at least 0.508 hours must be care provided to each resident by a registered nurse. The facility must provide adequate nursing care to meet the needs of each resident, which may necessitate staffing that exceeds the minimum required PPD.

A SNCFC shall provide a staff nurse, 24 hours per day, seven days per week for each unit.
</td></tr>
<tr><td>UK – 2010 [73]</td><td>
Nursing Homes Regulation and Quality Improvement Authority (2009)

The following are offered as guideline staff:patient ratios.

Propose nursing homes staffed so that over 24-hour period there is an average of 35 per cent registered nurses and 65 per cent care assistants:

• early shifts 1:5
• late shifts 1:6
• night 1:10
</td></tr>
<tr><td>Can – 2016 [74]</td><td>
Staffing level in Ontario's long-term care homes (LTCHs), mean hours of care per case-mix adjusted resident day, by profit status and chain affiliation, 1996–1997 to 2010–2011
<table>
<tr><th></th><th colspan="3">For-profit LTCHs</th><th colspan="3">Not-for-profit LTCHs</th><th>Municipal LTCHs</th><th>All LTCHs in Ontario</th></tr>
<tr><th>Types of staff</th><th>Chain member</th><th>Independent</th><th>Average</th><th>Chain member</th><th>Independent</th><th>Average</th><th></th><th></th></tr>
<tr><td>Direct care</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>RNs</td><td>0.37</td><td>0.42</td><td>0.38</td><td>0.39</td><td>0.46</td><td>0.44</td><td>0.39</td><td>0.40</td></tr>
<tr><td>RPNs</td><td>0.39</td><td>0.41</td><td>0.40</td><td>0.52</td><td>0.54</td><td>0.53</td><td>0.72</td><td>0.49</td></tr>
<tr><td>HCAs</td><td>1.66</td><td>1.65</td><td>1.65</td><td>1.70</td><td>1.70</td><td>1.70</td><td>1.64</td><td>1.66</td></tr>
<tr><td>Therapists</td><td>0.21</td><td>0.22</td><td>0.21</td><td>0.21</td><td>0.25</td><td>0.23</td><td>0.24</td><td>0.22</td></tr>
<tr><td>All direct care</td><td>2.63</td><td>2.70</td><td>2.64</td><td>2.82</td><td>2.95</td><td>2.90</td><td>2.98</td><td>2.77</td></tr>
</table>
Abbreviations: LPN/LVN – equivalent to PCA/AIN; LN – either RN or EN; CNA – equivalent to AIN/PCA
</td></tr>
</table>

Country	Staff to resident ratios
Can - 2020 [75]	***Recommendation by Ministry of Long-term Care (2020)*** Given all these considerations, we recommend the following: **1.** A guideline of one PSW to eight residents be adopted for the day and evening shifts. Given the considerations above, this ratio would not be regulated. Over time, the government should work towards a guideline of one PSW to six residents. Overnight shifts can accommodate a higher ratio, but we are concerned that the current typical ratios for night coverage, sometimes as high as one PSW to 32 residents puts residents and staff at risk. The ministry should identify a more appropriate ratio for the overnight shift, and work towards it. **2.** The current requirement for at least one RN to be present and on duty at all times should be maintained. However, the requirement should be updated to consider home size as one RN is not sufficient to meet resident needs in larger homes. **3.** Sufficient levels of registered nursing staff are needed to provide greater clinical oversight and expertise to the care team, as well as to enhance direct care. Consideration should be given by homes to the mix of specialized expertise among registered staff, such as geriatric or wound care specialties. **4.** Additional access should be provided to allied health professionals as fully integrated members of the care team. Ensuring resident access to the expertise these professions bring is an important focus of geriatric medicine and an elder approach to care.
NZ - 2017 [76]	Standards in relation to staff-resident ratios are voluntary. Voluntary staffing recommendations were published in 2005 by the MoH in the handbook: *Minimum Indicators for Safe Aged Care and Dementia Care for New Zealand Consumers SHNZ HB 8163:2005* (Standards New Zealand, 2005), following concerns by a number of staff and consumer organisations. These set a higher threshold than the ARRC agreement and include recommended hours per consumer per week. Details outlined are a (one) RN on duty at all times if the facility provides hospital-level care and a minimum of 1.14 hours per resident per day increasing to two hours per resident per day when levels of acuity among residents is high (Standards New Zealand, 2005). However, the workbook is a guideline rather than a prescribed standard. Recommendations are as follows: • rest-home level care – 1.7 hours of caregiver time and 0.3 hours of RN time per day • dementia patients – two hours of caregiver and 0.5 hours of RN time per day • hospital residents – 2.4 hours of caregiver and one hour of RN time, with a nurse to be on duty 24/7

Table 4 – The changing nursing home workforce and their educational requirements, modified from [26, 27]

	2003	2007	2012	2016	2020*
Nurse Practitioner (NP) Master's degree			294 (190)	386 (293)	203 (163)
Registered Nurse (RN) 4-yrs University	24,019 (16,265)	22,399 (13,247)	21,916 (13,939)	22,455 (14,564)	32,726 (20,154)
Enrolled Nurse (EN) 1-yr University	15,604 (10,945)	16,293 (9,856)	16,915 (10,999)	15,697 (9,126)	16,000 (9,919)
Personal Care Attendant (PCA) Cert III – 5 weeks TAFE	67,143 (42,943)	84,746 (50,542)	100,312 (64,669)	108,126 (69,983)	144,291 (93,115)
Allied Health Professional (AHP) ¾-yrs University	8,895 (5,776)	9,875 (5,204)	2,648 (1,612)	2,210 (1,092)	10,604 (4,081)
Allied Health Assistant (AHA) Variable			5,001 (3,414)	4,979 (2,862)	2,992 (1,720)
Total staffing	**115,661 (75,929)**	**133,313 (78,849)**	**147,086 (94,823)**	**153,853 (97,920)**	**206,816 (129,152)**
Ratio patient to FTE staff			**1.76**	**1.79**	**1.42**
Total No of nursing home patients#			166,960	175,993	183,989

() full-time equivalent

* changed methodology, residential aged care workers only (prior years home and residential aged care workers were counted together)

https://www.gen-agedcaredata.gov.au/Topics/People-using-aged-care

Table 5 – Recommendation 68: Universal adoption by the aged care sector of digital technology and My Health Record

The Australian Government should require that, by 1 July 2022: every approved provider of aged care delivering personal care or clinical care: uses a digital care management system (including an electronic medication management system) meeting a standard set by the Australian Digital Health Agency and interoperable with My Health Record invites each person receiving aged care from the provider to consent to their care records being made accessible on My Health Record if the person consents, places that person's care records (including, at a minimum, the categories of information required to be communicated upon a clinical handover) on My Health Record and keeps them up to date the Australian Digital Health Agency immediately prioritises support for aged care providers to adopt My Health Record.

Appendix 4 – Figures

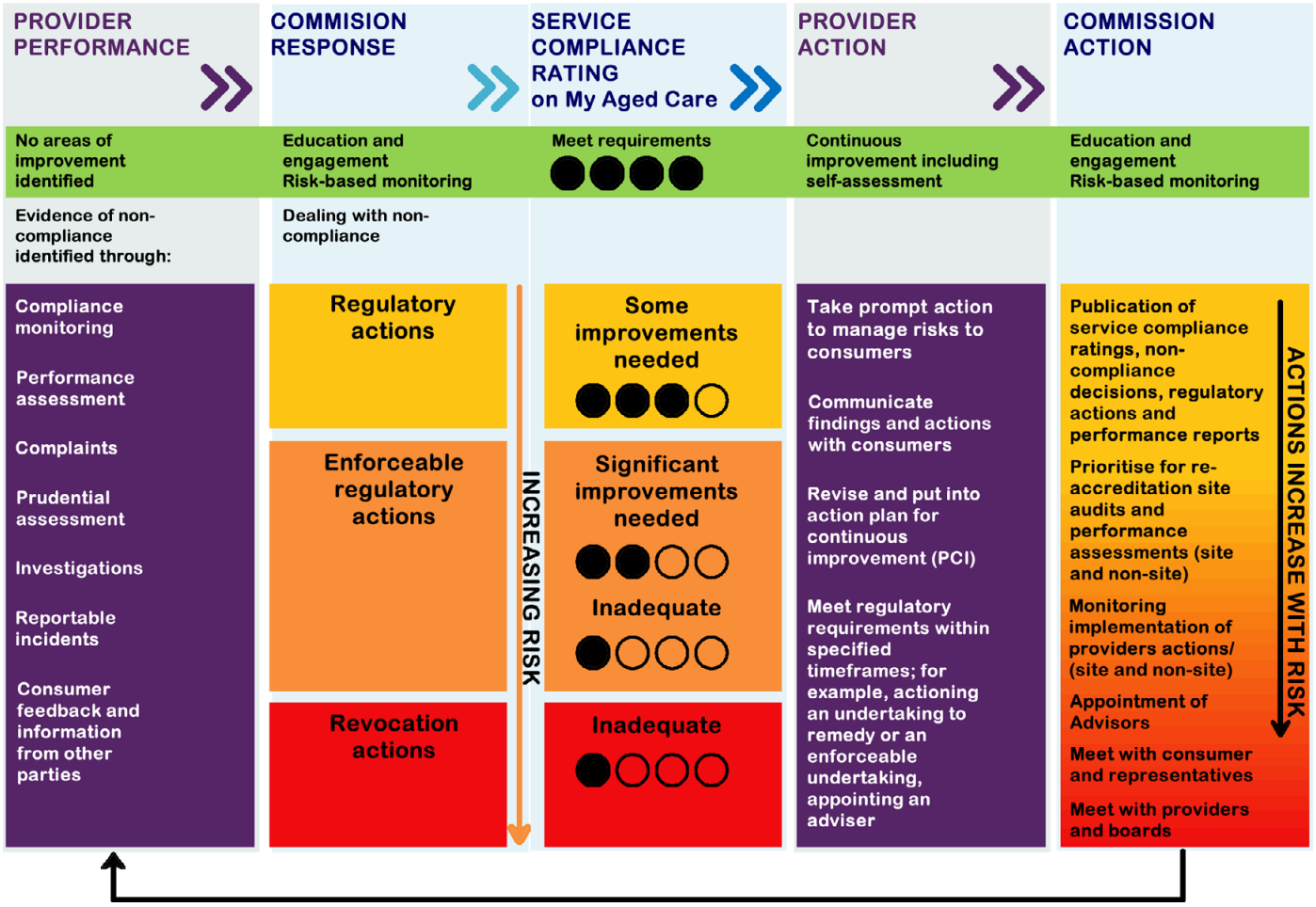
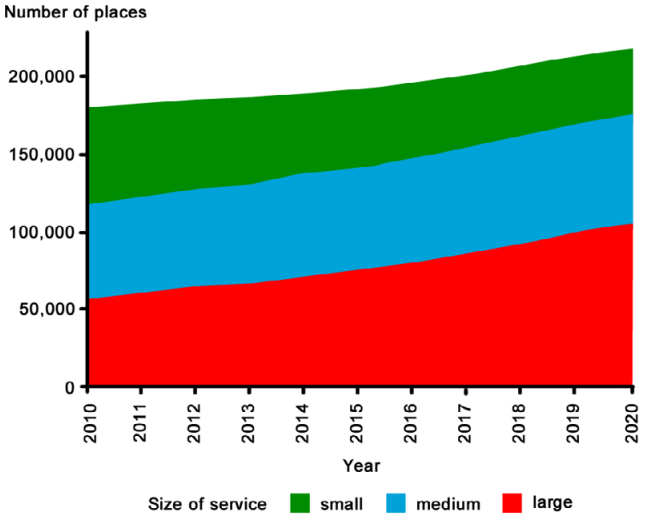
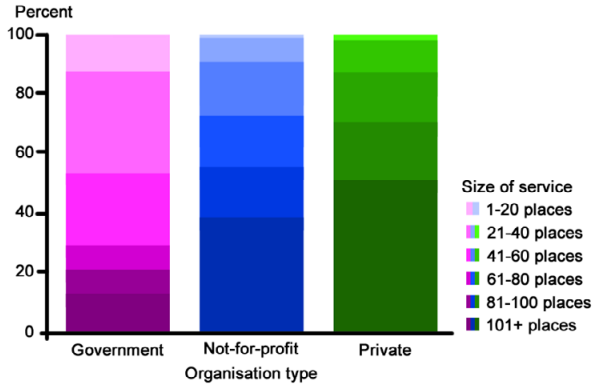


Figure 1 – The Aged Care Quality and Safety commission compliance framework [40]

Number of places in residential aged care by organisation type - 2012-2020

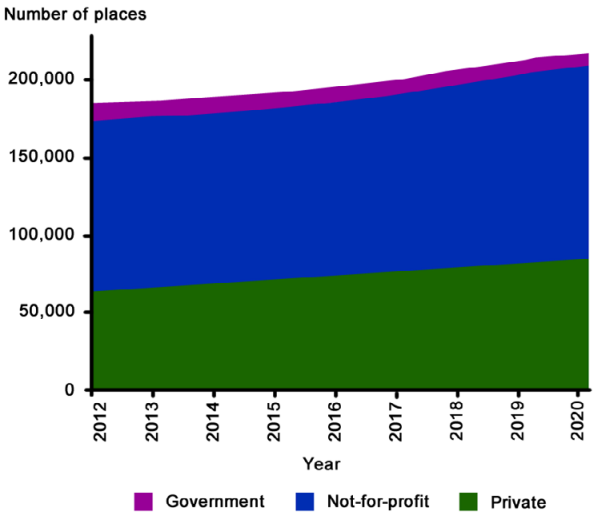


Places in residential aged care by organisation type and service size, 30 June 2017



Source: Australian Institute of Health and Welfare
Gen Aged Care Data
Services and places in aged care - Factsheet 2016–17
https://www.gen-agedcaredata.gov.au/www_aihwgen/media/2017-Factsheets/Services-and-Places-Factsheet-2016%E2%80%9317_2.pdf?ext=.pdf

Places in residential aged care by organisation type (All) - 2010-2020



Source: Australian Institute of Health and Welfare
Gen Aged Care Data
Providers, services and places in aged care
https://www.gen-agedcaredata.gov.au/Topics/Providers,-services-and-places-in-aged-care

Places in residential aged care by size of service and organisation type - 2010-2020

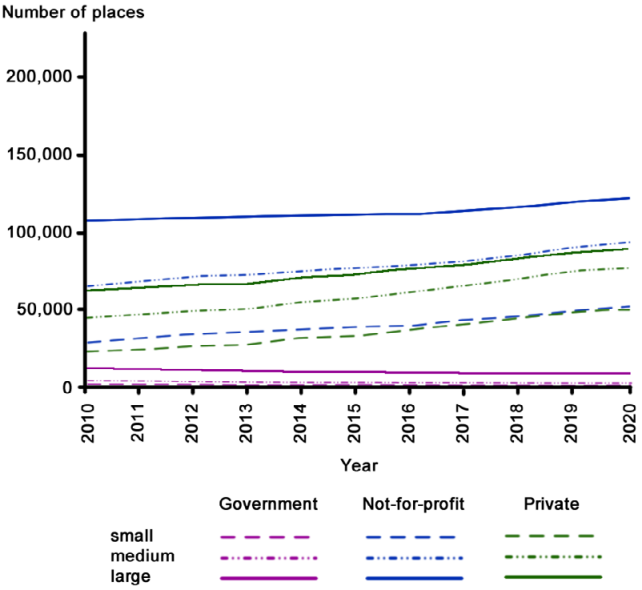


Figure 2 – Growth in numbers and change in composition of residential aged care providers. Compiled from [45, 46]

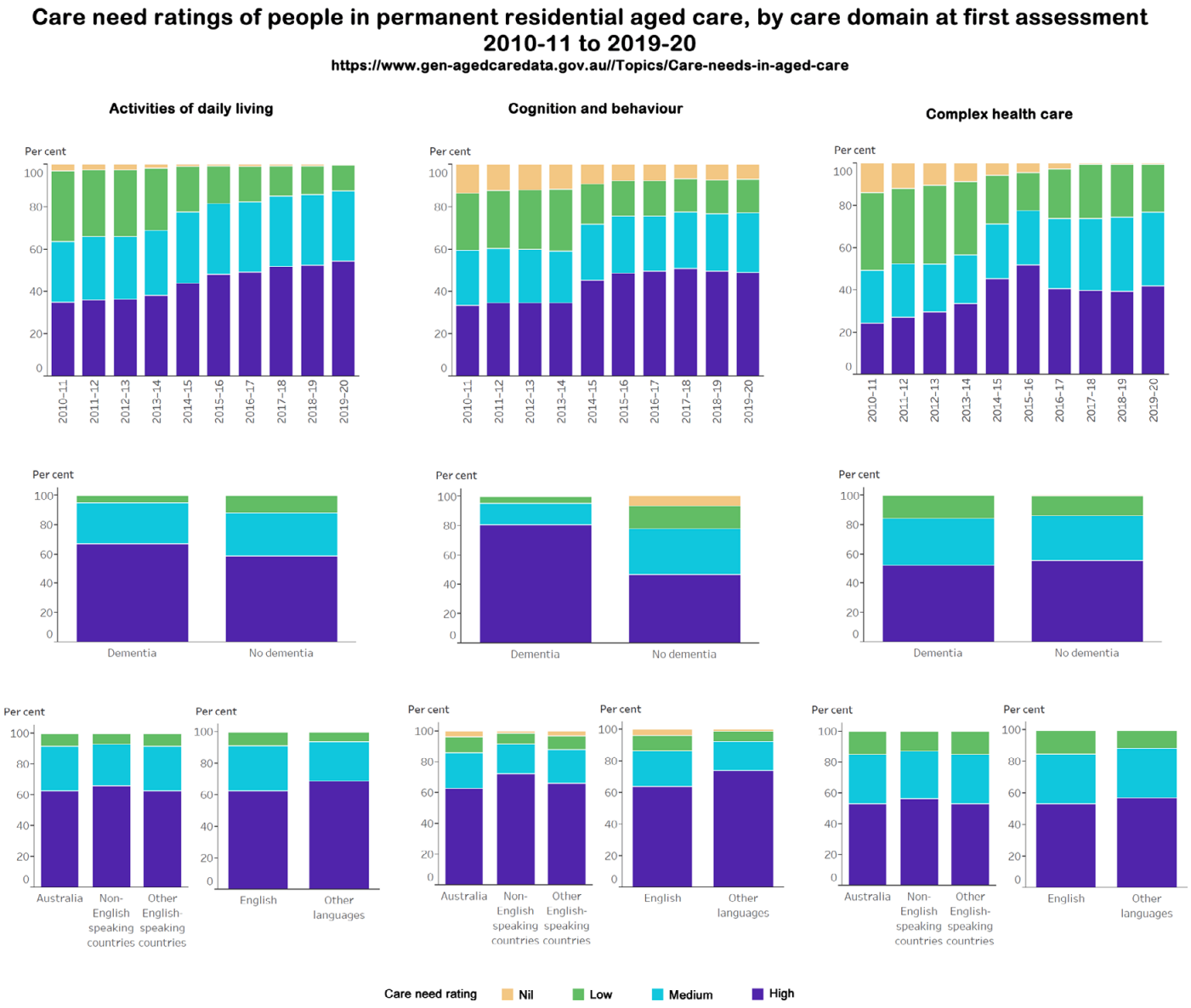


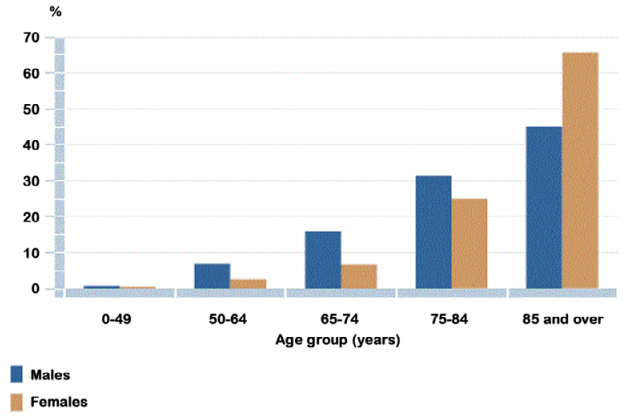
Figure 3 – Residential aged care residents care needs

Compiled from: Australian Institute of Health and Welfare (2021). People's care needs in aged care. https://www.gen-agedcaredata.gov.au//Topics/Care-needs-in-aged-care Last accessed 28-Aug-2021

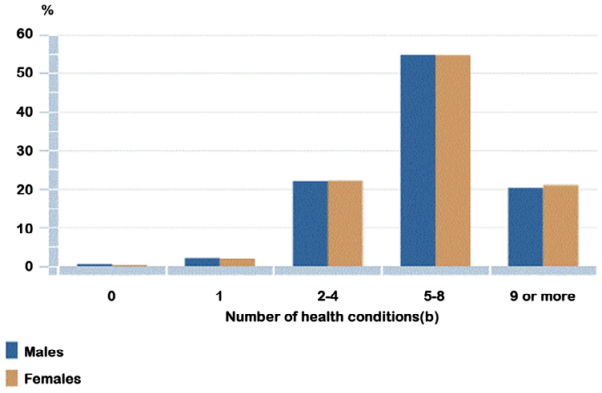
Domains of care needs specified: Activities of daily living (ADLs) – nutrition, mobility, personal hygiene, toileting and continence; cognition and behaviour – cognitive skills (including diagnoses of dementia, Parkinson's disease, delirium, psychoses, anxiety disorders, intellectual and developmental disorders), wandering, verbal, physical and depression; complex health care – medication, complex health care (blood pressure monitoring, blood sugar monitoring, complex pain management, skin integrity care, tube feeding, enemas, permanent urinary catheter, management of chronic infections, oxygen therapy, palliative care). Department of Health. Aged Care Funding Instrument (ACFI). [56]

AUSTRALIANS LIVING IN RESIDENTIAL AGED CARE

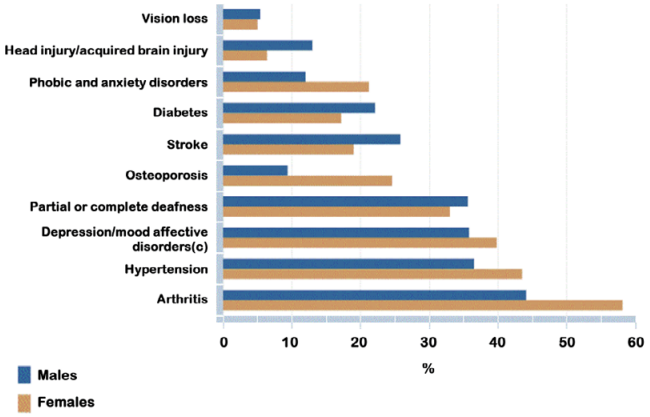
People living in residential aged care (a) by age & sex, 2015



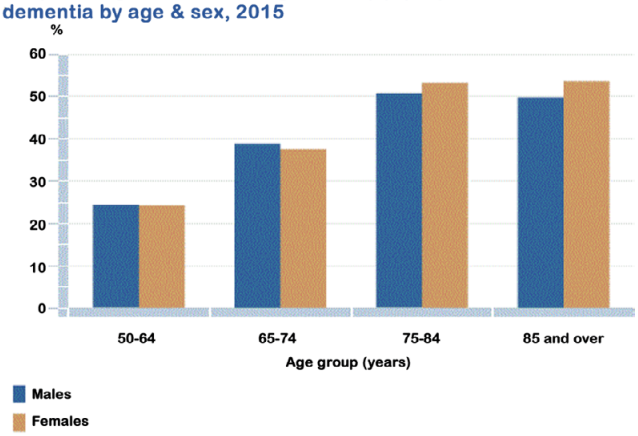
People living in residential aged care(a), number of long-term conditions by age & sex, 2015



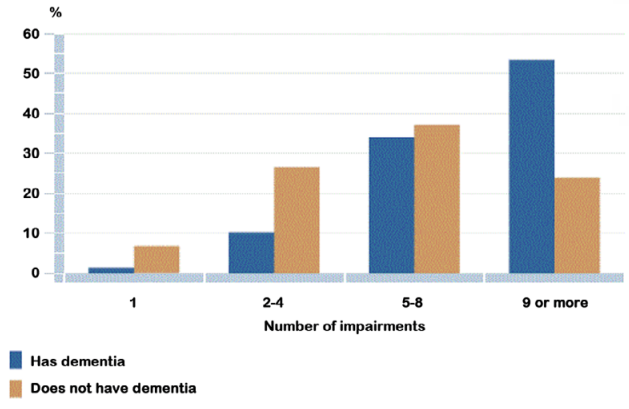
People living in residential aged care(a), proportion with selected long-term health conditions(b) by sex, 2015



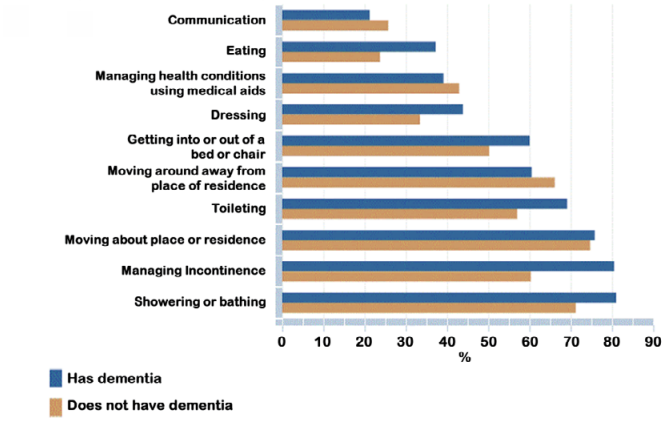
People living in residential aged care(a), proportion with dementia by age & sex, 2015



People living in residential aged care(a), number of impairments by whether has dementia, 2015



People living in residential aged care(a), activities where aid(s) or equipment used(b) by whether has dementia, 2015



(a) includes people in nursing homes, aged care hostels and cared components or retirement villages. (b) Number of long-term conditions. (c) excludes post-natal depression

Source: 4430.0 - Disability, Ageing and Carers, Australia: Summary of Findings, 2015
https://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/4430.0Main%20Features1022015?opendocument&tabname=Summary&prodno=4430.0&issue=2015&num=&view=

Figure 4 – Age, morbidity, impairment, and care need characteristics of nursing home patients

Compiled from: Australian Bureau of Statistics. Australians Living in Residential Aged Care. https://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/4430.0Main%20