Australian e-Health Research Centre

digital health crc

The Australian aged care data landscape

Gaps, opportunities and future directions

March 2025

Citation

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Foreword

With the full impetus of the digital health transformation well upon us, individual parts of the healthcare system are increasingly activated around digital preparedness. Aged care is by no means immune to this growing imperative.

The use of data in the Australian aged care environment is necessary – yet complex. Data, or information, is being collected in a breadth of ways and formats to provide care for older adults living at home or in Residential Aged Care Facilities (RACF). However, the Aged Care Royal Commission (2021) (The Commission) demonstrated gaps in the collection, use, and exchange of data.

Since The Commission delivered its findings in 2021, much has been done sector wide to harness data, technology and artificial intelligence to optimise care provision. This has occurred at all levels of the aged care system and across all care points. Four years on from The Commission, the time has come to assess progress made and the benefits that have followed. Without this reconciliation, and a careful assessment of what remains to be done, there is a risk that already limited resources for an ever-expanding demand may be used sub-optimally.

Therefore, the purpose of this Australian Aged Care Data Landscape Report, a collaboration between the Digital Health CRC and CSIRO's Australian e-Health Research Centre, is to ask several key questions:

- What does the aged care data landscape look like today, four years on from The Commission's findings?
- What does the sector's work on data look like and what has been the impact to care?
- Have the changes to how data is captured, used, and shared, in response to The Commission, worked?
- Where might the capabilities of organisations, within the digital health landscape be put to best use in closing gaps in data usage?

Taking the time to speak with representatives from across the aged care industry provided clear insight into the complexities and challenges being faced at all levels of the sector.

We asked clinicians, managers, c-suite professionals, researchers, federal departmental representatives, and technology vendors to describe what works well, what are their challenges and their priorities for change.

This report showcases what has come to light from these discussions and provides a wealth of information and detail about the issues and priorities, directly from those working intimately within the system.

It is clear from the research interviews that the aged care workforce is eager to make things better for individuals, families, themselves and their colleagues.

What was also clear is that all parties have been working diligently to find solutions to address the problems identified by The Commission. However, it appears this has resulted in siloed solutions that have, in some instances, created increased workloads or unanticipated complexities. Some groups are still facing issues such as limited access to shared data, platforms that do not communicate with each other, difficulty accessing and sharing quality care information, and challenges in collecting quality indicator information.

CSIRO considers the key priorities for advancing data usage in aged care prioritise interoperability. One of the ways CSIRO is championing this is through the Sparked FHIR Accelerator, which together with our partners HL7 Australia, Department of Health and Aged Care and the Australian Digital Health Agency, is working with the community to create data standards for Australia. The recent release of the AU Core Implementation Guide is a huge step toward making sure systems can exchange vital patient information to streamline services and eradicate the data silos.

In addition to addressing the lack of standards used in aged care, the DHCRC considers that the lack of standardised, evidence based functional assessments in Australia contributes to many of the inefficiencies, increased cost and sub-optimal use of data highlighted by the Commission in its report four years ago.

The standards coming out of Sparked alongside the findings from the DHCRC research projects can form the basis for addressing better use and interoperability of data in aged care, and of course between health and aged care. Interoperability between health and aged care will benefit both sectors. Sparked is an open program, and aged care system providers should be encouraged to participate in the program.

There is much work to be done to ensure that the aged care sector is brought up to speed in the data realm to ensure improving levels of care, workforce support, and appropriate data is accessible to achieve world class leadership by Australia in aged care research and policy development.

We trust this report will provide valuable insights to consumers, aged care services providers, technology vendors, researchers, and policy makers.

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Executive summary

The Australian aged care sector has undergone a significant reform agenda over the past four years. The Royal Commission into Aged Care Quality and Safety (The Commission) was the catalyst for change that touched all areas of aged care provision. This report delves into one area still to be fully realised and yet underpins all aspects of care delivery – data.[1]

The use of data in the Australian aged care environment is complex. Data, or information, is being collected in a breadth of ways and formats to provide care for older adults living at home or in residential aged care facilities (RACF). However, The Commission demonstrated that the collection, use, and consideration of data, was not being utilised in a way that benefited all parties accessing, providing, and delivering aged care services.

Since The Commission delivered their findings in 2021, much work has occurred at a sector wide level to harness data, technology and AI to improve upon care provision. Four years on from The Commission the Digital Health CRC and CSIRO have collaborated, taking the opportunity to reflect and consider what the recent sector wide work looks like and what its impact has been. Has it worked? Has care provision improved? Has the workforce felt a positive impact? Along with other questions. "The Australian aged care data landscape: gaps, opportunities and future directions" report is the result of the Digital Health CRC and CSIRO collaboration.

This report outlines the research methodology and outcomes used to understand the current state of data use, from aged care stakeholders. Ethics approval was acquired (#2024_055_LR) to conduct individual interviews with research participants of the aged care sector (clinicians, managers, executive level professionals, researchers, federal departmental representatives, and technology vendors) to capture firsthand experiences of the challenges and complexities that are being faced at all levels of the sector. This coupled with desktop research, to look at the literature and policy environments surrounding aged care highlighted the following challenges:

- Aged care data does not easily integrate with national health care system data.
- Data capture, generally, can require the involvement of numerous sources, people, and software programs.
- Data access is not the same for all users of the aged care system and this can mean that data is absent from core care decisions.
- Data exchange between systems and people continues to present significant challenges for consumers, clinicians, aged care providers, technology vendors, researchers, and policy makers.
- The collection of quality indicator data presents unique challenges in acquiring and delivering the data in a timely and appropriate manner.
- Aged care service stakeholders are often working with data in silos causing them to invent or develop their own work arounds and/or solutions.

For every challenge an opportunity presents itself and this report provides extensive details of not only the challenges but the identified opportunities which broadly include:

- The need to explore, understand, and uptake data interoperability opportunities that are available through communities such as the Sparked program.
- Improved digital literacy and provision of data education opportunities to stakeholders to improve the understanding of the uses and importance of data collection.
- Opportunities to advance the development of supporting technologies that have adequate standards-based data exchange frameworks built within them.
- The opportunity to co-ordinate and guide the nation's narrative on data through integrated policy directions across aged care and health care.
- The opportunity to ensure that data being collected daily can be fed directly to quality indicator data collection platforms.
- The opportunity to develop a co-ordinated support service for aged care users and providers to support them to collect, analyse, and exchange data to reduce workload.

Key priorities identified in this report include:

- Interoperability of data is essential to ensure seamless data sharing across aged care systems and into the health care system.
- Common data languages must be promoted within aged care. This needs to be a co-ordinated and guided approach to bring all system users forward in the same way and with adequate support provided.
- Data standards programs, currently available nationally, (e.g. Sparked) should be promoted widely.
- A co-ordinated, national approach, which guides the improvement of data access and use within aged care is essential to a solid aged care landscape for Australia.

There has been significant reform to the sector and the research findings within this report demonstrate that the reform has not explicitly followed a logical path in terms of the digital journey. This Digital Health CRC and CSIRO report demonstrates that there is an opportunity to take stock, examine the aged care data landscape and ensure a clear and logical roadmap.

PART 1
Introduction

About this report

The Digital Health CRC (DHCRC) and CSIRO's Australian e-Health Research Centre (AEHRC) collaborated to understand the "Where, What, How, Why and When" of aged care data in Australia. Both organisations are similar in their desire to transform the aged care data landscape and have already worked individually on transformative aged care data and digital research projects. Therefore, it seemed an imperative that they work together to analyse and understand deeply the landscape for and with which they are leading change.

This report presents the research findings from desktop research and interview data populated from a variety of aged care stakeholders within Australia. It also analyses existing data flows and processes across aged care, represented in aged care data landscape diagrams and data requirement templates. A range of easy-to-read diagrams and templates provide a view of what data is held and how initiatives collate, transform and report on data. Finally, the report identifies the current opportunities that exist for further development.

This report articulates the needs for data sharing in aged care, and lessons from comparable approaches in health care. The comparison to health care reflects the significant investment made in the last 20 years by successive federal, state and territory governments in digital health and the importance of integrating aged care and health care as highlighted in Chapter 9 of the Royal Commission's *Final Report*.[2]

The research and analysis findings from this work:

- supports continued delivery of **data and digital strategies** in the aged care sector
- supports the **ongoing reform agenda**, including implementation of the recommendations of The Commission
- informs **future policy** plans across the sector
- informs **national data standards efforts** in aged care, including the Sparked Australia Core Data for Interoperability (AUCDI) road map and the efforts of the Sparked Clinical Design Group
- informs **adoption and integration planning** in health and aged care systems
- identifies areas for **further research** to support advancements in data mappings and data sharing across the health and aged care sectors.

Who should read this report?

This report is intended to facilitate the activities of a broad range of stakeholders, including:

- **policy makers** who need to understand what data capabilities exist and need to be enhanced to support the aged care reform agenda
- **existing aged care programs** interested in further development of systems to incorporate more standardised data collection
- **organisations** considering the implementation or maintenance of systems that collect or process aged care data, such that they can avoid duplication of efforts
- **groups interested in digital health standards** and reuse of existing national capabilities
- **researchers and clinicians** wishing to understand data collected about aged care and how it flows through the health system
- **data analysts** who need to identify potential sources of information and the nature and scope of that data
- **governments** funding aged care and interoperability programs wishing to maximise the value of these investments.

How to read this report

This report describes the current data landscape in aged care, based on stakeholder input, coupled with insights from existing strategies and blueprints. The document identifies existing systems and process, flags areas of challenge from those environments and highlights areas that may be future opportunities. A series of provisional next steps are noted to close the report.

Structure

- **Part 1** describes the aged care sector background, data used and exchanged among sector stakeholders and visualises the nature and flows of this data. It provides commentary on the systems and processes involved along with the research methodology.
- **Part 2** makes observations about the aged care data landscape based on feedback by research participants and analysis of the information provided.
- **Part 3** identifies challenges and opportunities raised by research participants and provides a high-level roadmap for how these might be realised.

Figure 1 below provides a visual of information held within this report.

- **Data flows and exchanges** – research participants from a range of different sector stakeholders were interviewed. They described the data flows, processes and systems in their area of aged care. These interactions are modelled using a consistent diagram template.
- **Challenges** – feedback from research participants and analysis of the information provided highlighted challenges in data capture, technology in use and interoperability between current systems.
- **Opportunities** – opportunities were raised by research participants around the environment in which data is managed, the potential to leverage other programs to uplift aged care, the value of improving interoperability between aged care systems and the need to improve the supporting technologies.
- **Next steps** – areas that could continue the momentum from the landscape analysis, including standards programs such as Sparked, DoHAC policies around aged care and health data, aged care work program from The Australian Institute of Health and Welfare (AIHW), projects in aged care from AHDA and ongoing aged care research from groups such as CSIRO and DHCRC.

The report closes with a suite of supporting appendices that enumerate the key data templates and related elements for aged care. It is valuable to bundle these materials with the report, allowing readers to use this document as a "one stop shop" compendium of relevant material for handling of data in aged care.

The report links throughout to recommendations from The Commission, and the relevant recommendations are excerpted from The Commission's report and attached here.

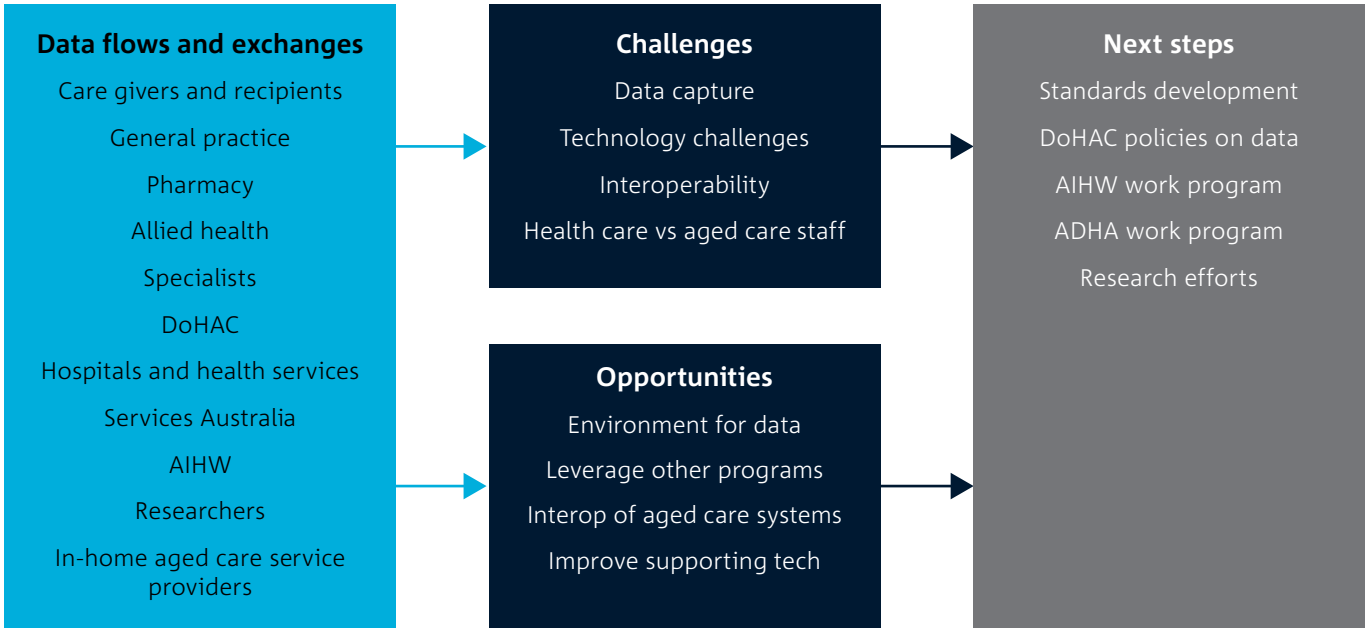

Figure 1. Report sections

About the sponsors and authors of this report

This report has been jointly funded and supported by DHCRC and AEHRC. DHCRC is funded under the Australian Commonwealth's Cooperative Research Centres (CRC) Program.

About DHCRC

digitalhealthcrc.com

The DHCRC is advancing digital health innovation by linking academia, industry and government to accelerate research implementation, enable effective use of data, connect care, empower the health workforce and support consumers to confidently be in control of their health and wellbeing.

Together, DHCRC invests in research and development to support the growth of a strong digital health industry, improve patient outcomes and experience and deliver sustainable digital health solutions.

About AEHRC

aehrc.csiro.au

CSIRO's AEHRC is Australia's national digital health research program – enabling the digital transformation of health care to improve services and clinical treatment for Australians. Our vision is to drive digital transformation of health care for Australia and the world – undertaking research across data and interoperability, virtual care and precision health.

AEHRC works with many collaborators across the healthcare system to optimise delivery of health services and diagnosis, management and treatment of disease. AEHRC includes a joint venture between CSIRO and the Queensland Government and works with state and federal health agencies, clinical research groups and health businesses around Australia.

1.1 Background

The Australian aged care sector has seen significant reforms in the last few years, with large investments by government and the sector to improve the quality of care provided to care recipients. The scope of this reform is massive, and this necessarily means change needs to be staged. To date, this has largely focused on legislative and regulatory reforms, supported by changes to reporting requirements and support for the workforce.

One area yet to be addressed in detail relates to data. The Commission and the *Aged Care Data and Digital Strategy 2024–2029* published by the Department of Health and Aged Care (DoHAC) make it clear aged care has a data problem, and the sector has been working to address this issue.[1,3,4]

Consistent and standardised data sharing is vital to the provision of connected and coordinated care across the aged care sector in Australia. This sector comprises diverse stakeholders, including consumers (who may provide self-care) and their caregivers (often unpaid carers) and their advocates, government, aged care service providers, public hospitals, general practitioners (GPs) and other medical specialists, and a wide range of allied health professionals.

Significant data demands support regulatory oversight and reporting, aged care service provider business operations, and clinical record keeping. Despite this, there are differing levels of maturity between the systems used by all parties in the sector, and a concomitant difference in their ability to record data in a way that supports data sharing. In addition, the nature of the data collected and the way it is coded varies across professional groups and even between professionals. Finally, there are different goals for data, resulting in differing data sets, including clinical observations, treatment records, outcome measures, and statutory reporting. These factors, and co-ordination of them, have been addressed in other sectors of the broader health care ecosystem, but to date, this has not been widely explored within the aged care sector.

1.2 What is a data landscape?

A data landscape describes:

- the **stakeholders** across the sector, including consumers, government, aged care providers, GPs and other medical specialists, and allied health professionals
- the nature of the **systems and devices** used to collect or manage data
- the **data collected** by relevant stakeholders for direct operational and professional needs, as well as that data they need to share with other organisations
- the **methods by which data is standardised** (or not), coded and suitable for broader data sharing
- the **frequency** and extent of **data sharing** among the stakeholders
- identified **opportunities** and **challenges** for aged care data sharing requirements
- exploration of the different approaches for integration that exist and the different kinds of utility for clinicians operating in both the aged care and health sectors.

This report focuses on the data associated with provision of care in the aged care sector. However, the report recognises the significant overlap between aged care and health care and so leverages the national approaches to categorising healthcare data to help illustrate where data for aged care needs to work with the existing data landscape. Refer to Appendix A for a discussion on the data in aged care and what is meant by data within this context.

1.3 Why articulate an aged care data landscape?

This report describes the current state of data collection, use and exchange in aged care. By developing an understanding of the current aged care data landscape, it is hoped that any aged care sector stakeholders can identify data-related issues that do not benefit the sector or stakeholder needs.

This report was driven by:

- A need to gain an understanding of the breadth of the data requirements, both administrative and clinical, for the delivery of quality care in aged care
- The need to explore the use, reuse and interoperability of data in aged care, especially regarding its ability to be used to inform quality indicators
- The need to shed light on duplication when gathering assessment data and other clinical data
- The need to determine who is doing what to address the data flow and data standardisation issues
- The need to understand what challenges and opportunities exist regarding aged care data
- The need to understand similar work, already being done, in the broader healthcare system.

1.4 Current aged care data landscape activities

Current activities that are underway within the sector include:

- **Ongoing reform agenda**
  DoHAC continues to implement the significant reform agenda resulting from the recommendations of The Commission.[1]
- ***Aged Care Data and Digital Strategy 2024–2029***
  DoHAC has published a data and digital strategy and associated action plan for aged care, outlining their approach to addressing the recommendations of The Commission.[3,4]
- ***National Digital Health Strategy 2023–2028***
  The Australian Digital Health Agency (the Agency) published a digital health strategy outlining their approach to achieving a digitally enabled healthcare system.[5]
- **Aged Care National Minimum Data Set (NMDS)**
  DoHAC and the AIHW have partnered to develop the Aged Care NMDS and the National Aged Care Data Asset (NACDA) which brings together de-identified person-level data collected across aged care, health and community service settings for aged care research purposes.[6]
- **Introduction of a new comprehensive assessment form**
  Clinicians in aged care are being trained in a new comprehensive assessment form. This integrated assessment tool (IAT) is a primary reporting and assessment mechanism that will require key data from the sector to ensure service recommendations and referrals are tailored to each person's needs.[7] See Appendix C for data elements forming the IAT.
- **Aged Care Gateway and associated programs**
  DoHAC recently delivered an expansion of the Aged Care Gateway (ACG) including changes to the Government Provider Management System (GPMS) to support aged care service providers in reporting and changes to support the broader reform agenda.[8] Once again, this is a primary data sharing exercise that needs to be considered.
- **Single Assessment Scheme**
  Work is underway to consolidate the assessment processes under a single scheme in line with Recommendation 25 of The Commission.[2]
- **Quality indicator reporting and the star rating system**
  In line with Recommendations 22–24 of The Commission, DoHAC has implemented updates to quality indicators and a star rating system to support better understanding of the quality of care in the sector.[2]
- **Aged Care Data Compare (ACDC) project**
  Work that has been undertaken by the ACDC project show the value of generating quality indicators using standards-based data captured at point of care, that can be risk adjusted for quality improvement, benchmarking and system redesign purposes.[9]

1.5 Methodology

All information within this report was sourced through a desktop literature and policy review exercise along with qualitative research interviews. This included interviews with stakeholders who had been identified from a wide variety and breadth of areas across the Australian aged care landscape. Interviews occurred with 47 individuals representing 20 individuals/groups, between October and December of 2024. The demographic characteristics are summarised in Table 1.

Recruitment of the research participants occurred through an email invitation and went to a selection of stakeholders who had been identified as relevant to the national aged care data story. They included subject matter experts, industry experts and software company representatives and were identified via their place of work or professional association with a workplace/body.

The interview/focus group was an online interview of typically one hour duration. Research participants were not compensated for their time and gave a time donation of their experience and knowledge within their workhours or in their own time outside of their designated workhours.

Data was analysed into themes and information grouped accordingly.

This project was assessed and approved by the CSIRO Health and Medical Research Ethics Committee low risk panel (approval #2024_055_LR).

1.6 The importance of this report

This report provides an update on the data landscape, as it has progressed since The Commission's final report was delivered in 2021. There has been significant change within the aged landscape over the past four years and now is a time to pause and review what is the current situation. It is important to understand if recent reforms have had the desired impact which was, ultimately, to improve the care of older Australians through responsible, considered, and co-ordinated data use.

The landscape report condenses the findings from stakeholder insights into a series of observations and identified opportunities that sit across the aged care sector. These sections of the report highlight major areas of challenge that could be the commencement point for future reforms and note areas where potential improvements might be made.

The transition to reform and improved aged care in Australia has made significant strides in recent times, but sustained progress and long-term improvements to the quality and efficiency of aged care will be powered by good data management. The present environment has many areas of challenge to be tackled, and this landscape report provides a thorough analysis of the commencement point for future work.

Table 1. Project participant demographics

PARTICIPANT TYPE	FURTHER DETAIL	TOTAL (INDIVIDUALS)
Data collectors	Research community and data collectors	4
Aged care service providers	Providers of residential and home care services	7
Clinicians/Clinician researchers/ Clinician peak body representatives	Independent clinicians and/or related peak body representatives	14
Federal bodies	Various federal entities	10
Vendors and consultants	Solutions encompassing aged care provision, health and medical, assistive technologies and general consultants	12

PART 2
Visualising the current data state landscape

Visualising a data ecosystem or environment is a fundamental way of supporting data-driven policymaking.[10] Based on research and interviews with aged care sector stakeholders, a suite of diagrams has been prepared that document the way data flows across the sector. The data flows described in this section are the main ones under consideration in this report.

From a government perspective, Figure 2 shows how aged care has a continuous spectrum of care that should include a mixture of funding related data, policy related data, service delivery related data, outcomes related data, and intersects with elements of the health care system. Chapter 9 of the Commission's *Final Report* called out this interdependence with health care, especially regarding allied health.[2]

Work currently being conducted by the CSIRO, the GEMO-MATIC project provides an understanding of what navigating this system currently looks like (see Figure 3) for those navigating the aged care system or providing services within it.[11]

Figure 2 and Figure 3 highlight that while the system should be simple it is quite complex on close examination. And indeed, the data flowing through those intricacies is of great breadth and depth.

Figure 3 provides a view of the stakeholder groups who are involved in the direct provision of care and support services. Appendix B provides detailed information regarding all the aged care stakeholders identified, for the purpose of this report. Please refer to Appendix B for this information.

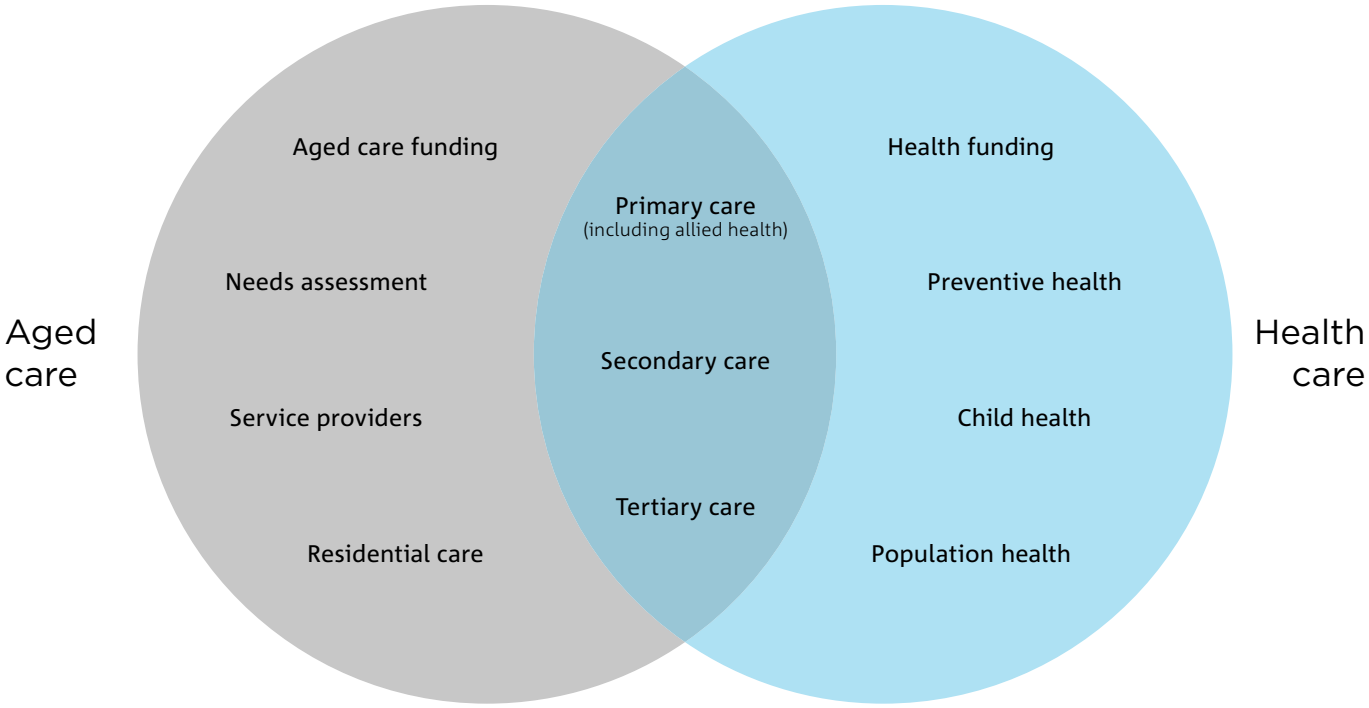

Figure 2. The overlap of aged care and health care — a government perspective

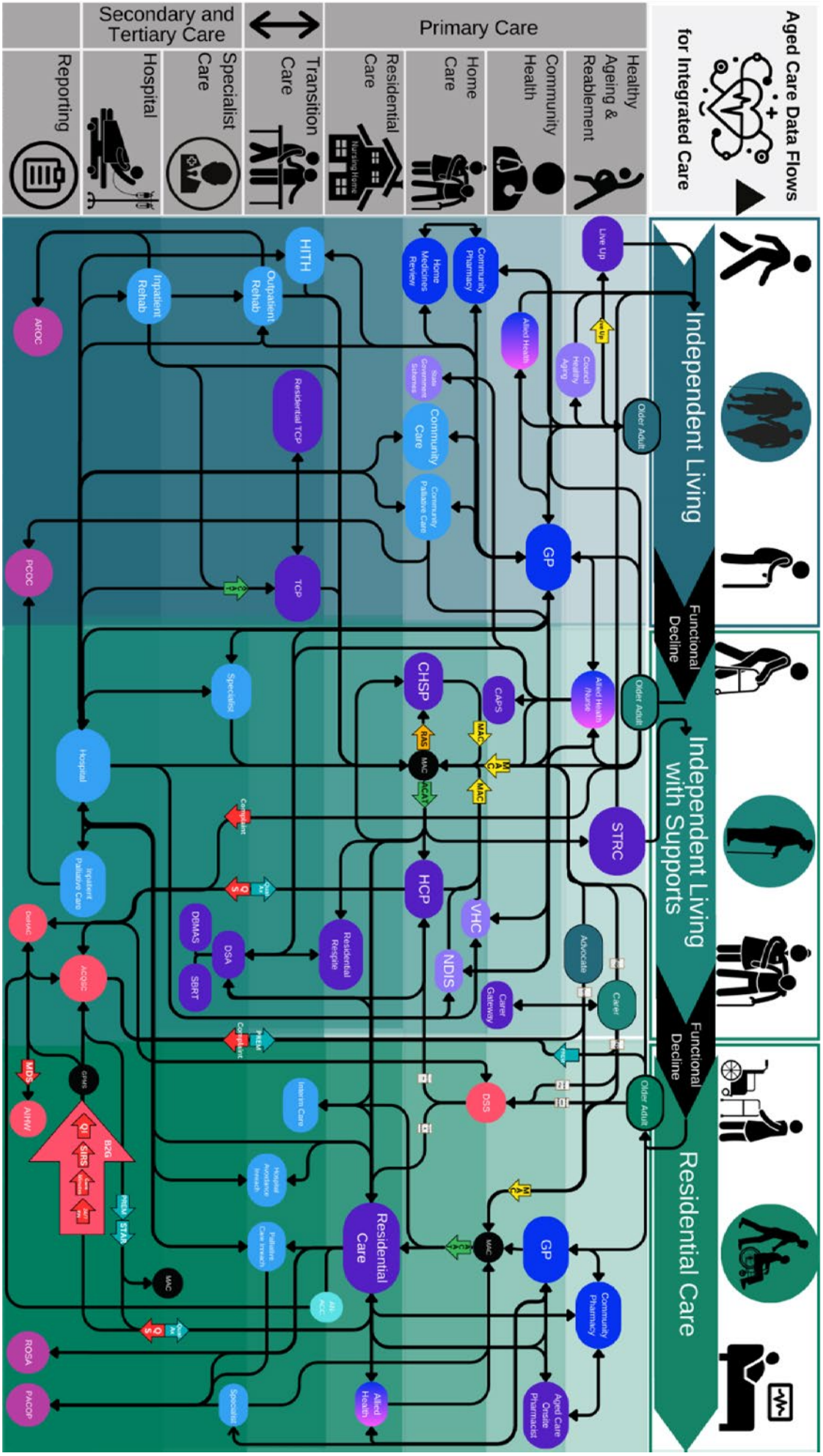

Figure 3. Snapshot of current data flows in the aged care system

2.1 Visualising the high-level data flows – how to read the diagrams

The first stage in visualising the data landscape is understanding the stakeholders.[10] With so many stakeholders, range of data flows and points of analysis or reporting (see Figure 3 from the GEM-OMATIC project), the Australian aged data landscape is complex and can seem confusing.

In this paper, to simplify the data flows, the landscape is represented as diagrams using a common visual framework. Figure 4 shows the key stakeholders involved in the direct provision of care and support services in the aged care sector, broadly grouped by the level/type of care being provided or role. Not all those described in Appendix B are included as key stakeholders in these diagrams. Some influence or affect the aged care sector while not being direct stakeholders. Examples include the Agency and software developers.

Figure 5 provides a legend for the symbols used in the data flow diagrams that follow.

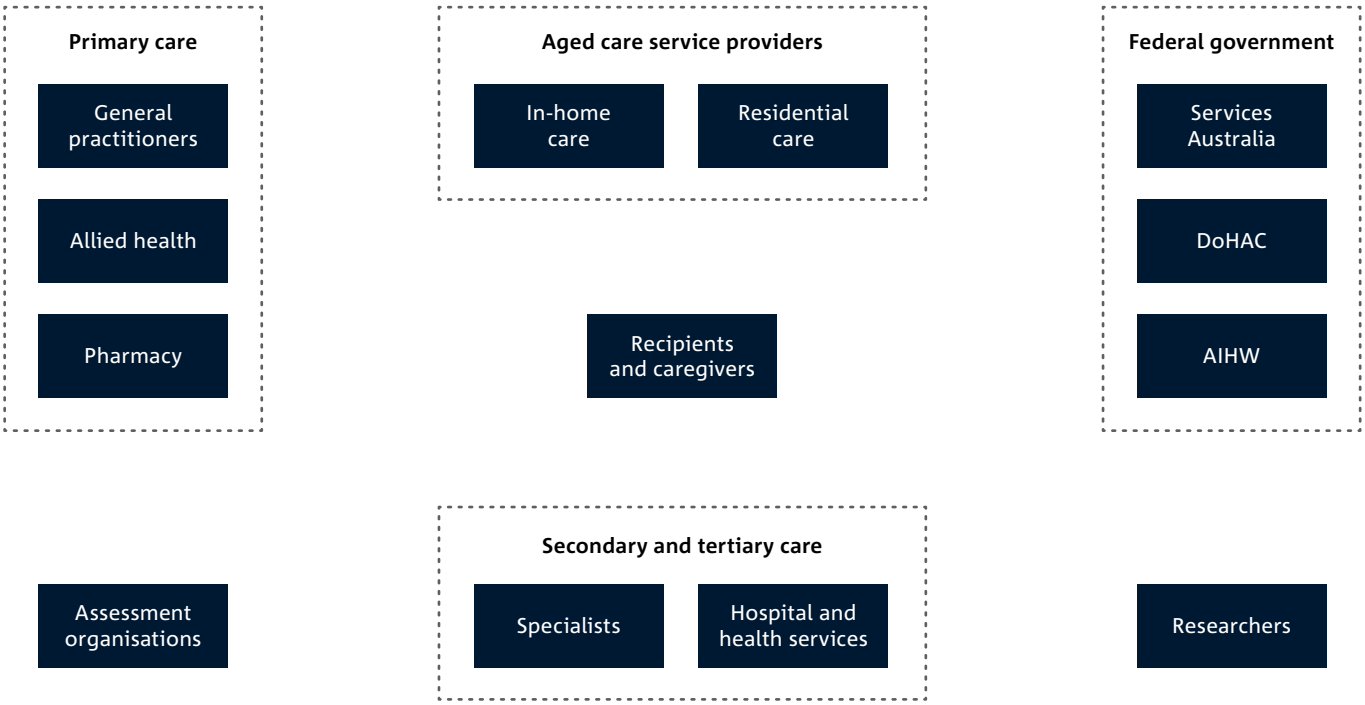

Figure 4. Key stakeholders in the direct provision of care and support services

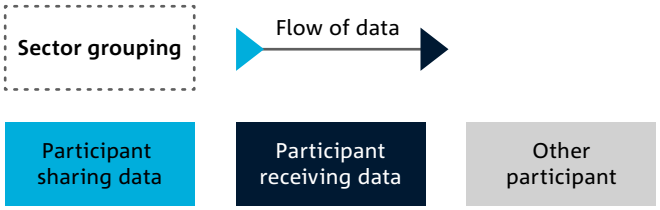

Figure 5. Symbols used in the data flow diagrams that follow

2.1.1 Understanding high-level relationships between sector stakeholders

Acknowledging the limitations of oversimplification, Figure 6 illustrates the high-level relationships between key stakeholders in the sector providing direct care and support.

The key interactions demonstrated in Figure 6 are:

- **Care recipients and their caregivers** can interact with healthcare providers across primary, secondary and tertiary care, and progress through different levels of support/care in the aged care sector. While not shown in Figure 6, there are also interactions with government and their services (including assessment organisations), and with researchers in some cases.
- **Healthcare providers** (primary, secondary and tertiary) support delivery of services to care recipients and aged care service providers; however, aged care service providers deliver additional services (such as personal care and accommodation) which is outside the scope of traditional healthcare services.
- **Aged care service providers** have a central role, engaging with care recipients and their caregivers, healthcare services, and government agencies. They offer a range of services across in-home and residential care.
- **Federal government and its agencies** are engaged with all parts of the aged care and healthcare system, and are responsible for managing policy, funding, quality and reporting. This often involves the research community.
- **Researchers** (from government and academic institutions) bring together data from across the sector to support a learning environment for the health and aged care systems. They interact with most stakeholders in the aged care sector (for simplicity they are not shown in Figure 6).

Additional interactions are shown in more details and discussed in the following sections.

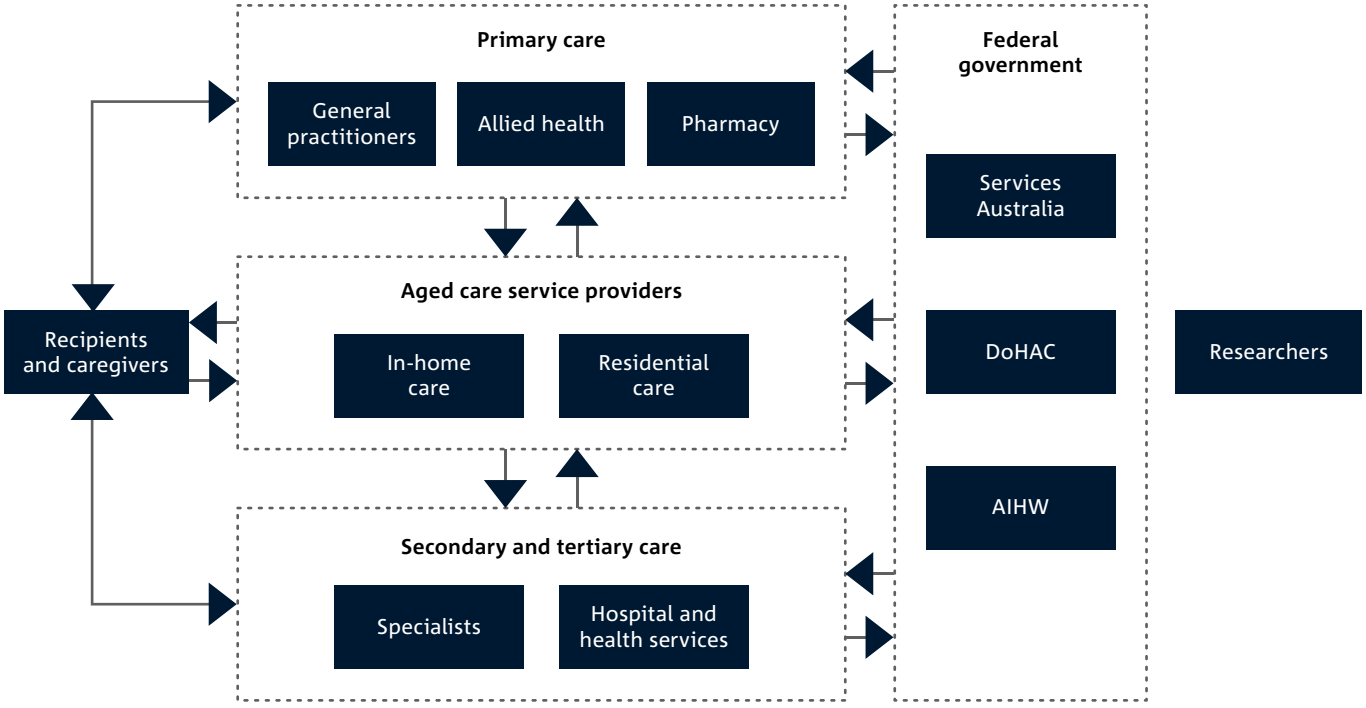

Figure 6. High-level relationships of key stakeholders providing direct care and support

2.1.2 Initial assessment data flows

The usual starting place for aged care is the request for an assessment. These assessments can be initiated by the care recipient, their caregivers, or healthcare professionals involved in their care, as in Figure 7. The data collected is described in Appendix C.

These requests are usually made using the My Aged Care system or (for healthcare providers) via integration with clinical information systems (CIS). Alternatively, the application can be submitted with the support of the My Aged Care call centre. The My Aged Care system and the My Aged Care contact centre are operated by Healthdirect Australia on behalf of DoHAC. State and territory governments deliver hospital-based assessments.

The application process collects three types of data:

1. data to determine if the proposed care recipient qualifies for an assessment, based on **age and the level of assistance required**
2. demographic data about the **proposed care recipient**
3. demographic data about the **person to be contacted** to arrange the assessment.

Details of the data elements collected for the above data requests are in Appendix C.

Once a My Aged Care account is created for the care recipient, DoHAC then assigns a qualified assessment organisation (see Figure 8) using the assessors portal in the My Aged Care system.[12] This gives assessment organisations a list of assigned assessments, including the type of assessment, the state of the assessment and contact details. This process can take 2–6 weeks.

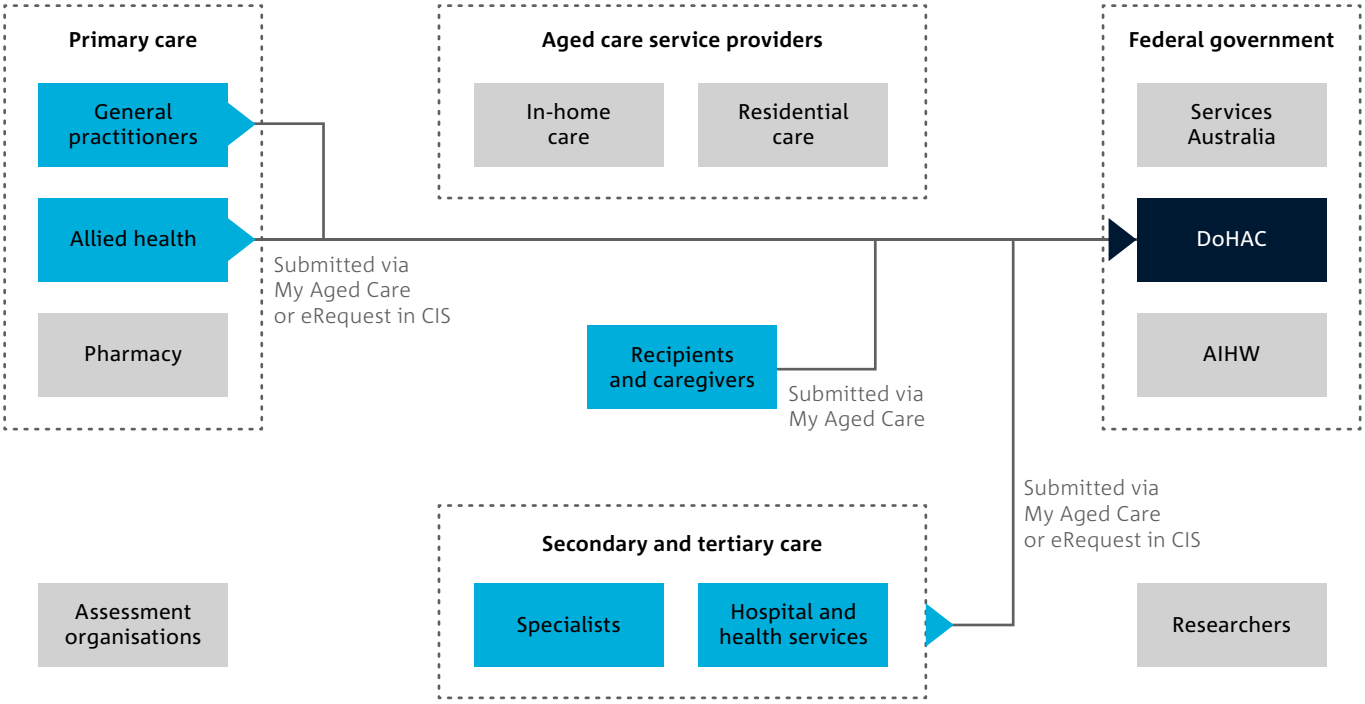

Figure 7. Data flows involved in initial requests for assessment

Until late 2024, one of three types of assessment could be assigned:

- Regional Assessment Service (RAS)
- Aged Care Assessment Teams (ACATs)
- Independent Australian National Aged Care Classification (AN-ACC) assessors.

As of 9 December 2024, these have been replaced with the Single Assessment System, and assessment organisations conducting aged care needs assessments can:

- perform home support assessments for the Commonwealth Home Support Programme (CHSP)
- conduct comprehensive assessments for:
  - the Home Care Package (HCP) Program
  - flexible aged care programs
  - residential respite
  - entry into residential aged care.[13]

This change is in response to Recommendation 25c of The Commission (please see Appendix H for detail), which called for a "a single assessment process based upon a common assessment framework and arrangements followed by all assessors".[2]

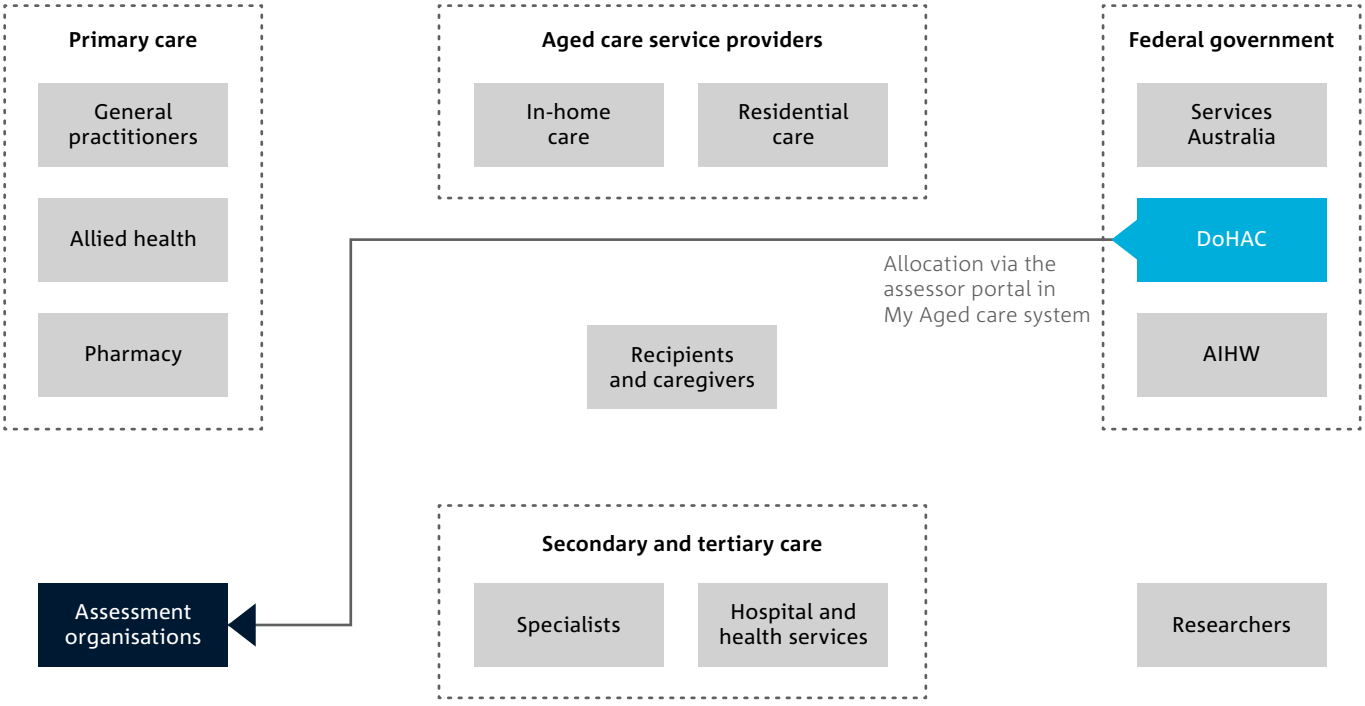

Figure 8. Assigning assessment requests to assessment organisations

The assessors work with the care recipient/caregivers to coordinate an assessment (Figure 9) using the Integrated Assessment Tool (IAT), which is used to ensure service recommendations and referrals are tailored to each person's needs.[7]

Appendix D details the data elements collected to form the IAT. During an assessment, this information can be collected either through the Aged Care Assessor app, upload of information into the Aged Care Assessor portal, or manually entered into a blank copy of the IAT and transferred to the assessor portal after the assessment.[14]

Assessors come from many backgrounds, including gerontology, nursing and allied health. Assessors typically engage with care recipients and their caregivers to gather medical histories and current functional assessments. Sometimes, specific functional assessments may involve other clinical input such as from occupational therapists, physiotherapists, optometry and other allied health services.

Completion of the IAT is a core element of the new assessment process. Many of the introductory data elements for the IAT are questions included in the initial request for an assessment, but this data is not reused to populate the IAT. Equally, the data in the IAT is not readily accessible for later reuse.

Assessors also leverage some or all these sources of information:

- information from the care recipient and/or their caregivers
- information recorded in the My Aged Care system as part of the application for an assessment
- clinical data in the My Health Record (if the care recipient has one and the assessors have access to the My Health Record)
- clinical information from primary care, including the care recipient's GP (if they have a regular GP)
- progress notes from other clinicians.
- In the research interviews, the duplication of this information was a frequent feature. Numerous research participants described the care recipient, care giver, and/or the assessors having to ask the same questions time and again.

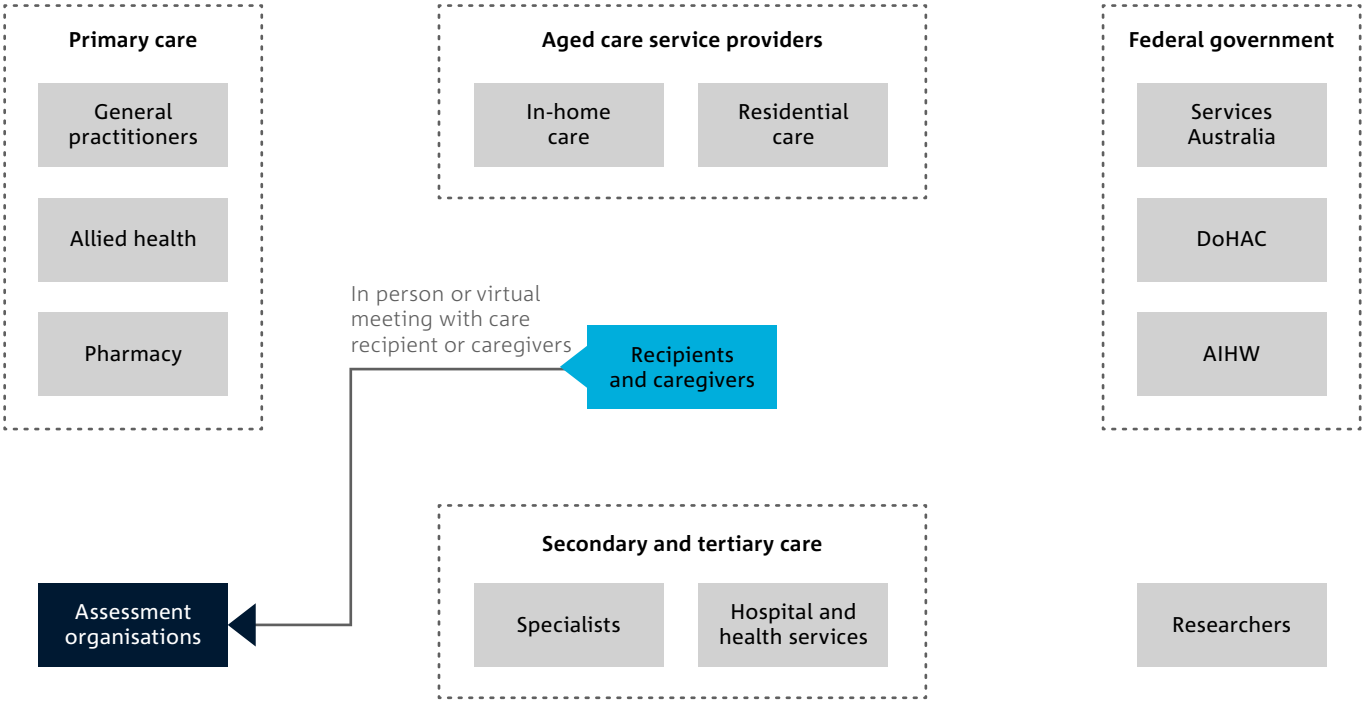

Figure 9. Data gathering during an assessment process

Once an assessment is completed and a care plan developed, both are provided back to DoHAC (Figure 10) via the My Aged Care system using the assessor's portal.

Service providers can later access the My Aged Care system to access the assessment data, care plan and funding data. Data is available onscreen or as a Portable Document Format (PDF) for downloading. **This format limits its utility for interoperability**. The My Health Record system should be used to access healthcare data, although, My Aged Care support plans can also be shared within the My Health Record.

However, research participants noted that the time between initial assessment and availability of funding/acceptance/access to services can be lengthy. As it is common for care recipients to decline during the waiting period for assessment, the initial assessment was frequently found to be out of date. This resulted in a new AN-ACC assessment process being required at the start of service provision to determine the revised needs of the care recipient. As the previous assessment was only available in a PDF format, later AN-ACC assessments could not leverage the older data except through re-entry.

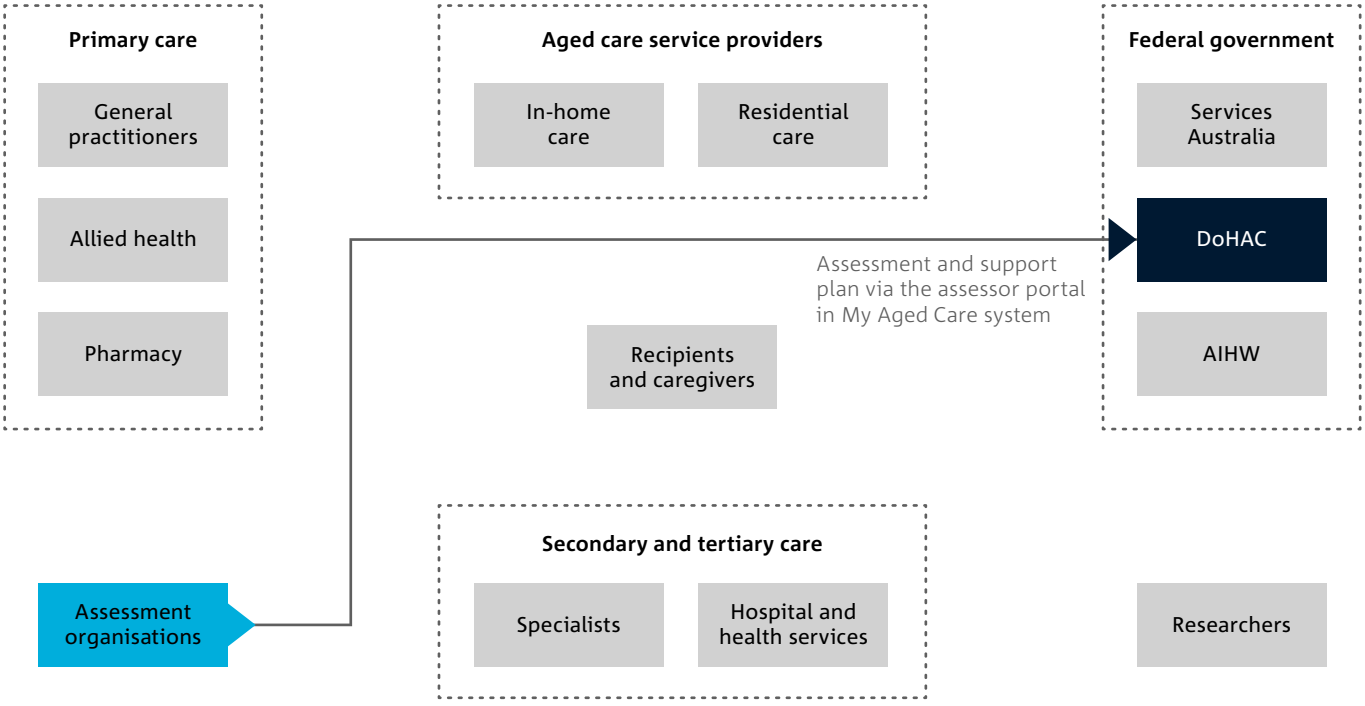

Figure 10. Submission to DoHAC of the completed assessment and care plan

2.1.3 Funding aspects of aged care

The next stage in the process for accessing care is confirmation of a funding package for the care recipient. Services Australia checks the eligibility on behalf of DoHAC. This can involve means testing and hardship assessments in coordination with the care recipient and their caregivers, as in Figure 11.

DoHAC provides a limited set of data to Services Australia to ensure privacy of care recipients. This will include necessary demographic information, and the assessed level of care required. Specific details of this transfer were not available.

Services Australia works with care recipients and their caregivers to collect the financial data via the Centrelink portal in the MyGov website and associated credentials linked to an Aged Care Identifier (ID) from DoHAC. Individual Aged Care IDs are provided for both care recipients and their caregivers.

Once the means testing and other considerations are completed, DoHAC is advised of the outcome. DoHAC then advises care recipients, or their caregivers, of the funding package as shown in Figure 12. Services Australia is also advised as they manage funding expenditure on DoHAC's behalf.

Once a funding package is confirmed, care recipients or their caregivers can identify and engage with aged care service providers (Figure 13). The nature of the services sought will depend on the needs assessment and funding allocated. Care recipients, and their nominated caregivers, will have access to the care recipient's care plan and funded services via the My Aged Care system using their relevant Aged Care IDs. The My Aged Care system provides the care finder functionality allowing recipients to search for providers who match their needs.

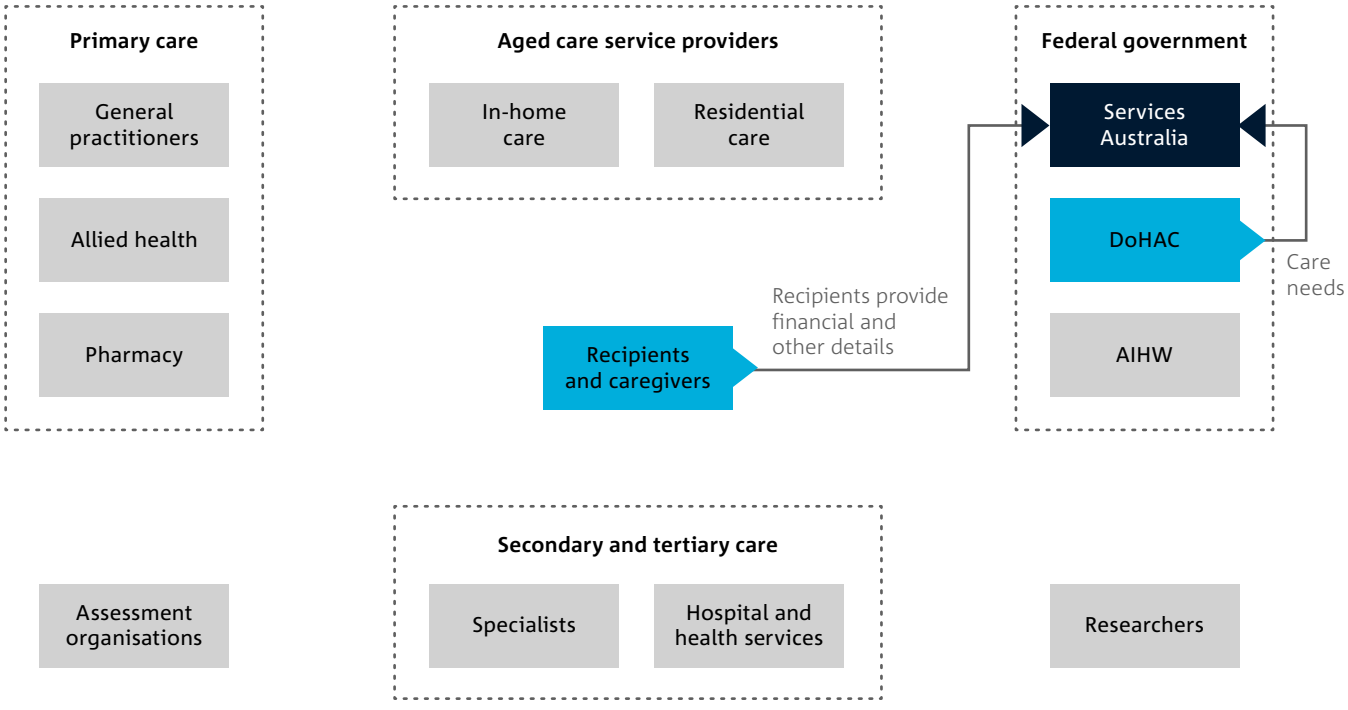

Figure 11. Review of eligibility for funding undertaken by Services Australia

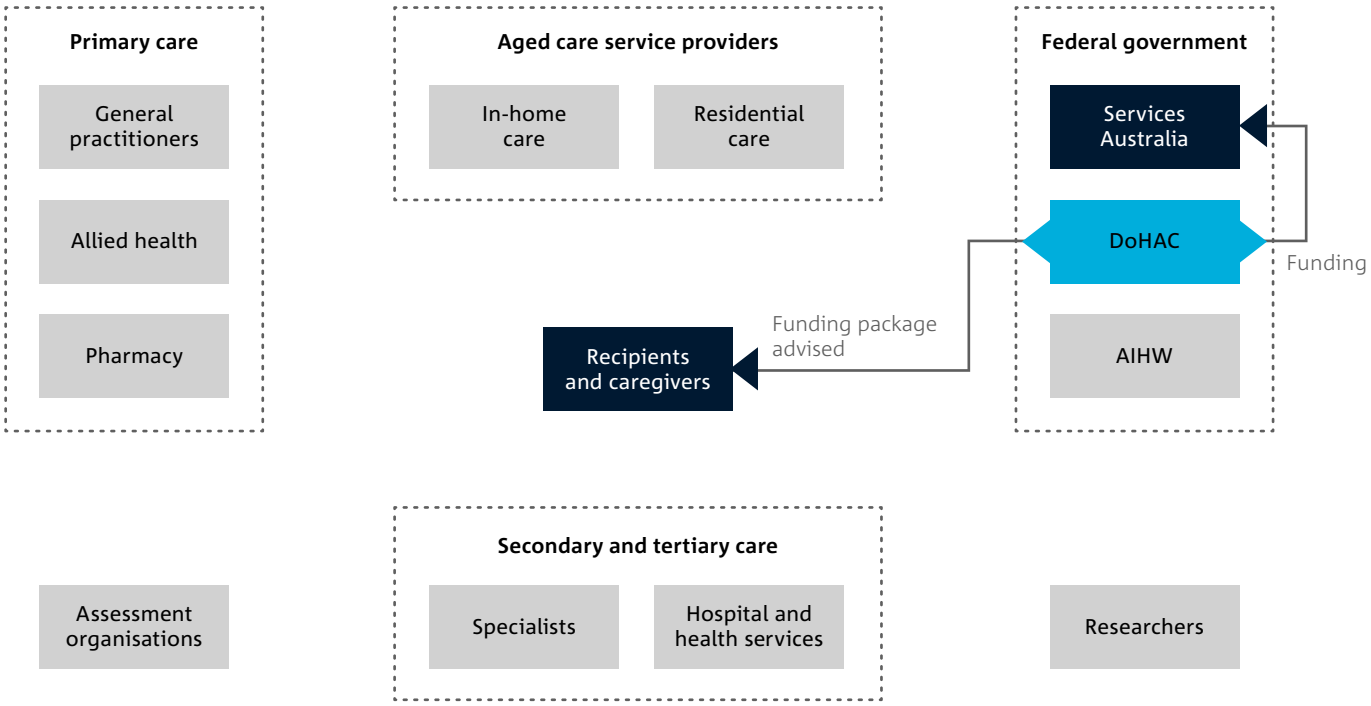

Figure 12. Communication of assessment outcomes and package funding

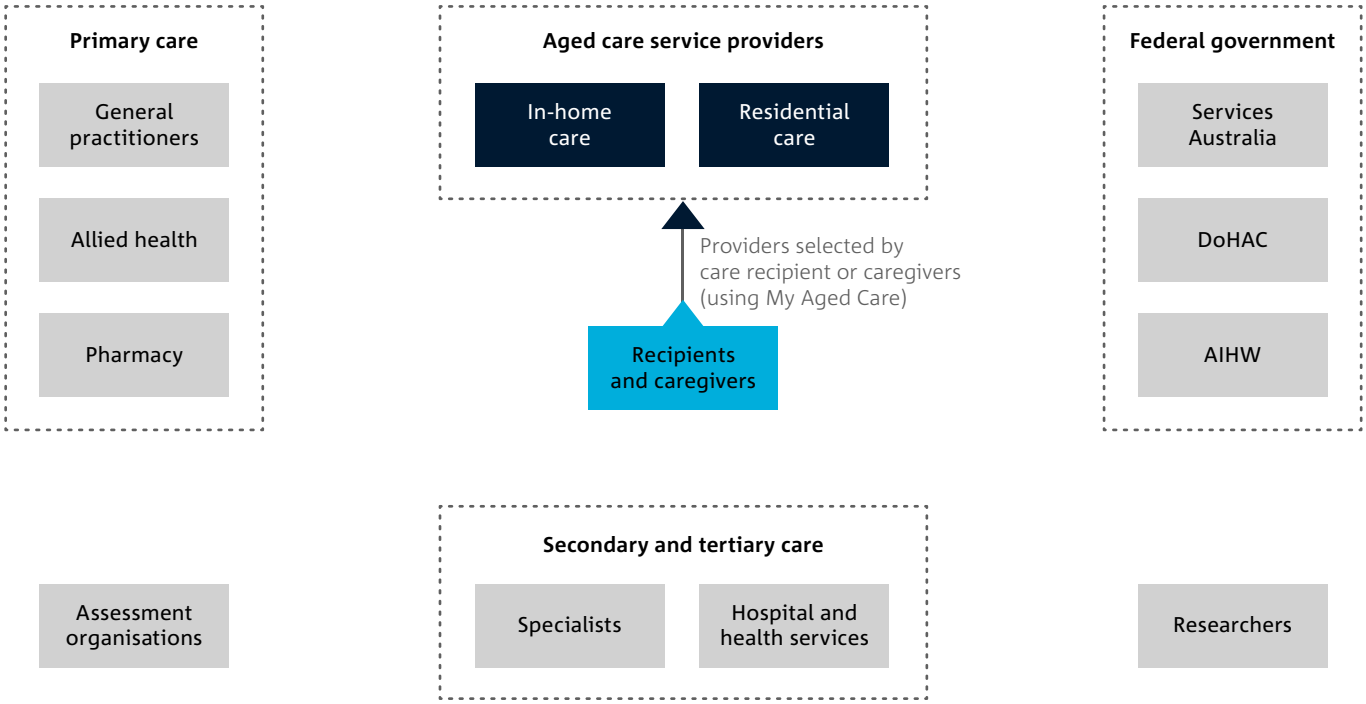

Figure 13. Selection of aged care service provider(s)

Once selected, aged care service providers will invoice against the available funding package. Typically, this is achieved using Application Programming Interfaces (APIs) between the service provider's billing system and the provider portal operated by Services Australia (Figure 14).

DoHAC shares information about registered providers held in the Government Provider Management System (GPMS) to Services Australia. While details of the data exchange between DoHAC and Services Australia are not on the public record, details of the information held for registered services providers (and available using the Business-to-Government (B2G) APIs) can be found in Appendix F.

Services Australia manages the financial transactions within the scope of the funding package. DoHAC has read only access to the Services Australia system to support reporting of the spending.

2.1.4 Ongoing healthcare services

While the aged care service providers deliver a range of services, care recipients are frequent users of the healthcare system. Healthcare providers rely on data from aged care service providers to inform healthcare delivery (Figure 15) but also provide data about ongoing care assessments and provision to aged care service providers (Figure 16).

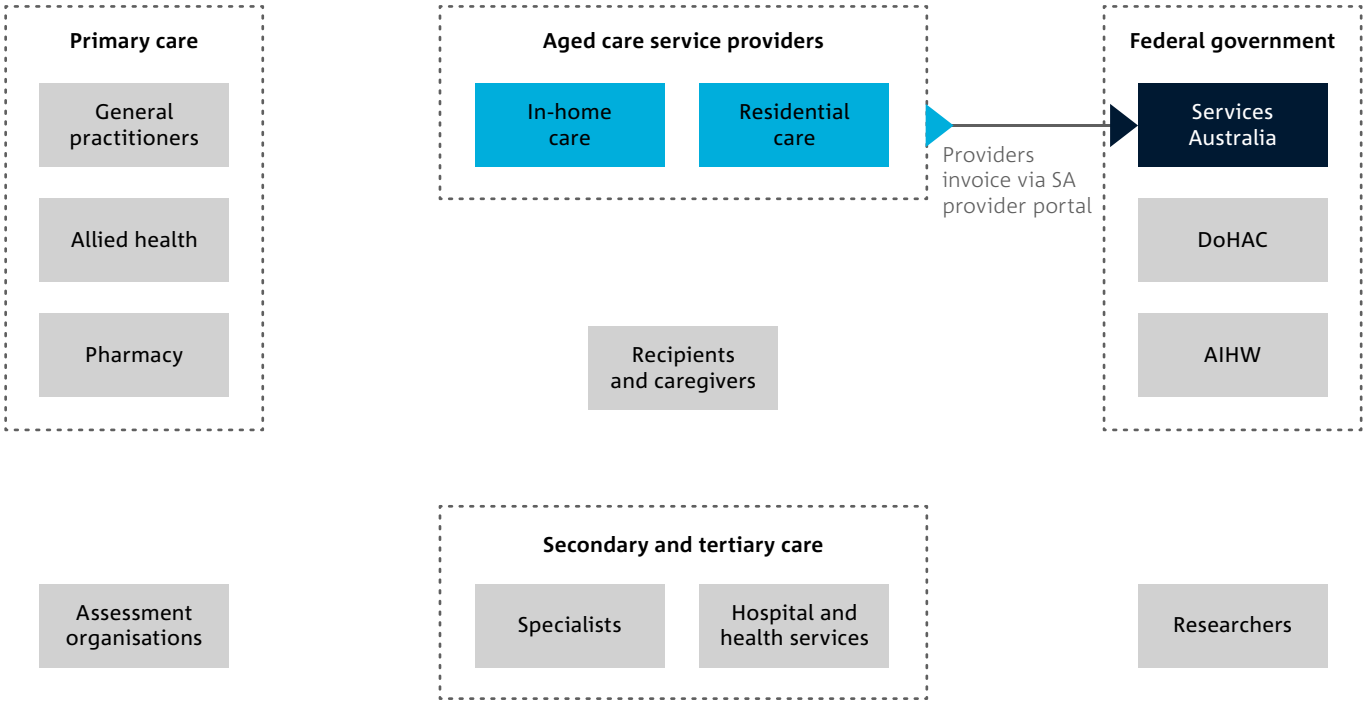

Figure 14. Aged care service providers invoice Service Australia against funding

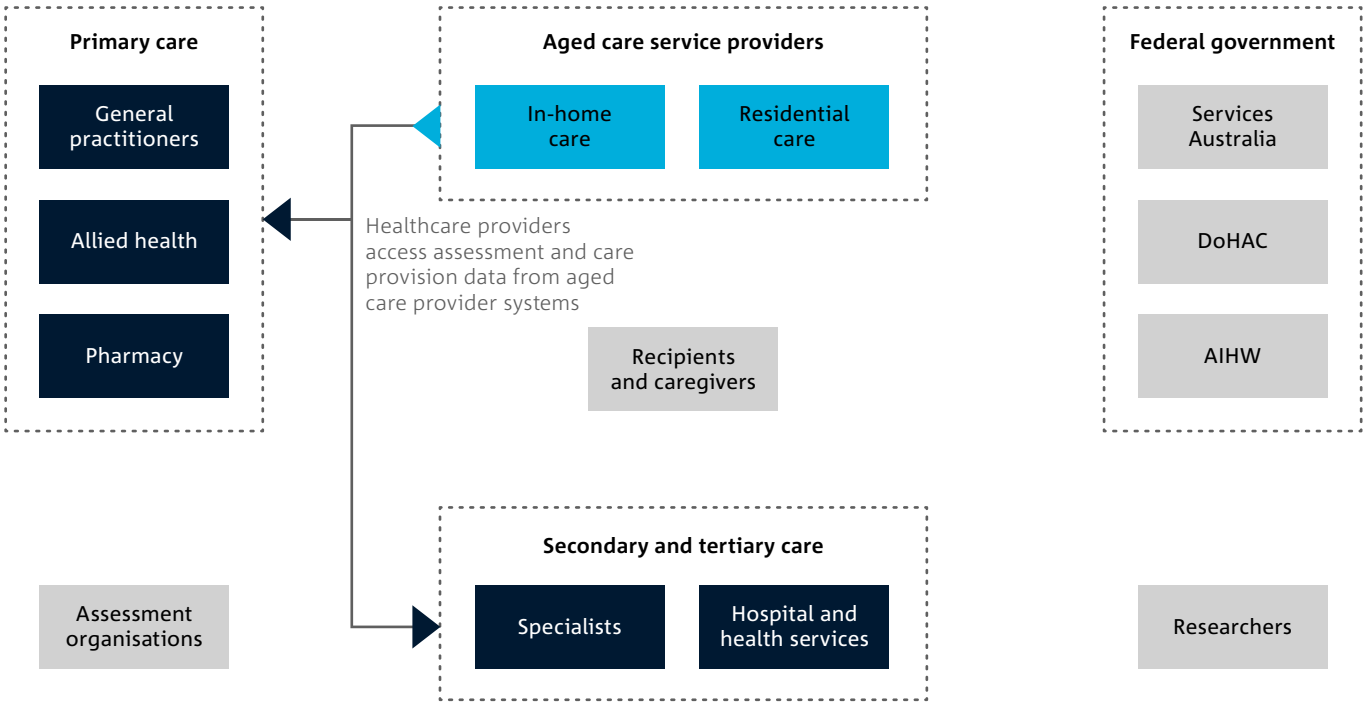

Figure 15. Ongoing healthcare services coordinated by aged care

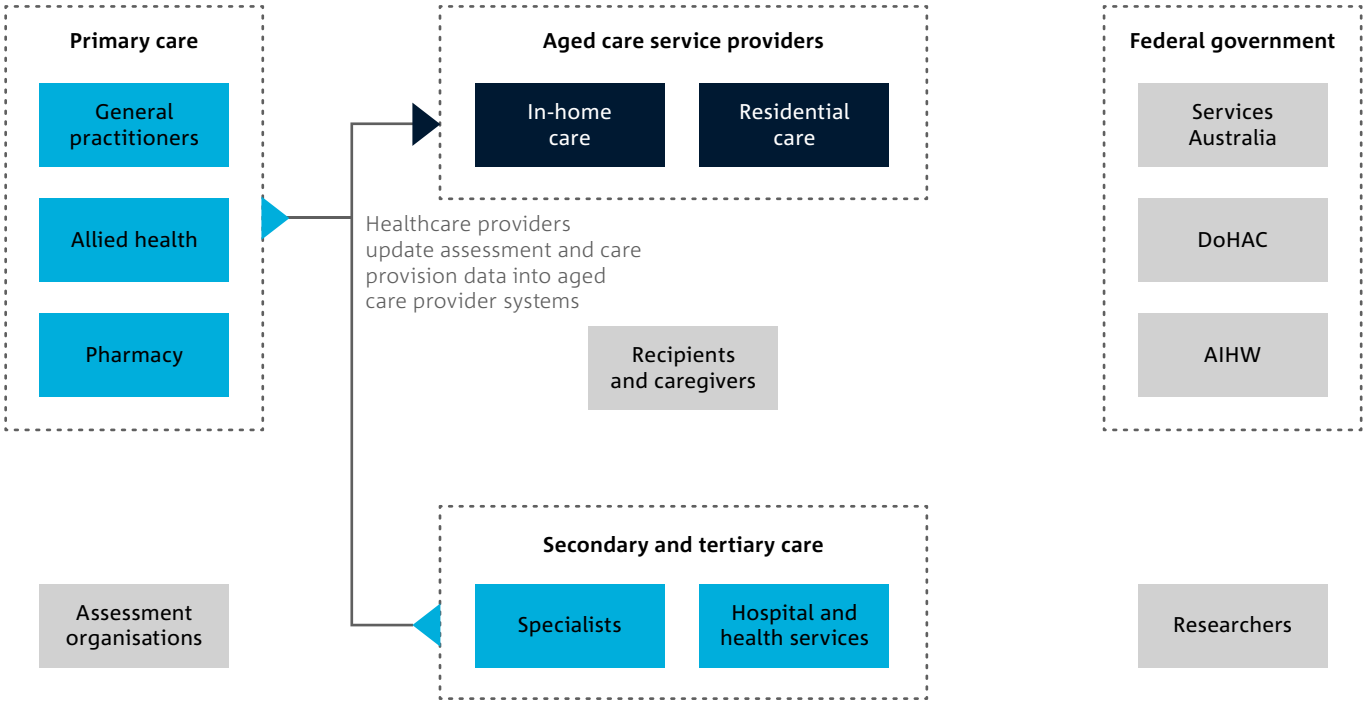

Figure 16. Data flows from healthcare providers to aged care service providers

The capability to exchange data between these two groups is critical to manage the quality of care provided.

Some of the key data flows include:

- **Referrals:** Referrals for specialist care are usually made by the supervising GP. If being made to a private specialist, the Agency's Referral specification can be used and is supported by many GP CISs.[15] In the case of referral to a hospital specialist service, the Service Referral specification can be used.[16] However, many specialist clinics have their own non-standard format for receiving referrals. Unlike GPs, allied health professional research participants reported limited capabilities to digitally provide referrals. In most cases, allied health referrals rely on postal or email delivery of digital or handwritten letters.
- **Transfers to acute care:** The Agency, in collaboration with its aged care partners, has delivered a specification called the Aged Care Transfer Summary (ACTS).[17] The ACTS implements three new record types into the My Health Record system for the sharing of residential health information from Residential Aged Care Facilities (RACF). These include a Residential Care Transfer Reason, Residential Care Medication Chart and Residential Care Health Summary. These record types are designed to facilitate access to health information relating to an aged care resident to support clinical hand-over when an individual is transferred from an aged care setting to acute hospital care. While each of these record types includes information useful in such transfers, the data is provided in a narrative/PDF format, which limits its utility for data exchange. Research participants indicated that they have yet to adopt this specification. Details of the content (atomic and narrative) can be found in Appendix E.
- **Discharge summaries:** Acute hospitals issue discharge summaries when a patient is discharged from their care. Many of these can now be sent electronically and conform to the national Discharge Summary specification developed by The Agency.[18] However, research participants noted that where these were issued, they were usually sent to the patient's GP, not to the service provider. This was problematic for RACFs who were tasked with managing care for the care recipient. Changes to the care recipient's medication needs to be made by the relevant GP in the medication management system. This information also needing to be available for other forms of care, such as allied health, are not always easily available at the RACF.
- **Bespoke systems integration:** Research participants also noted that data exchange with other organisations was generally addressed through bespoke integrations, developed either in-house or by the relevant software vendor, depending upon functionality and capabilities. Examples include the PainCheck system and the Palliative Aged Care Outcomes Program. Cross sector standards for this were not available.
- **Medications:** Pharmacy services are tightly coupled with the medication management systems used by service providers. A high degree of integration is usually found between prescribing systems (at the service provider) and dispensing systems (at the pharmacy). While many of these are bespoke integrations, The Agency is currently working towards a revision of the Electronic Prescribing Solution Architecture that will support a more standardised approach to integrations, including use of the National Prescription Delivery Service where appropriate.
- **Assessment and care plan data:** This is provided to care recipients and the caregivers and is available electronically as a PDF to authorised users via My Aged Care. As of December 2024, new support plans can also be provided via the My Health Record with the care recipient's permission.[19]

It should be noted that in Figure 16, residential care comprises a wide range of inhouse and contracted services, including nursing, personal carers, diversional therapies, pastoral care, and allied health. Many of these liaise with colleagues in primary care (if the care recipient's needs change). Inhouse and contracted care providers and/or services will usually use the software systems available within the service provider for recording care data.

While many aged care software systems can support integration with other systems, the most common form of access for healthcare providers to aged care service provider data is via an assigned user login to that system. Nursing and other staff at a residential care facility will provide a briefing to visiting healthcare providers, as those visiting providers will not necessarily have access to the internal systems.

Healthcare providers, who provide contracted or visiting services to RACFs, have a professional duty to maintain records of the care they are providing, within their own practice software systems. This data is also required by the aged care service providers. Data is often recorded in both systems as a double entry. A key example is the way prescriptions are written using a residential care facility's electronic medication chart; this is the legal instrument for these prescriptions. However, healthcare providers such as GPs also need to record medications prescribed in their own clinical information systems. This results in duplicate data entry across systems.

Research participants described the challenges in having to dual report which is not only time consuming but can lead to errors or missed documentation.

2.1.5 Reporting, research and other tools

As shown in Figure 17, organisations in the healthcare and aged care sectors must provide regulatory reporting to DoHAC and AIHW, often on a quarterly basis.[20] Core to their quarterly reporting are the quality indicators which form part of recommendations 22 to 24 of The Commission.[1]

Traditionally, **quarterly data uploads to DoHAC** were made by aged care service providers using the Provider Portal in the GPMS. DoHAC has recently introduced APIs to let organisations automate this process.[21] These APIs are based on the Health Level 7 (HL7) Fast Healthcare Interoperability Resource (FHIR) standard, using Questionnaire and Questionnaire Response resources which conform to the structure definitions of the FHIR global standard for health care data exchange. The APIs may include country-specific FHIR extensions built against the FHIR AU Core.

The APIs are used to allow service providers to provide quality indicators in accordance with the *National Aged Care Mandatory Quality Indicator Program Manual 3.0 – Part A* published by DoHAC.[22] The data elements required are listed in Appendix G.

New voluntary **Monthly Care Statements** have been introduced from October 2024 to better inform caregivers of the care being provided by residential care service providers.[23] These statements summarise:

- the care the resident accesses
- changes to the health or care needs of residents
- other relevant events that occurred in the previous period.

These statements have been introduced in response to Recommendation 124 of The Commission.[1]

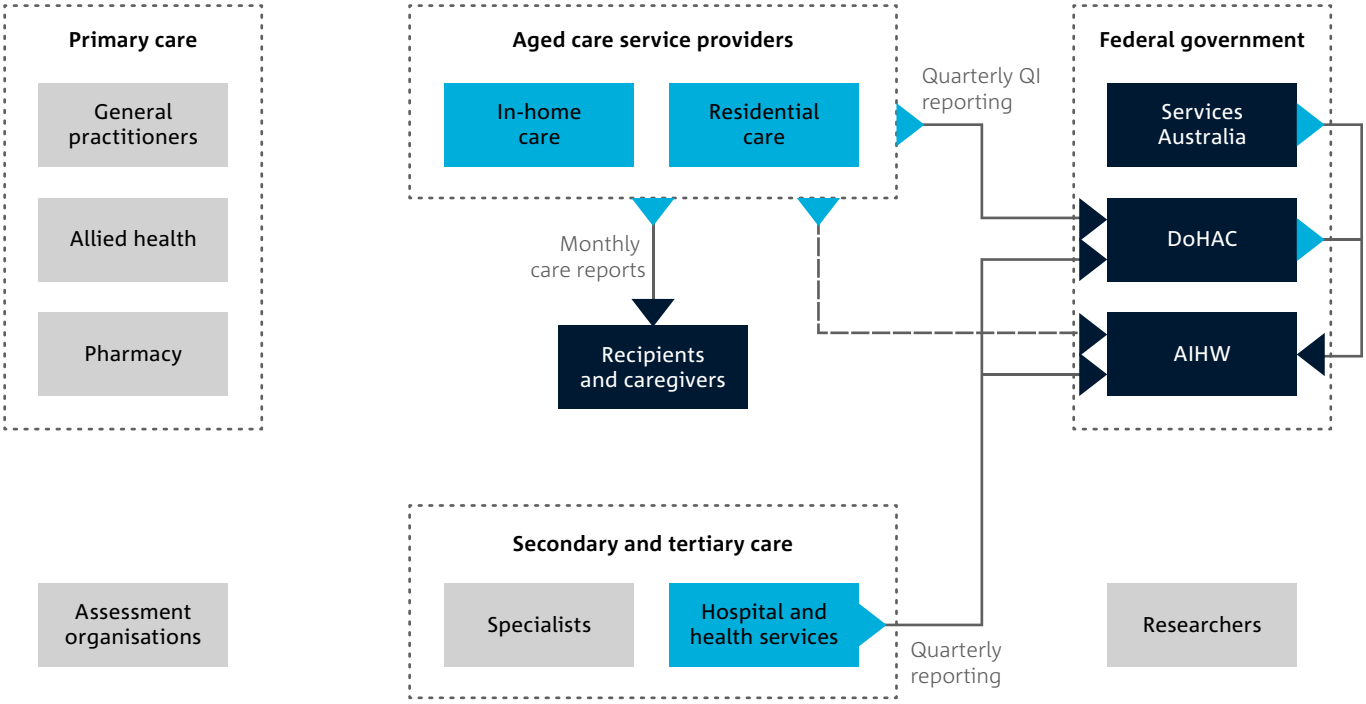

Figure 17. Regular reporting underpins quality assessments

DoHAC collates the data for their own reporting requirements and provides data to AIHW for national reporting. The AIHW manages the **National Aged Care Data Clearinghouse** (NACDC) on behalf of DoHAC. The NACDC is a central repository of national aged care data. The data mostly relate to government-funded aged care programs operating under the *Aged Care Act 1997*, including Services Australia and others. AIHW receives data yearly from DoHAC, and analysed data are published on the GEN Aged Care website.[24]

The **Independent Health and Aged Care Pricing Authority** (IHACPA) – not shown for ease of reading – also collects from aged care providers as part of pricing studies (usually performed annually) to update the aged care fees. These studies use spreadsheets and definitions that do not align to a standard data definition, making these studies an additional exercise in data preparation for service providers.

The **research community** seek data from across the aged care and healthcare sector (Figure 18). AIHW play an important part in supporting this work through the Data Integration Services Centre (DISC).[25] Organisations such as Registry of Senior Australians (ROSA) rely on AIHW data linkage services to collate data across multiple state and federal data sources.[26]

Historically, data linkage was complicated by the lack of a unique identifier consistent across all systems. The extended use of healthcare identifiers in aged care, as noted in the *National Healthcare Identifiers Roadmap 2023–2028* will eventually improve this situation.[27(pp. 2023–2028)]

The research community and commercial organisations provide service providers with valuable tools with which to provide better care. Most service providers also leverage software products from multiple software development organisations, including for clinical care, administration, and medication management. Specialist software developers provide specific functionality to support care delivery. An example is PainCheck, which started as a research project and is used by many of the research participants.[28]

This multiplicity of software solutions lets service providers combine best-of-breed options to meet their specific needs. However, it also demands better data integration capabilities and strong cybersecurity approaches.

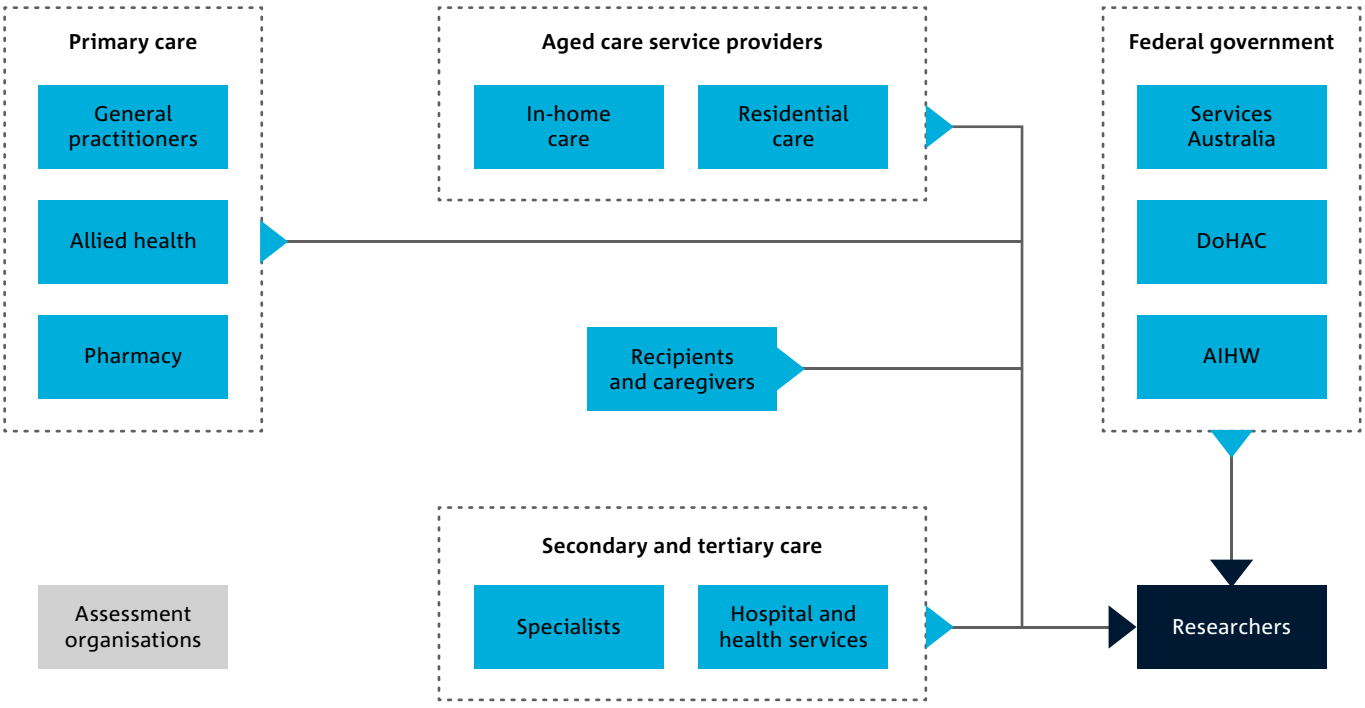

Figure 18. Researchers bring together data from across the sector

2.1.6 Summary

The data flows described in this section are the main ones being considered in this report. It is recognised that this is a limited set of data flows, and the existence of numerous other data flows is a reality. Despite this limitation, there is a need for standardisation of data elements across the sector, addressing meaning, data types and how they are collected. Next the report will look to understand how each sector stakeholder is impacted by data flows.

2.2 How data flows affect each sector stakeholder

The data flows explored in section 2.1 describe the broad sequence in which data flows across the sector; this is a transactional view of the data passing from stakeholder to stakeholder. Another perspective is to understand how individual sector stakeholders interact with the data flowing around the ecosystem. Taking a stakeholder view allows us to see the entirety of the data that a sector stakeholder is dealing with.

Figure 19 shows some of the key interactions that need to be understood in this data lifecycle for each sector participant.

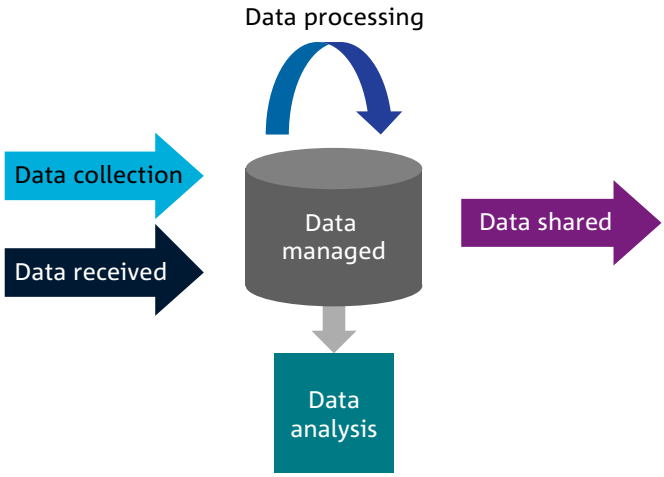

Figure 19: The data lifecycle for each sector participant

These lifecycle interactions have been analysed from the research data collection and grouped into the following themes:

- **Data collection** by the sector stakeholder. This process is more deterministic, with the sector stakeholder able to decide which data elements are being collected and how (although this can be influenced by the collection system used, especially within software).
- **Data received** from other sector stakeholders who have shared data they have collected. Receiving stakeholders may have control over the format, especially where the recipient has legislative or regulatory controls in place. For some however, the format and quality of the data is determined by the sector stakeholder who is sharing the data.
- **Data processing** may occur to collate, aggregate or extend the data to meet the needs of the organisation collecting or receiving the data. The extent to which this processing work is manual or automated can affect the speed at which data is understood, used and shared.
- **Data analysis** and reporting is important to organisations wanting to manage performance or quality of their services. The quality of data collected and received, and how much this can be automated will determine the value presented by the analysis.
- **Data sharing** may be voluntary (such as in research collaborations) or mandated (such as regulatory or legislative reporting requirements). An important factor here is whether the data to be shared can be extracted from existing data assets, or whether the data must be extrapolated or manually prepared only to report or share.

These five factors can be used to assess the complexity of the data landscape for a stakeholder. For each stakeholder, information has been collated in a structured format as shown in Table 2, called a stakeholder data lifecycle summary.

Table 2. Description of the data lifecycle summary

CATEGORY	Description of what is included across the related party, the method used and data available
Data received	A list of data categories, the formats and the sources of this data. This data is shared by another stakeholder in the aged and community care data landscape. Data that is received in unstructured formats provides a challenge to the recipient.
Data collected	A list of data categories, the formats and the sources of this data. This data is collected by the stakeholder from primary sources, devices, assessments, observations and care records. Data that is collected in unstructured formats provides a challenge for later recipients and for analysis by the collecting stakeholder.
Data managed	A list of data categories, the formats and how it is managed. This data may be generated within the stakeholder while processing and analysing data that is received or collected.
Processed/ analysed	Describes the processing required and the types of analyse performed on collected and received data and used to prepare data for sharing with others.
Data shared	A list of data categories, the formats and the recipients of this data. This data is shared to another stakeholder in the aged and community care data landscape. Data that is shared in unstructured formats provides a challenge to the recipient.

This data lifecycle template is used in the following sections to provide information about sector stakeholders that are collecting, receiving or sharing data as part of the data landscape. For each stakeholder, in addition to the list of data categories involved, commentary has been provided describing some of the key challenges and opportunities that have been identified during interviews with research participants.

2.2.1 Care recipients and their caregivers

While this project did not engage with care recipients directly, their role, and that of their caregivers, is an important part of the data landscape. Feedback from other research participants in the sector and the lived experiences of members of the project team provided insights into the way care recipients and their caregivers engage with the aged care system.

The Commission also made extensive commentary about the role of care recipients which was considered where appropriate to data.[2] Specifically, it is clear that care recipients still need to provide details of their care needs repeatedly, largely due to limited data exchange between those providing services to them. This remains a critical issue, as highlighted in the extensive duplication across assessment tools found by the CSIRO's work on the GEM-OMATIC project.[11]

Table 3 provides a snapshot of the data lifecycle summary for care recipients and their caregivers.

Table 3. Data lifecycle summary for care recipients and their caregivers

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• My Aged Care • Emails • Post	• Assessments • Care plans • Referrals to service providers • Funding arrangements
	DoHAC	• My Health Record	• Medication prescriptions/dispense information • Diagnostic results • Discharge summaries • Aged care transfer summaries
Data collected	NA		
Data managed		• Paper records	• Assessments • Care plans • Referrals to service providers • Funding arrangements • Medication prescriptions/dispense information • Diagnostic results
Processed/analysed	NA		
Data shared	Services Australia	• Paper forms • MyGov portal	• Financial data • Personal circumstances
	DoHAC	• My Aged Care portal	• Care recipient details • Care recipient request • Consent to share data
	Service providers	• Various	• Consent to share data for service improvement
	Researchers	• Various	• Consent to share data for research • Other data as required by research

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **care recipient and care givers**:

Challenges

- **Digital literacy issues:** While requesting an assessment through the My Aged Care website was relatively straightforward, later access to information in My Aged Care required access to MyGov by caregivers and/or care recipients. Some caregivers/care recipients might find this challenges their digital maturity.
- **Data access issue:** Information about care recipients may be spread across multiple systems, including My Aged Care, My Health Record, service provider systems (which sometimes provide consumer portals) and the systems used by various healthcare providers (most of which do not provide consumer portals). This places the burden of collating this data on the care recipient or their caregivers, with many managing paper records along with those digital systems.
- **Data security issue:** Sensitive data about care recipients is routinely emailed or mailed by assessors and care providers to care recipients and/or their caregivers. This is necessary given most care recipients/caregivers do not have a secure method of receiving this information.
- **Data currency issue:** While the My Aged Care system provides information about service providers and (in theory) their availability, care recipients and their caregivers still need to individually contact these providers to seek information about service availability as this information is not regularly updated by service providers.

Opportunities

- While steps are under way by DoHAC to make My Aged Care data visible in the My Health Record, the ability to achieve the reverse is limited by classification of the data under the Australian Privacy Principles. The My Aged Care system is regarded as holding administrative data ('personal information') rather than health data ('sensitive information').[29] Addressing the data classification of the My Aged Care system may resolve this issue and is being investigated by DoHAC.
- Provision of additional and more timely information from the service providers may improve the care finding features of the My Aged Care system, as it would help care recipients and their caregivers to locate service providers with capacity in their location. However, this would place increasing demands on service providers to provide this information.

2.2.2 General practice

The role of GPs is significant in aged care. For care recipients living in the community, the GP is generally their primary healthcare provider and healthcare coordinator, although the role of the home care provider is increasingly important in the coordination role for non-healthcare requirements.

For care recipients in residential care, a visiting GP is important. This role might be filled by their family GP (if that practitioner visits the particular care facility), another regular GP who works with one or more care facilities, or locum GPs who provide services in many situations.

Generally, the GP manages the medication regime for the care recipient, in coordination with other healthcare providers such as hospital clinicians and other specialists. Table 4 provides a snapshot of the data lifecycle summary for GPs.

Table 4. Data lifecycle summary for general practice

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• My Health Record Gateway • GP CIS	• Original assessment (PDF) • Care Plan (PDF) • Aged Care Transfer Summary (PDF)
	DoHAC	• My Aged Care • GP CIS	• Original assessment (PDF) • Care Plan (PDF)
	Hospitals & health services	• Secure messaging to GP CIS	• Discharge summaries (PDF)
	Service providers	• Service provider clinical systems	• Assessment on admission • Updated assessments for defined events • Progress notes by service provider staff and others
	Service providers	• Phone call • Email • Fax	• Request from RN or similar for care recipient consultation (eg telehealth call or visit) • Reason for request
	Diagnostic services	• Secure messaging to GP CIS	• Diagnostic test results
Data collected	Care recipients / caregivers	• GP CIS • Service provider clinical systems	• Regular assessment during care provision
Data managed	NA	• GP CIS	• Care recipient details • Diagnosis • Progress notes • Medications • Social history • Referrals • Diagnostic results • Care planning • Chronic disease management
Processed/analysed	NA	• GP CIS	Clinical records duplicated in GP CIS • Diagnosis • Progress notes • Medications
	NA	• GP CIS	Analysis • Diagnostic test results • Screening for public health issues
	NA	• GP CIS • eMC • eNRMC	Analysis • Current medications
Data shared	DoHAC	• My Aged Care portal • eRequests	• Care recipient details • Care recipient request
	Prescribers/ dispensers	• NPDS • eMC • eNRMC	• Prescribing data
	Care recipients	• My Health Record • NPDS	• Prescribing data
	Specialists and allied health	• Secure messaging • Email • Fax • Paper/post	• Referrals
	Hospitals & health services	• Secure messaging • Email • Fax • Paper/post	• Referrals
	PHNs	• Secure data extraction	• Aged care (and related) statistics for PHN reporting
	State and federal agencies	• Online forms • Paper forms/fax	• Infectious disease reporting • Other public health issues
	Researchers	• Various	• Consent to share data for research • Other data as required by research

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **GPs**:

Challenges

- **Limited data available:** GPs noted that they were often receiving limited historical information about referred patients, which resulted in time spent tracking down additional information to make an informed assessment.
- **Data format issues:** Historical information is commonly stored in narrative form by RACFs, poorly indexed, and with limited search capabilities in the local systems, adding an additional time and resource burden.
- **Inefficient manual data entry:** Historical data needs to be manually entered into the GP's clinical information system due to a lack of interoperability with other stakeholder systems and the prevalence of data being held in narrative or PDF format rather than as atomic data increases time and resource burdens.
- **Duplicate data entry:** Healthcare providers, such as GPs, visiting RACFs need to prescribe medications via the electronic medication chart (eMC)/electronic national residential medication chart (eNRMC) being used by the facility. However, for their clinical records, those healthcare providers also need to record the medications prescribed in their own CISs leading to duplicate data entry and potential for errors.[30,31(p. 18)]
- **Duplicate data entry:** Progress notes made in a RACF's clinical system needs to be transcribed into the GP's own CIS to maintain their own records.
- **Data quality issues:** As the recording of progress notes must be duplicated, some research participants raised questions about the quality of notes as there is the temptation to abbreviate these notes to facilitate entry.
- **Data completeness issues:** There is incomplete, or lack of transfer of, information between care systems. The transfer for prescribing and progress data to the GP CIS may be facilitated by written notes or personal recall, neither of which was considered ideal or clinically safe.[30]

Opportunities

- The Agency has begun initial investigations into a standardised approach to exchange clinical notes from one system to another. This is designed as point-to-point between systems rather than point-to-share via the My Health Record and might address the duplicate data entry problem for GPs. Design and implementation have yet to be formalised on the Agency's work plan.
- The Agency is reviewing the electronic prescribing solution architecture. One suggested approach (yet to be agreed) may involve clinical systems supporting a reconciliation function between the National Prescription Delivery Service and a provider's CIS to allow prescriptions entered via an eMC to be reconciled back into the GP CIS. However, it should be noted this may not address all prescribing situations such as paper prescriptions and private prescriptions.
- Some CIS software developers reported looking at how to provide GPs with access to the GP CIS via mobile or remote access. This still does not address the current need for duplicate entry.

2.2.3 Pharmacy

Pharmacy plays an important role in aged care, with many care recipients relying on medications to support their health and manage their end-of-life care. Due to the significant cost and need to address clinical safety concerns, there has been significant investment in digital technologies for medication management over the last decade. These include:

- Electronic transfer of prescriptions (ETP), through which prescribing systems transferred the data about prescriptions via prescription exchange services, supported by bar codes on the paper prescriptions.
- ETP has been largely replaced by electronic prescribing, which is supported by the National Prescription Delivery Service (NPDS).
- Electronic prescribing is further supported by the Active Script Registry (also known as MySL), which allows a care recipient's electronic prescriptions to be automatically stored in their Active Script List.
- The piloting of the eNRMC medication management systems for RACFs, which forms part of the broader electronic prescribing ecosystem.

Despite these actions, research interview information demonstrated that eMCs are not yet universal. Table 5 provides a snapshot of the data lifecycle summary for pharmacy.

Table 5. Data lifecycle summary for pharmacy

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	Prescribers	• NPDS • eMC • eNRMC • Paper • Fax	• Prescriptions • Current medication chart
Data collected	NA		
Data managed		• Conformant dispensing system	• Dispensing data
Processed/analysed	NA	• NPDS • eMC • eNRMC • Paper • Fax	• Prescriptions • Current medication chart • Current medications
Data shared	Prescribers/ dispensers	• NPDS • eMC • eNRMC	• Dispensing data
	Care recipients	• My Health Record • NPDS	• Dispensing data
	Researchers	• Various	• Consent to share data for research • Other data as required by research

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **pharmacy**:

Challenges

- Not all medications can be prescribed electronically or via eNMRCs, meaning paper prescriptions are still required.[31]
- Where care recipients are not in residential care, they or their caregivers may be managing their medications. Varying levels of digital maturity and access to digital devices complicate this process, with the need for paper prescriptions for some in this sector.
- Prescribers and dispensers must see the entire medication chart where one exists. While many medication management systems provide read only access via a hyperlink, there is no standardised way this is achieved.

Opportunities

- Continued improvements in electronic prescribing would allow a broader range of medications to be supplied using eMCs. This would remove the need for paper prescriptions which limit the ability to share data digitally.
- Establishing standards for viewing eMCs would allow prescribers and dispensers to have a consistent approach to this important process and reduce the need for paper copies of charts to be used (currently regulation states such copies must be less than 72 hours old to be valid).

2.2.4 Allied health

Allied health covers a wide range of professionals providing in-home, in-clinic and residential services for the aged care sector. While it is impossible to list all types of services provided, this project engaged with professionals across:

- musculoskeletal areas, including physiotherapy, chiropractors, exercise physiology and occupational therapy
- optometry and orthoptics
- dentistry
- dietetics
- podiatry
- music therapy.

While dentistry is considered an allied health profession, it has several notable features that distinguish it from other allied health specialties. As a service funded outside Medicare, the relationship between dentist, service provider, and care recipient/caregivers is unique to other allied health professionals. This includes the ability to see records or communicate with care givers.

Despite the number of allied health professionals in Australia, as a group, the level of digital capability is limited. This represents a challenge in delivering an integrated digital ecosystem for aged care, given the sector's significant use of allied health.

Allied health professionals work in one of several ways in aged care:

- direct or contracted employees of care providers (residential care, in-home care, or state/territory aged care services)
- contracted service providers as part of a funding package
- private professionals servicing the aged care market.

Table 6 provides a snapshot of the data lifecycle summary for allied health.

Table 6. Data lifecycle summary for allied health

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• My Health Record Gateway • Allied health CIS – See Note 1 & 2	• Original assessment (PDF) • Aged Care Transfer Summary (PDF) • Discharge summaries (PDF)
	DoHAC	• My Aged Care • Allied health CIS – See Note 2	• Original assessment (PDF)
	Service providers	• Service provider clinical systems	• Assessment on admission • Updated assessments for defined events • Progress notes by service provider staff and others
	Hospital & health services	• Secure messaging • Email • Fax • Paper/post	• Discharge plans (especially where the care recipient has been discharged from a rehabilitation service)
Data collected	Care recipients / caregivers		• Initial assessment on admission • Updated assessments for defined events • Regular assessment during care provision
Data managed		• Allied health CIS – See Note 2	• Care recipient details • Assessment data • Diagnosis • Progress notes • Medications • Social history • Referrals • Diagnostic results
Processed/analysed		• Allied health CIS – See Note 2	• Clinical records duplicated • Diagnosis • Progress notes • Medications
		• Service provider clinical systems	• Diagnostic test results
		• eMC • eNRMC	• Current medications
Data shared	DoHAC	• My Aged Care portal	• Care recipient request • Care recipient details
	Specialists	• Secure messaging • Email • Fax • Paper/post	• Referrals
	Researchers	• Various	• Consent to share data for research • Other data as required by research
Notes	1. Not all allied health professionals have access to My Health Record 2. Not all allied health professionals have their own clinical information system. Where allied health operates in an aged care facility, normal practice is to record in the Serv ice Providers clinical system		

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **allied health**:

Challenges

- **Limited access to patient information**:
  - Research participants noted the difficulty in accessing comprehensive patient/care recipient information, including medical histories and current medications.
  - There was reported reliance by clinicians on accurate information from patients or their caregivers, which can be challenging with older patients who may be experiencing cognitive and memory issues.
- **Data integration issues**:
  - Research participants reported a lack of integration between different CISs, leading to manual data entry and duplication of efforts.
  - There was also inconsistent use of digital systems across different service providers and practices. This increased the effort required to locate information.
- **Communication barriers**:
  - Most allied health professionals reported challenges in communicating with other healthcare providers, including GPs and specialists, due to reliance on outdated methods like fax and post. Many professionals reported typing referrals in separate systems where such existed.
  - Professionals widely reported the difficulty in coordinating care with other allied health professionals due to siloed systems and lack of shared access to patient records.
- **Technological limitations**:
  - Many professionals still use paper records or basic digital systems that do not support advanced data sharing or integration.
  - Limited use of My Health Record and other digital health initiatives existed due to lack of training, awareness, and system compatibility. While Australian Health Practitioner Regulation Agency Australia (AHPRA) regulated professionals can now register for access to My Health Record, allied health research participants demonstrated that this was not necessarily known/promoted/accessed. Professional associations with members not regulated through AHPRA are working to get access to systems like My Health Record.
- **Regulatory and funding constraints**:
  - Research participants reported that underfunding of allied health services, particularly in aged care, is leading to resource constraints and limited access to necessary technology. This was especially of concern to allied health professionals working independently or under contract to service providers.
  - Regulatory requirements for data management and reporting can be burdensome and time-consuming, especially for sole professionals who may have limited technology support.
- **Data access constraints:** Research participants reported that limited, if any, access to service provider systems means that many allied health, with particular reference to dentists, are largely reliant on caregivers and care recipients for medical histories.
- **Data privacy issue:** Some research participants noted that reports were given to the care recipient or their caregivers, rather than service providers, as the financial relationship was with the care recipient not the service provider. While care recipients/caregivers could share the report with a service provider, this was not always done to avoid perceived criticism of the service provider and possible negative outcomes for the care recipient.
- **Data exchange limitations:** As the report was in a physical or PDF format, it had limited ability to be shared in a digital context.
- **Data exchange limitations:** Dentists, in particularly, were noted as having limited if any contact with other allied health professionals (for example dieticians) despite the potential value to wholistic care of the care recipient, of such exchanges.

Opportunities

- Access to relevant data **by all allied health professionals is an area of primary concern.** This includes:
  - My Health Record to access relevant health information and history
  - My Aged Care to understand previous assessments and other providers giving care to a care recipient
  - Service provider systems to understand the current state of a care recipient's health and welfare.
- Giving all allied health professionals the ability to exchange information with other health professionals associated with a care recipient.
- Standardising terminology across professional boundaries.

2.2.5 Assessment organisations

Assessment teams are not a specific profession and may include:

- GPs
- specialist, especially geriatric specialists
- nurses
- allied health professionals.

Assessment is carried out by assessment organisations to find out if care recipients are eligible for subsidised aged care. This involves a process to understand their needs and what services may help. It usually begins with a request for consent and an eligibility check (online or over the phone) followed by an in-person assessment. Table 7 provides a snapshot of the data lifecycle summary for assessment organisations.

Table 7. Data lifecycle summary for assessment organisations

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• MAC Assessor Portal	• Care recipient details • Assessment request (PDF)
Data collected	Care recipients / caregivers	• Assessment forms	• NSAF (deprecated) • IAT (new)
Data managed			• Care recipient details • Assessment request • Assessment data
Processed/analysed			• Care needs • Current program guidelines
Data shared	DoHAC	• MAC Assessor Portal	• Assessment data • Care plan

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **assessment organisations**:

Challenges

- **Change fatigue:** The assessment process has undergone substantial changes in recent years, and this change continues largely in response to the recommendations of The Commission. These changes include:
  - the IAT has replaced the National Screening and Assessment Form (NSAF)
  - the Regional Assessment Services (RAS), Aged Care Assessment Teams (ACATs) and independent Australian National Aged Care Classification (AN-ACC) assessment organisations were replaced on 9 December 2024 by a new Single Assessment System workforce which conducts:
    - all aged care needs assessments for in-home aged care, flexible aged care programs, residential respite and entry into residential aged care
    - residential aged care funding assessments
  - the Support at Home program will replace the HCP Program and Short-Term Restorative Care Programme (STRC) from 1 July 2025. The CHSP will transition to the new program no earlier than 1 July 2027.
- **Duplicate/manual data entry:** The IAT form can be completed offline in PDF (pseudo-digital) or written form. This means the data must be re-entered into the My Aged Care Assessor system.
- **Data access issues:** Research participants noted information was required from a wide range of data sources, but these were not always easily accessible and often not in a digital format other than PDF.
- **Timeliness of data:** Research participants reported that assessments and care plans were frequently no longer representative of a care recipient's situation due to the delay between assessment and allocation of a care package.

Opportunities

- Continued investment will be required for the IAT to ensure the workforce can use it effectively.
- Further digital investments could reduce data re-entry, such as provision of devices for use during assessments.
- Improvements that allowed access to the My Aged Care data in a digital format would allow this data to be used to pre-populate later assessment processes and provide a longitudinal view of a care recipient's progress.

2.2.6 In-home aged care service providers

Service providers operating in the home care sector provide many services, including help with domestic duties, transport, temporary care such as respite and transitional care, to nursing, personal care and end of life services.[32] They may also provide social and emotional support to improve a person's quality of life. They can also coordinate healthcare services, especially those in allied health, under a care plan and the designated funding arrangements. Some service providers also provide residential care services. Table 8 provides a snapshot of the data lifecycle summary for in-home aged care service providers.

Table 8. Data lifecycle summary for in-home aged care service providers

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• My Aged Care provider portal	• Care recipient details (onscreen) • Original assessment (PDF) • Care plan (PDF)
	DoHAC	• My Health Record Gateway • SP CIS 1	• Original assessment (PDF) • Aged Care Transfer Summary (PDF)
	Services Australia	• SA portal	• Funding arrangements
	Healthcare professionals	• Secure messaging • Email • Fax • Paper/post	• Initial assessment on admission • Updated assessments for defined events • Regular assessment during care provision
	Care recipients	• Various	• Consent to share data for service improvement
	Care recipients	• Monitoring devices	• Environmental monitoring • Activity monitoring • Vital signs
Data collected	Healthcare professionals 3		• Initial assessment on admission • Updated assessments for defined events • Regular assessment during care provision
Data managed			• Care recipient details • Funded package arrangements • Care planning • Ongoing care delivery • Medication prescriptions, dispensing, and administration • Staff rostering data • Care recipient consent
Processed/analysed			• Collating data for quarterly QI reporting • Collating data for monthly care recipient reporting • Care needs • Current program guidelines
Data shared	Prescribers/ dispensers	• NPDS • eMC • eNRMC • Paper • Fax	• Prescriptions • Current medication chart
	Specialists & allied health	• Secure messaging • Email • Fax • Paper/post	• Referrals
	DoHAC	• MAC provider portal	• Provider registration (manual entry) • Quality indicators (CSV upload)
	DoHAC	• B2G API 2	• Quality indicators
	Services Australia	• SA portal • API	• Invoices for services under funding arrangements
	Researchers	• Various	• Consent to share data for research • Other data as required by research
Notes	1. Not all service providers have access to My Health Record yet 2. Not all service providers have yet implemented the B2G APIs 3. Where healthcare professionals use the service provider's clinical systems		

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **in-home aged care service providers**:

Challenges

- **Limited access to patient information:**
  - Initial assessments were often out of date by the time care was being arranged, requiring them to be repeated as part of the onboarding process.
  - Research participants noted they had difficulty in accessing comprehensive historical patient information, including medical histories and medications.
  - There was reported reliance on patients or their caregivers to provide accurate information, which can be challenging for older patients, particularly with cognitive or memory issues.
  - Historical data needed to be manually entered into the service provider's CIS due to a lack of interoperability with other stakeholder systems and the prevalence of data being held in narrative or PDF format rather than as atomic data.
- **Data integration issues:**
  - Research participants reported a lack of integration between different CISs, leading to manual data entry and duplication of efforts.
  - There was also inconsistent use of digital systems across different facilities and practices. This increased the effort required to locate information.
- **Communication barriers:**
  - Most service providers reported challenges in communicating with other healthcare providers, including GPs and specialists, due to reliance on outdated methods like fax and post.
- **Technical barriers:**
  - Not all service providers had systems that supported digital capture at the point of care, leading to paper records and data entry completed after the fact.
  - My Aged Care only provided portal access, meaning data had to be manually located and entered in service provider systems.
  - Access to My Health Record was not universal, limiting access to clinical data about care recipients.
  - Not all service providers had the technical capacity or capability to develop the extensive business intelligence systems needed to meet reporting obligations.
- **Reporting barriers:**
  - **Increasing levels of reporting obligations were challenging service providers, especially those without the technical capacity or capability to develop the extensive business intelligence systems required.**
  - Uptake of the new B2G APIs was low given their recent introduction, but intention to adopt was also low due to technical complexity of collating the data required, the diversity of systems involved, and the level of investment required.

Opportunities

- Many service providers leveraged mobile technologies to support their workforce (such as point-of-care devices), and continued developments in this area would support better access to information.
- Some service providers leveraged Internet of Things (IoT) technologies to acquire environmental factors, activity or vital signs. Continued investment in these technologies will provide opportunities for better care (as well as increased demand for standards and interoperability to leverage the data generated).
- Providing all service providers access to relevant data is a primary area of concern. This would include:
- My Health Record to access relevant health information and history
- My Aged Care to understand previous assessments and other providers giving care to a care recipient.
- Providing all service providers with the ability to exchange information with other health professionals associated with a care recipient.
- Standardising terminology across professional boundaries.

2.2.7 Residential aged care service providers

Significant information management demands are placed on residential care service providers. As care recipients reside within the facility, recording and managing their health and care information on facility clinical information systems is critical.

Despite this, the historical digital capabilities such as software available to service providers have not always been as mature as those provided to the broader health care sector. Some providers have started custom development of bespoke systems and others have invested in systems to support reporting and analysis needs. This is important as for many providers, data needs to be collated across multiple computer and manual systems. Table 9 provides a snapshot of the data lifecycle summary for residential aged care service providers.

Table 9. Data lifecycle summary for residential aged care service providers

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• My Aged Care provider portal	• Care recipient details (onscreen) • Original assessment (PDF) • Care plan (PDF)
	DoHAC	• My Health Record Gateway • SP CIS 1	• Original assessment (PDF) • Aged Care Transfer Summary (PDF)
	Services Australia	• SA portal	• Funding arrangements
	Healthcare professionals	• Secure messaging • Email • Fax • Paper/post	• Initial assessment on admission • Updated assessments for defined events • Regular assessment during care provision
	Care recipients	• Various	• Consent to share data for service improvement
	Care recipients	• Monitoring devices	• Environmental monitoring • Activity monitoring • Vital signs
Data collected	Healthcare professionals		• Initial assessment on admission • Updated assessments for defined events • Regular assessment during care provision
Data managed			• Care recipient details • Funded package arrangements • Care planning • Ongoing care delivery • Medication prescriptions, dispensing, and administration • Staff rostering data • Care recipient consent
Processed/analysed			• Collating data for quarterly QI reporting • Collating data for monthly care recipient reporting • Care needs • Current program guidelines
Data shared	Prescribers/ dispensers	• NPDS • eMC • eNRMC • Paper • Fax	• Prescriptions • Current medication chart
	Specialists & allied health	• Secure messaging • Email • Fax • Paper/post	• Referrals
	DoHAC	• MAC provider portal	• Provider registration (manual entry) • Quality indicators (CSV upload)
	DoHAC	• B2G API 2	• Quality indicators
	Services Australia	• SA portal • API	• Invoices for services under funding arrangements
	Researchers	• Various	• Consent to share data for research • Other data as required by research
Notes	1. Not all service providers have access to My Health Record yet 2. Not all service providers have yet implemented the B2G APIs 3. Where healthcare professionals use the service provider's clinical systems		

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **residential aged care service providers**:

Challenges

- **Limited access to patient information:**
  - Initial assessments were often out of date by the time care was being arranged, requiring them to be repeated as part of the onboarding process.
  - Research participants noted they had difficulty in accessing comprehensive historical patient information, including medical histories and medications.
  - There was reported reliance on patients or their caregivers to provide accurate information, which can be challenging older patients, particularly with cognitive or memory issues.
  - Historical data needed to be manually entered into the service provider's CIS due to a lack of interoperability with other participant systems and the prevalence of data being held in narrative or PDF format rather than as atomic data.
- **Data integration issues:**
  - Research participants reported a lack of integration between different clinical information systems, leading to manual data entry and duplication of efforts.
  - There was also inconsistent use of digital systems across different facilities and practices. This increased the effort required to locate information.
- **Communication barriers:**
  - Most service providers reported challenges in communicating with other healthcare providers, including GPs and specialists, due to reliance on outdated methods like fax and post.
- **Technical barriers:**
  - Not all service providers had systems that supported digital capture at the point of care, leading to paper records and data entry done after the fact.
  - My Aged Care only provided portal access, meaning data had to be manually located and entered in service provider systems.
  - Access to My Health Record was not universal, limiting access to clinical data about care recipients.
  - Not all service providers had the technical capacity or capability to develop the extensive business intelligence systems needed to meet reporting obligations.
  - Uptake of the new Aged Care Transfer Summary was low, due in part to its recent introduction and limited information value.
- **Reporting barriers:**
  - Increasing levels of reporting obligations were challenging for service providers, especially those without technical capacity or capability to develop the extensive business intelligence systems required.
  - Uptake of the new B2G APIs was low given their recent introduction, but intention to adopt was also low due to technical complexity of collating the data required, the diversity of systems involved, and the level of investment required.

Opportunities

- Many service providers leveraged mobile technologies to support their workforce (such as point-of-care devices), and continued developments in this area would support better access to information.
- Some service providers leveraged IoT technologies to acquire environmental factors, activity or vital signs. Continued investment in these technologies will provide opportunities for better care (as well as increased demand for standards and interoperability to leverage the data generated).
- Providing all service providers access to relevant data is a primary area of concern. This would include:
- My Health Record to access relevant health information and history
- My Aged Care to understand previous assessments and other providers giving care to a care recipient.
- Providing all service providers with the ability to exchange information with other health professionals associated with a care recipient.
- Standardising terminology across professional boundaries.

2.2.8 Specialists

Care recipients often rely on the health system for medical care, including specialists in private practice and in public hospitals and health services. The role of the geriatrician is critically important for initial and ongoing assessments. Table 10 provides a snapshot of the data lifecycle summary for specialists.

Table 10. Data lifecycle summary for specialists

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	Other healthcare providers	• Secure messaging to CIS • Email • Fax • Paper/post	• Referrals
	DoHAC	• My Health Record Gateway • GP CIS	• Original assessment (PDF) • Care Plan (PDF) • Aged Care Transfer Summary (PDF)
	Hospitals & health services	• Secure messaging to GP CIS	• Discharge summaries (PDF)
	Service providers	• Service provider clinical systems	• Assessment on admission • Updated assessments for defined events • Progress notes by service provider staff and others
	Diagnostic services	• Secure messaging to CIS	• Diagnostic test results
Data collected	Care recipients / caregivers	• CIS • Service provider clinical systems	• Regular assessment during care provision
Data managed	NA	• GP CIS	• Care recipient details • Diagnosis • Progress notes • Medications • Social history • Referrals • Diagnostic results • Care planning • Chronic disease management
Processed/analysed	NA	• CIS	• Clinical records duplicated in GP CIS • Diagnosis • Progress notes • Medications
	NA	• CIS	• Analysis • Diagnostic test results
	NA	• GP CIS • eMC • eNRMC	• Analysis • Current medications
Data shared	DoHAC	• My Aged Care portal • eRequests	• Care recipient details • Care recipient request
	Prescribers/ dispensers	• NPDS • eMC • eNRMC	• Prescribing data
	Care recipients	• My Health Record • NPDS	• Prescribing data
	Specialists and allied health	• Secure messaging • Email • Fax • Paper/post	• Referrals • Specialist letter/report
	Hospitals & health services	• Secure messaging • Email • Fax • Paper/post	• Referrals • Specialist letter/report
	Researchers	• Various	• Consent to share data for research • Other data as required by research

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **specialists**:

Challenges

- Specialists (especially geriatricians) noted they were often given limited information about referred patients, which resulted in time spent tracking down this information to make an informed assessment.
- If this search was being undertaken at RACFs, the information required was commonly stored in narrative form, poorly indexed, and with limited search capabilities in the local systems.
- Access to allied health assessments and plans was difficult to access, as this was rarely sent to the specialist and was difficult to identify in RACF systems.
- Data needed to be manually entered into the specialist's CIS due to a lack of interoperability with other participant systems and the prevalence of data being held in narrative or PDF format rather than as atomic data.
- Hospital-based specialists would generally have greater access to a broader range of data (such as allied health assessments and plans) as there were generally entered into the electronic medical record (EMR) used by the hospital, which is an accessible document to the appropriate and authorised care professionals.
- If specialists required changes to a residential care recipient's medication, the prescribing function would generally be the eMC at the facility, meaning the specialists would need to transcribe this information into their own clinical information system to maintain their own records.

Opportunities

- A move to share-by-default for a broad range of data would increase the utility of the My Health Record when seeking information about a care recipient's history and current state.
- Improved access to allied health data would assist in understanding a care recipient's health situation.

2.2.9 Hospitals and health services

The role of hospitals and health services in aged care spans several areas, including:

- provision of healthcare services for care recipients, including emergency care, in-patient care and rehabilitation
- provision of residential care facilities
- provision of allied health services across both these types of care.

While no hospitals and health services were directly involved in the research, several allied health professionals involved spoke to the role of hospitals and health services. Table 11 provides a snapshot of the data lifecycle summary for specialists.

Table 11. Data lifecycle summary for hospitals & health services

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	Healthcare providers	• Secure messaging to CIS • Email • Fax • Paper/post	• Referrals
	DoHAC	• My Health Record Gateway • GP CIS	• Original assessment (PDF) • Care Plan (PDF) • Aged Care Transfer Summary (PDF)
Data collected	Care recipients / caregivers	• EMR	• Assessment during care provision
Data managed	NA	• EMR	• Care recipient details • Diagnosis • Progress notes • Medications • Social history • Referrals • Diagnostic results
Processed/analysed	NA	• EMR	• Clinical records duplicated in GP CIS • Diagnosis • Progress notes • Medications
	NA	• EMR • Related systems	• Analysis • Diagnostic test results
	NA	• GP CIS • eMC • eNRMC	• Analysis • Current medications
Data shared	DoHAC	• My Aged Care portal • eRequests	• Care recipient details • Care recipient request
	General practitioner	• Secure messaging to CIS • Fax • Paper/post	• Discharge Summary (PDF)
	DoHAC	• My Health Record gateway/EMR	• Discharge Summary (PDF)
	Researchers	• Various	• Consent to share data for research • Other data as required by research

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **hospitals and health services**:

Challenges

- **Adoption issue:**
  - Uptake of the new Aged Care Transfer Summary was low, due in part to its recent introduction and limited information value.
  - Not all states and territories had universal EMR systems, limiting the exchange of data with other aged care service providers.
- **Data access issues:** Where discharge summaries were issued digitally, these were often issued to the GP not the aged care service provider, resulting in limited information being available to those service providers.
- **Digital capabilities:** While allied health professionals working within public hospital systems had access to supporting digital systems, these were largely targeted at tertiary care rather than aged care needs.

Opportunities

- Continued investment in EMRs and data interoperability would facilitate improved exchange of data between hospital and health services and aged care service providers.
- Providing discharge summaries to service providers (in addition to a patient's GP) would assist in ongoing care management.

2.2.10 DoHAC

DoHAC provides information and advice to the Australian community on health, ageing and aged care topics and issues. DoHAC works with stakeholders including members of the public, other government agencies, peak bodies and service providers. It is the funding, policy and regulatory agency responsible for aged care and has the primary responsibility to implementing the recommendations of The Commission. Table 12 provides a snapshot of the data lifecycle summary for specialists.

Table 12. Data lifecycle summary for DoHAC

Category	Other party	Method	Data
Data received	Assessment organisations	• MAC Assessor Portal	• Assessment data • Care plan
	Service providers	• MAC provider portal	• Provider registration (manual entry) • Provider services (manual entry) • Quality indicators (CSV upload)
	Service providers	• B2G API 1	• Quality indicators
	Services Australia	• Secure file transfer	• Payments made to providers for care recipients
Data collected	Various	• My Aged Care Gateway	• Care recipient details • Care requests
Data managed		• My Aged Care Gateway	• Care recipient details • Assessment request • Assessment data • Care plans • Funding arrangements
		• GPMS	• Provider registrations • Provider services
Processed/analysed		• Public reporting	• Quality indicators
Data shared	Assessment organisations	• MAC Assessor Portal	• Care recipient requests
	Care recipients	• My Aged Care • Emails • Paper/post	• Assessments • Care plans • Referrals to service providers • Funding arrangements
	Services Australia	• GPMS • Secure file transfer	• Provider registration data • Care recipient details • Assessed level of care required • Accommodation arrangements • Related persons
	AIHW	• Secure file transfer	• Quality indicators
Notes	1. Not all service providers have yet implemented the B2G APIs		

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **DoHAC**:

Challenges

- **Adoption and change management:**
  - Implementing the recommendations of The Commission has been a significant cause of change for DoHAC and the aged care sector, including significant legislative and program changes.
  - The availability of systems that meet the recommendations of The Commission has been limited, with new capabilities having to be developed.
  - DoHAC is undertaking a significant investment in systems such as the GPMS and My Aged Care to support reform in the aged care sector, but this takes time to implement.
  - There has been limited adoption of the B2G APIs due to development timelines, the complexity of collating required data across multiple systems, and other priority changes for service providers.
- **Data classification:** The data classification of the My Aged Care system is different to the My Health Record system, largely due to its legacy administrative funding nature, and this limits the ability of it to exchange data with healthcare systems.
- **Data definitions:** Some research participants reported that the definitions for quality indicators were still evolving, which impacted on systems and their ability to use data for longitudinal analysis.

Opportunities

- Providing API access to the My Aged Care system would allow assessment teams, healthcare providers and service providers to better use the information it has.
- Stabilising the definitions of quality indicators may increase the adoption of the B2G APIs by service providers.

2.2.11 Services Australia

Services Australia delivers payments and services on behalf of over eight policy departments and agencies, including DoHAC. In this role, Services Australia supports DoHAC by:

- **Means and income assessments:** conducting means and income assessments to calculate subsidies for care recipients.
- **Program agreement data:** managing program agreement data, which includes care recipient details, accommodation details, and related people.
- **Care events:** receiving information on care events, such as when a care recipient enters care, and the level of care required.
- **Hardship assessments:** performing hardship assessments to determine the level of funding based on personal circumstances.
- **Data exchange:** exchanging data with DoHAC through systems like the GPMS and the Aged Care Gateway (ACG).
- **Provider portal:** managing a Provider Portal where service providers submit invoices for services rendered to care recipients.
- **Veteran Affairs assessments:** handling assessments for the Department of Veteran Affairs to determine fees based on care recipient needs. Table 13 provides a snapshot of the data lifecycle summary for Services Australia.

Table 13. Data lifecycle summary for Services Australia

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• GPMS • Secure file transfer	• Provider registration data • Care recipient details • Assessed level of care required • Accommodation arrangements • Related persons
Data collected	Care recipients	• MyGov portal • Paper forms/post	• Financial data • Personal circumstances
	Service providers	• Services Australia portal • APIs	• Invoices • Payments
Data managed			• Data governance and privacy
Processed/analysed		• Internal SA systems	• Means testing of funding arrangements • Hardship assessments
Data shared	DoHAC	• Secure file transfer	• Payments made to providers for care recipients

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **Services Australia**:

Challenges

- **Data integration**: Managing data from a wide range of service providers (and their systems) and ensuring seamless integration between different systems provided technical issues. This included dealing with different systems that may have varying data formats and requirements.
- **Legislative and privacy constraints**: Adhering to legislative requirements and ensuring data is used under the law, constrains what Services Australia can use the data for. Handling sensitive and personal data with care to ensure privacy and security requires dedicated data governance functions.
- **Complex data landscape**: Navigating the complex data landscape of the aged and community care sector, which involves multiple stakeholders and data points.
- **Data accuracy**: Ensuring the accuracy and reliability of the data received from various sources requires considerable processing.
- **Communication**: Maintaining clear and effective communication with other agencies and stakeholders involved in the data exchange process.

Opportunities

- Standardisation of metadata and data formats would simplify the process for exchanging data with the organisations and systems that Services Australia needs to deal with.
- As Services Australia are constrained by their legislative responsibilities, changes to requirements might need to be supported by legislative changes.

2.2.12 AIHW

AIHW is an independent statutory Australian Government agency producing authoritative and accessible information and statistics to inform and support better policy and service delivery decisions, leading to better health and wellbeing for all Australians.

AIHW plays a significant role in data analysis and reporting, particularly in aged care and healthcare data:

- **Data improvements:** They try to improve the quality and standardisation of data, despite the limitations of service-level data rather than individual-based data. The Commission made recommendations related to improving the quality, coverage and availability of aged care data. AIHW have worked with DoHAC to deliver the *National Aged Care Data and Digital Strategy*, the Aged Care National Minimum Data Set (NMDS) and the National Aged Care Data Asset (NACDA).[6]
- **Data linkage and analysis:** AIHW is involved in data linkage efforts, which try to build common data tables from multiple sources. For example, they transform 100 tables into 20 basic tables. They work with various environments and people to achieve this, previously focusing on Pathways in Aged Care and now integrating healthcare data into the National Health Care Data Hub.[25]

- **NACDA:** AIHW is developing the NACDA, which aims to bring together de-identified person-level data collected across aged care, health and community service settings for aged care research purposes. The NACDA is an enduring asset, meaning data will be updated regularly and new datasets added over time. It contains data from the Medicare Benefits Schedule (MBS), the Pharmaceutical Benefits Scheme (PBS), the Repatriation Pharmaceutical Benefits Scheme (RPBS), the National Death Index (NDI), the Australian Immunisation Register (AIR), hospital care services, emergency department services and outpatient services.[33]
- **NMDS:** The Aged Care NMDS data standards are published via METEOR, AIHW's metadata repository. The data standards are being implemented progressively, with work first focused on aligning internal processes within DoHAC with the data standards.[6]
- **Reporting and metrics:**
  - AIHW produces quarterly reports and shares curated research data sets through platforms like the GEN website for public view.[24] GEN is a comprehensive single-source for data and information about aged care services in Australia. It reports on capacity and activity in the aged care system focusing on the people, their care assessments and the services they use.[24]
  - They also provide aggregate metrics for business-as-usual activities, ad hoc projects, and internal projects at AIHW.

AIHW's role in data analysis and reporting is important for improving the quality and usability of healthcare and aged care data, enabling better decision-making and policy development. Table 14 provides a snapshot of the data lifecycle summary for the AIHW.

Table 14. Data lifecycle summary for AIHW

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	DoHAC	• Secure file transfer	• Quality indicators • MBS, PBS & RPBS data
	Services Australia	• Secure file transfer	• AIR data
	Hospital & health services	• Secure file transfer	• Data for inpatient, outpatient and emergency admissions, treatment and discharge
Data collected	NA		
Data managed		• Internal systems	• Aged Care National Minimum Data Set
Processed/analysed		• Internal systems • Secure research environments	• Aged care data sets • Data linkages
Data shared	Public reporting	• GEN website	• Aged Care National Minimum Data Set
	Researchers	• Secure file transfer • Secure research environments	• Deidentified data sets • Data linkages

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **AIHW**:

Challenges

- AIHW faces challenges such as the lack of a single identifier that links care recipients across all care environments, data standardisation issues, and the use of data for research when it was not originally collected for that purpose. An example is the NACDC, which faces challenges due to the lack of aged care identifiers that would help in data linkages.
- AIHW also reported the limitations of service-level data and the need for better person-based quality measures. As many current metrics provide aggregated data for a service provider (by facility), it is not possible to link these data points to individual data points to provide a richer data set.

Opportunities

- Adopting the **Individual Healthcare Identifier (IHI) and improving workforce registration are two key options** that would improve the ability to link person-level data for use in the NACDA.
- Provision of quality indicators at a person level rather than service level would also support better data linkage and more detailed data sets.

2.2.13 Researchers

Part of the role of DoHAC is to support research to assess the performance of the aged care system, identify issues and collate information required to guide improved decision-making. Part of this process involves the AIHW and supporting or commissioning research in the academic sector.

Give the results of The Commission and the aged care reform agenda under way, there is a significant amount of research into aged care. Much of this is funded by Commonwealth grants such as through the National Health and Medical Research Council (NHMRC) or commissioned directly. Research projects such as ROSA are also actively undertaking longitudinal research activities. Consumer and provider groups are also commissioning research, mostly to help solve the many gaps or issues facing the system which The Commission called out. Many individual service providers also undertake research activities to drive operational and performance improvements.

Several research groups were interviewed as research participants. Table 15 provides a snapshot of the data lifecycle summary for the researchers.

Table 15. Data lifecycle summary for researchers

CATEGORY	OTHER PARTY	METHOD	DATA
Data received	AIHW	• Secure file transfer	• Deidentified data sets • Data linkages
	State health departments	• Secure file transfer	• Deidentified data sets
	Service providers	• Secure file transfer	• Deidentified data sets
	Research participants	• Various	• Consent to share data for research • Other data as required by research
Data collected	Various	• Secure research environment	• Additional research data
Data managed		• Secure research environment	• Linked data sets
Processed/analysed		• Secure research environment	• Linked data sets • Trends and indicators
Data shared	AIHW	• Secure file transfer	• Data sets for linking
	Services providers	• Secure file transfer	• Provider reporting
	Publications	• Journal articles	• Research results

During research interviews and desktop landscape reviewing, the following challenges and opportunities were identified for **researchers**:

Challenges

- **Content:** The use of data for research when it was not originally collected for that purpose was identified as a challenge for researchers. The issue of consent is problematic as most data provided by service providers is collected for administrative or operational needs rather than research purposes.
- **Data linkage:** The lack of a single care recipient identifier and the use of data for research when it was not originally collected for that purpose was identified as a challenge for researchers. Data linkage efforts try to build common data tables from multiple sources, but these are constrained by lack of consistent identifiers for care recipients and healthcare professionals such as allied health professionals.
- **Reporting cadence:** The cadence of reporting and data sharing was also noted as a challenge. Service providers report to DoHAC on a quarterly basis, and DoHAC provides data to AIHW annually. This limits the timeliness of reporting and its use in decision-making for policy setting and service provision.

Opportunities

- Adopting the IHI and improving workforce registration are two key options that would support better data linkages.
- Improvements in data exchange to support more timely access to data would better inform decision-making.

PART 3
Observations across the aged care sector

As with other parts of the health system, data flows within aged care are complex. Often, the targeted programs were designed as stand-alone initiatives. This presents several compatibility challenges when considering their incorporation into a national data reporting system. This section explores some of these considerations.

3.1 Data capture considerations

Research participants raised several challenges relating directly to the data used or available within systems in aged care.

3.1.1 Duplication and lack of standards in functional assessment data

While there is a great focus on functional assessments in aged care (also see section 3.1.6) and extensive clinical guidance provided by the Australian Commission on Safety and Quality in Healthcare (ACQSHAC), there is little practical data standardisation related to these functional assessments. National standardisation of data capture and concept representation (such as consistent data definitions, terminologies, and value sets) is required. Examples included:

- While ongoing functional assessments of care recipients is required by multiple healthcare providers, the same (or similar) data points are collected by multiple providers with little of the data shared. This increases the burden on care recipients who may be asked the same (or similar) questions repeatedly, is an inefficient use of time, and limits collaboration between providers. CSIRO's GEM-OMATIC study has identified at least 73 outcome measurement tools (OMTs) being used in aged care, measuring 831 data points across 261 unique data elements. Of these, 150 data elements were duplicated at least once and one (mobility) was requested in 21 of the 73 OMTs.[11]
- The current assessment tools available from government for aged care have not been developed to support direct care delivery. This results in duplicated efforts between initial eligibility, needs assessments, and the functional assessments used for ongoing care. To improve efficiency, common definitions are needed to enable the reuse of data collected through the AN-ACC and IAT tools for continuous care.[34]
- The data from functional assessments needs to be manually collated (often from multiple systems) to support quality indicator reporting. Research participants noted that this was complex and time-consuming. Lack of standardisation of the data collected meant this may be inconsistent across organisations.[34]

3.1.2 Other data standards-related issues

While data standards for functional assessments are of primary concern, other elements within aged care systems are generally not standards based. This limits the ability to exchange data with healthcare systems, which are increasingly becoming standards based.

One particular issue relates to medical histories. Limited access to prior medical histories or for health professionals to obtain such from care recipients with limited cognitive skills (such as those suffering from dementia) increases the reliance on family or carer reported histories. The ability to distinguish between the two is a relevant consideration in the aged care sector.

3.1.3 Delays in data entry

A repeated theme among research participants was the issues of delayed data entry. Examples included:

- If data in residential aged care was not captured at the point of care (for example using tablet devices or portable laptops), data needed to be manually recorded and entered later at a workstation. This involved duplication of effort, potential for data entry errors, congestion at workstations, especially during shift handovers, and the potential for data to not be recorded.
- Prescribers, such as GPs, needed to record prescriptions in the medication chart at the facility to support medication management within that facility. However, these prescribers also needed to record medication information in their own clinical information systems, resulting in duplication of effort and the potential for errors.
- Healthcare providers tend to record progress notes and care plans in the service provider clinical systems, in addition to those in their own clinical systems. Research participants noted that this may lead to inconsistencies between systems with one or the other being an abbreviated version.

3.1.4 Impact of competition on data collection

Aged care is a competitive industry in which service providers try to highlight key differences in the way they provide care. This is shown by the number of specialist service providers working with specific communities of interest. These communities of interest may be based on religious beliefs, country of origin, or other factors that allow service providers to respond to specific community needs. Service providers targeting these communities strive to provide pastoral and other care specific to their target community need, and this drives the need for more data capture.

The increased reporting requirements and the introduction of elements such as the aged care star ratings have further honed the need to differentiate the quality of care provided. Larger service providers (often for-profit) have greater capacity to invest in systems to allow additional data capture and analysis, which may allow them to further differentiate their services.

Software vendors have recognised this need and generally provide flexible data definition, capture and reporting to address those needs and enhance the care recipient's lived experience. However, this can lead to highly customised systems that do not support standardisation nor promote interoperability.

Balancing the need for customisation and standardisation will be an important consideration for letting the aged care sector benefit from data interoperability while still serving the needs of the community.

3.1.5 Classification of data

Discussions with DoHAC identified that data held in the My Aged Care system was classified as personal or administrative data. This compares to data in the My Health Record which is classified as sensitive health data, and which falls under specific controls of the *Privacy Act*.

This difference in classification has several implications:

- while it is relatively straightforward to make information such as assessments in the My Aged Care system available in the My Health Record system, the inverse is not true
- sensitive health assessment data in the My Aged Care system does not have the same level of protections as similar data in the My Health Record.

DoHAC is reviewing the differences in the classifications, which may see changes in how aged care data is treated and classified, but until this occurs, there may be limitations associated with exchanging data between health care and aged/community care organisations. Aligning the approach to data classification will assist both sectors and improve privacy and security settings.

3.1.6 Assessment focused funding

While the overall level of data and digital maturity within the aged care sector may be considered suboptimal, areas directly related to funding are more mature or have greater levels of attention.[35] Maturity is also higher in those areas associated with aged care funding to meet reform and regulatory requirements associated with the provision of care, rather than other business infrastructure investments.

Some software systems in use have been specifically built around episodic assessment funding models, while others provide highly customisable forms solutions. Both approaches provide rich assessment data that can support applications for funding by service providers. Equally, medication management is strongly data-driven, reflecting the investments since 2020 in electronic prescribing and the electronic National Residential Medication Chart (eNRMC) program.

In comparison, data related to care provision, such as progress notes and referrals, is typically narrative in format, and there is little capability for this information to be shared or received electronically other than as PDF documents.

3.2 Technology challenges

Data cannot be easily separated from the digital technologies that support it. Research participants reported several themes related to broader technology issues.

3.2.1 Investments business intelligence

Aged care service providers need to manage data across multiple diverse systems, including:

- care assessment records
- clinical care systems
- medication management systems
- accommodation systems
- catering systems
- resourcing systems.

Existing and proposed regulatory reporting needs to bring data together from across many of these systems. However, these systems have generally low levels of interoperability, meaning that collating data across multiple systems is complex and often achieved using manual or semimanual processes.

Larger service providers had made significant investments in business intelligence and dashboarding systems to bring this data together for both operational and regulatory reporting reasons, with investments in information and communications technology (ICT) staffing to develop and support these systems. However, research participants noted that not all service providers could sustain these investments, meaning smaller service providers may need to manually collate data for regulatory reporting.

3.2.2 Demands on software vendors

Software vendors reported that some service provider clients were increasingly looking to them to provide extended reporting capabilities to meet their regulatory reporting requirements. This was more prevalent for smaller service providers who did not have the technical capacity or capability to develop reporting and business intelligence tools inhouse.

This was challenging as many of the regulatory reporting requirements required data from multiple systems. Where the service provider used systems from several vendors across their portfolio, this raised questions about who should be responsible for providing data.

3.2.3 Availability of devices and technical infrastructure

The availability of technology to perform data capture at the point of care varies greatly across the sector:

- some RACFs had tablets for clinical staff to record data at the point of care
- other RACFs often had shared computer access, typically at a nursing station, which resulted in paper-based notes at the point of care being recorded digitally later
- in-home care providers typically had a device for recording care provision at the point of care, varying between tablets, smart phones and notebook computers, that updated cloud-based solutions
- independent allied health providers typically recorded care and assessments in either paper or digital form, depending on their relationship with the care provider organisation.

While the access to digital technologies across the sector varied, investments are being made sometimes in point of care systems that use IoT technologies to monitor care recipients (in residential care and in-home). This work is formative and the subject of research by many parties, including CSIRO.[36]

This inconsistency of these investments (by government and the sector) means there is little standardisation in the way data is treated by emerging technologies and limited drivers for exchanging this data. This is compounded by the traditional separation of aged care from health care, as the healthcare sector has seen more driver for adopting such standards. Emerging standards such as Representational State Transfer (REST), FHIR, and Open Authorisation (OAuth) have driven change in healthcare systems.

3.2.4 Limited digital maturity within allied health

As has been widely recognised by the digital health community, there is limited digital maturity in the allied health sector.

While some disciplines (such as dentistry and optometry) are supported by highly functional, commercially available clinical software (or in-house systems), these rarely support broader digital health standards or interoperability with other health care or aged care systems. Other disciplines (notably the musculoskeletal disciplines) often have access to a more limited and generic set of clinical systems which need to be customised to local practice and seem to have limited interoperability capabilities. The remaining allied health disciplines have little or no clinical software support and rely largely on personal productivity products (such as Microsoft Office).

Research participants particularly noted:

- access to My Health Record was new to some disciplines and poorly supported by software
- other disciplines did not have access to My Health Record at all due to a lack of recognised registration processes required to assign a healthcare identifier for providers
- allied health professionals had limited visibility of treatment and care plans by other healthcare professionals
- access to My Aged Care was limited for some allied health professionals
- the ability to refer care recipients to other healthcare professionals was limited and poorly supported by software solutions.

3.3 Interoperability challenges

Aged care is facing many challenges that have plagued the healthcare industry's adoption of digital technologies. Primary among these challenges is the vexed issue of interoperability between systems.

3.3.1 Data exchange formats

DoHAC has recently provided a set of APIs to support quarterly reporting by aged care service providers. These use modern API standards and have partially adopted elements of the FHIR standard increasingly used in the broader healthcare market, and which are being developed with the support of DoHAC.

However, among research participants interviewed, there was little take-up (achieved or planned) of these APIs due in part to the recency of their release and the complexity of bringing together the data required. Research participants noted that the definitions of the data required had been evolving and needed to be sourced from multiple systems. In some cases, data needed to be manually collated, reducing the benefit of the APIs as a mechanism for exchange.

Generally, the format of aged care data transfers is typical of non-API formats in health because they are based on a limited set of tools available to those involved. Several exchange formats have been identified:

- PDF
- Comma separated value files (CSV)
- Microsoft Excel spreadsheets (XLS or XLSX)
- Secure electronic messaging
- Emails
- Facsimiles
- Physical mailing of hardcopy documents.

Despite this, work has begun to identify and encourage use of standards. The Aged Care Clinical Information System (ACCIS) Standards comprise a list of technical standards, developed through consultations with the aged care sector and targeted focus groups with software developers. The Standards are expressed as recommended minimum software requirements, for every RACFs CIS and eMM software developer to incorporate into their product roadmaps.

The ACCIS Standards will help standardise information that is collected and the way it is shared, to support interoperability and improve the overall safety and quality of care recipients' continuity of care. The ACCIS Standards relate to both Recommendations 68 and 109 of The Commission. These are a first step on this journey with additional refinement and expansion planned as the Sparked FHIR Accelerator program delivers the new generation of FHIR standards and implementation guides.[37]

3.3.2 Data exchange mechanisms

Many data transfers with government require manual entry (or re-entry) via online portals. While the online portals provide flexibility of access, manual data collation also increases the level of effort required to undertake data transfers and the likelihood of error (when compared with automated electronic transfers). The recent release of the B2G APIs can address this, but evidence suggested that research participants had not yet adopted this due to competing priorities, the need to manually collate data anyway, and the diversity of source systems.

A lack of data exchange between aged care and other healthcare providers (especially primary care) results in duplication of data entry (commonly after the fact), which can lead to data inconsistencies and errors. There was repeated evidence from research participants that sensitive clinical information was commonly shared between sector participants using email, fax and postal services. Secure data transfer services typically used in the health sector were largely unknown or unused in the aged care sector.

This was especially true when the recipient was the care recipient or their caregivers. Email and postal methods were common. The project team were aware of cases where documents loaded to the My Aged Care system were then also emailed to the care recipient and caregivers, notably because of the complexity of accessing and using the My Aged Care system for some users. Unlike the My Health Record system, there are not consumer focused apps to help with access to the My Aged Care system.

Despite the lack of standardised approaches, there was significant data exchange between core aged care systems and other supporting systems. Some of these exchanges were provided by the aged care software vendors for commonly used systems such as medication management systems. Others needed bespoke development by either software vendors or in-house ICT teams. Research participants noted many supporting systems were used, and a lack of standards and governance for data exchange could lead to security and privacy concerns.

3.3.3 Access to national infrastructure

One of the recommendations of The Commission was greater use of national infrastructure such as the My Health Record system and the Health Identifier service. The ACCIS Standards now require the use of IHIs and connectivity to the My Health Record system.

While service provider organisations can now register for access to My Health Record, the level of use reported by research participants varied widely. Access by allied health professionals was very low, with many aware of the My Health Record but not using it, and some professional (self-regulated) groups still unable to register for access. Use of national infrastructure will need to be prioritised if the benefits are to be realised.

One repeated point raised by research participants was the inability to access information in the My Aged Care system other than through manual data extraction. In at least one case, screen scraping technologies were being used to automate the data extraction, however, some noted that this was subject to problems when the My Aged Care system changed.

3.3.4 Customisation rather than standardisation

Using recognised standards for data exchange can help address the issues outlined above. As an example, the pathology sector has typically adopted HL7's V2 messaging standards and the Logical Observation Identifiers Names and Codes (LOINC) terminology.

However, the adoption of standards within the healthcare sector is a vexed issue, even with HL7 V2, where many variations and generations of standards exist. As many data transfers described across the programs are specific to the area of study, they rarely lend themselves to more generalised data transfer standards.

The recent popularity of HL7's FHIR standard is gaining much support across the health sector. This has been reflected in DoHAC's decision to fund the Sparked FHIR Accelerator program led by CSIRO, intending to support adoption of FHIR as the primary method of health data exchange in Australia.

While aged care has specific requirements for data exchange, there are already many data elements on the AUCDI roadmap that would support aged care. It may present an opportunity to leverage the flexibility of FHIR to provide standardised data transfers and to promote data exchanges that support whole of life health care.

3.3.5 Terminologies used

The codification of some data elements through defined terminologies supports greater portability and interpretability of data. In the analysis of individual programs, validation against predefined values is relatively common.

However, where used, such predefined lists have been largely defined within the context of the program providing or collecting the data, rather than based on more generalised terminology sets such as Systematized Nomenclature of Medicine Clinical Terms - Australia (SNOMED CT-AU), Logical Observation Identifiers Names and Codes (LOINC) or the like. Given the specific nature of aged care, it is understandable that more contemporary approaches to using defined terminologies may not have been adopted. The many terminologies used limits the opportunities for reuse and standardisation of systems. A lack of terminology implementation projects for aged care has not helped adoption.

Even where terminologies such as Australian Medicines Terminology (AMT) were available, such as within medication management systems, the regulatory reporting requirements were rarely supported. For instance:

- reporting on residents with polypharmacy status was complicated by the many exclusions (for example, lotions, vitamins and eyedrops) that needed to be manually eliminated from data extracts
- privately funded medications outside the PBS schedule where not included in AMT
- antipsychotic medication reporting was complicated by the timeliness of drugs being added to AMT (such as cannabis oil).

3.4 Healthcare versus aged care workforce

While there is a significant overlap between the healthcare and aged care sectors, it is important to remember that many aged care workers such as those providing personal care are not healthcare providers.[38] This was highlighted in The Commission Recommendations 68 and 109 and a recent report by the ACIITC.[2,35]

Stakeholders note that many of the personal care workforce in aged care sector are poorly remunerated and are people for whom English is a second language.[39] Stakeholders also noted digital and data maturity for these workers is likely to be lower than the broader healthcare workforce, which itself has challenges in this area. Research participants also noted that there is significant turnover of staff in this workforce category. These factors must be front of mind when considering who is collecting data about care recipients, when and how they are collecting it, and for what purpose.

Despite this difference, the personal care workforce regularly interacts with care recipients and are most likely to notice changes in behaviour that may show a need to review or change care services. Leveraging this knowledge could lead to early interventions and improvements in the quality of care provided to care recipients.

4 Opportunities for improvement

Based on feedback from individual research participants interviewed, and the observations made by the project team across interviewees, many opportunities exist to address the challenges identified in this report with the aged care data landscape today.

4.1 Strategic environment for health and aged care data

As discussed in section 1.4, significant investment has been made by the Australian Government to promote interoperability and data exchange in the Australian health and aged care systems. While aged care and health care each have areas of particular concern, similarities between them are strong, and the aged care sector can learn much from the work done in health care in recent decades to lift technical capabilities and drive interoperability.

4.1.1 Continued investment in aged care digital and data strategy

Given the lack of digital and data maturity in the aged care sector, ongoing investment is required in these areas. The aged care data landscape requires significant investment to improve standardisation, interoperability and equity of access. Interoperability with the healthcare sector is of particular importance given the overlap of data requirements.

The Australian Government has already allocated substantial funds to support the work of the DoHAC, largely focused on improving the GPMS and the My Aged Care Gateway.[40] This work will continue in line with the *Aged Care Data and Digital Strategy* and associated *Action Plan* which outline DoHAC's plans going forward.

Based on commentary by research participants, there is clear need to continue support and development of the B2G APIs, provide greater clarity in how these should be interpreted and encourage adoption of these by software vendors and service providers. However, investment by government is only one part of the solution.

Investment also needs to be continued by service providers in the aged care sector. There was clear evidence that many research participants are actively involved in improving their digital and data maturity. Several reported on ongoing research into point of care and ambient monitoring technologies.

These service providers also rely on the continuing investments by software vendors in the sector. Several of the research participants are actively involved in the Sparked FHIR Accelerator, thus ensuring their systems are interoperable with other healthcare systems as the FHIR data exchange standard becomes more widely developed.

Ongoing work to monitor these changes and the impact on the aged care data landscape will be required to ensure progress is being made consistently across the sector.

4.1.2 Improving digital access to My Aged Care

As the My Aged Care continues to develop, it becomes an important source of data for service providers, assessors and researchers. The current portal access approach, while a useful first step, needs to be supplemented by more APIs that provide access to information in the My Aged Care system. This was a frequent request among research participants. The types of information that would be useful to access include:

- assessments
- care plans
- care recipient and caregiver details.

The existing ability to extract information in PDF needs to be supplemented with data elements access. This would let the information be processed and actioned in accessing systems and would avoid the effort and error prone necessity of manually transcribing data between the My Aged Care system and other systems used by sector participants.

These efforts should leverage the work already funded by DoHAC in FHIR standards so the benefits of these investments can be maximised, and the My Aged Care system is interoperable with clinical systems used by aged care and health care participants.

4.1.3 Adoption of APIs

DoHAC has been engaging with the sector regarding the work they have undertaken to provide APIs to the GPMS. These are designed to enable sector participants to provide data through direct system integration rather than through manual data entry or upload via CSV files.

There has been limited uptake of the new APIs, partly due to their recent release, and partly due to the existing workload on service providers and the complexity of bringing the data together. However, some research participants noted that there have been refinements necessary in the definition of the new indicators (whether provided by API or through the Provider Portal). Until this is stabilised, investments to adopt the new APIs may be limited given the constrained resource environment for service providers and software vendors.

4.1.4 Improvements in finding providers

A core capability of the My Aged Care system supports care recipients and their caregivers to find service providers.[41] This service lets users search by:

- location or name
- the type of care needed
- other relevant factors, such as faith-based services.

Users receive a list of providers that match the search criteria and can be examined individually for suitability. However, lived experience of the project team shows finding a provider with capacity can be more challenging.

If aged care service providers could provide real-time data on available capacity for their services, My Aged Care system could leverage this information to improve the care finder process. This would add an additional data exchange burden to both the GPMS and service provider systems and will require investment or incentives to encourage adoption.

4.1.5 Continued investment in national data capabilities

Capturing data is important for operational and reporting requirements. However, leveraging and reusing this data for research and investing in a learning health system can support better aged care delivery. Continued investments are required to support:

- AIHW in the continued development of national data sets for aged care, including better identification of individuals to support data linkages
- research groups such as ROSA to use national datasets to provide reporting to service providers and government that can inform operational and performance improvements
- expanded use of modern data transfer technologies to streamline data capture and increase the cadence of this reporting so that national datasets can improve the timeliness of reporting to better inform policy and improvement programs.

4.2 Leveraging other aged care data programs

Having identified the categories of data exchanged between organisations in aged care, including healthcare provider organisations and individuals, it is worth investigating other programs working concurrently in understanding data that forms part of the aged care data landscape.

While the level of activity shows visibility of the underlying issues, these projects may not be working cohesively and strategically, leading to:

- consultation exhaustion for sector participants
- conflicting recommendations between projects
- a tactical rather than strategic approach to resolving issues
- confusion for industry participants including software developers and service providers about the long-term data strategy for the sector.

4.2.1 Understanding and improving sector maturity

As noted in sections 3.4 and 3.2.4, digital and data maturity are critical success factors in delivering digital and data transformation. This is recognised by DoHAC, with several strategies identifying these, as strategic outcomes to be supported.

Projects under way include:

- Nearly half of the Primary Health Networks (PHNs) are now using a digital health maturity assessment tool which lets them evaluate the digital and data maturity of Australian general practices, RACFs, allied health practices, and pharmacies. This tool also provides a strategic plan to facilitate digital transformation.[42] Developed by the digital health consulting firm Semantic Consulting, the Kaleidoscope data insights platform is designed to measure digital health maturity in primary and aged care providers.[43] To date, digital health maturity assessments have been completed for about 40% of Australian general practices and around 30% of aged care facilities.
- Consultancy firm Ernst & Young (EY) has been contracted to conduct a research project examining the digital maturity of the aged care sector and how it varies by provider type. The project tries to identify the types of support and enablers that providers may need to enhance their digital maturity, as well as the key barriers and challenges preventing aged care providers from improving their digital maturity. Concerns have been raised within the sector regarding preparedness for upcoming aged care reforms.[44]

These and other initiatives should directly support greater clarity about the digital and data needs of the sector. Based on an improved understanding of sector maturity, initiatives that improve this maturity can then be co-designed with the sector. These may include:

- supporting organisations to implement processes and software which improves the sector's capabilities to exchange and use data for better quality and performance
- developing skills across the workforce to support them to better understand the use of data that is captured.

4.2.2 Further integration of My Aged Care and My Health Record

Work has recently been completed to let new My Aged Care support plans be shared to clinicians and consumers using the My Health Record system. Support plans available in My Health Record allows health professionals, including allied health professionals, to see these support plans. This will give them a better understanding of a care recipient's aged care needs and help them provide better care.[19]

There may be more opportunities for collaboration and data exchange between these two systems, which is important to avoid duplication and ensure both systems give their respective users a current picture of a care recipient's health and care needs. Items to be considered include care assessments, service provider details, and advanced care directives that support end-of-life care.

4.2.3 Improving consistency in data classifications

This integration between the two systems faces regulatory challenges. As noted in Section 3.1.5, data in the My Aged Care system is classified as administrative data despite often containing sensitive personal and health information. This limits the ability to exchange data between the My Health Record and the My Aged Care system and is potentially a privacy risk. DoHAC are aware of this limitation and are investigating the implications and necessary steps to address this.

Any change in this situation may also affect systems used by assessors and aged care service providers. With ongoing work on a new *Aged Care Act* and revised *Privacy Act*, there exists the opportunity to review the data classifications of systems across the whole of aged care.

4.2.4 ACDC projects

DHCRC, in partnership with government, service providers, software vendors, universities and CSIRO have invested in projects to investigate and trial the use of quality indictors in aged care. Projects have included:

- the *Aged Care FHIR Implementation Guide & Benchmarking MVP* project (part of phase 1 and 2 of the ACDC program) [45]
- the *Aged Care Data Compare Plus* project (ACDC phases 3 and 4). [46,47]

This work is ongoing and will continue to guide the development and use of quality indicators to support aged care quality improvements. It also directly guides work within the Sparked FHIR Accelerator program.

4.2.5 Mapping aged care against the Australian FHIR standards

Aged care is one area in particular that could benefit significantly from the co-design of new FHIR based interoperability standards for healthcare, led by CSIRO. The Sparked FHIR Accelerator is engaging consumers, clinicians, technologists and software developers across health and aged care to co-design these new standards.

National governance arrangements have been established and the Sparked FHIR Accelerator has published broad roadmap for this work, including:

- Release 1 of the AUCDI – June 2024
- Release 1 of the *Australian Core FHIR Implementation Guide* – January 2025
- Release 1 of the *Australian eRequesting FHIR Implementation Guide* – June 2025
- Release 1 of the *Australian eRequesting Data for Interoperability* – November 2025
- Release 2 of the AUCDI – June 2025

Appendix A discusses work done to identify data elements across both health and aged care. While the first releases of the roadmap are targeting priorities related to healthcare interoperability, many of these directly impact interoperability within the aged care sector. This is supported by the number of software vendors in the aged care market listed as participants in the program.

There is also a clear opportunity for the aged care sector to be engaged in later stages of the roadmap. Figure 20 takes the consolidated set of data elements identified in Figure 26 (on page 93), and maps data elements that would be supportive for aged care data exchange. These elements are shaded in light blue.

Of particular interest is the *Functional status and disability assessment*, which is flagged for the patient summary work under development. The importance and diversity of assessment data in aged care would be useful in contributing to this work.

Additional details are required to support further work on aged care requirements for AUCDI. The GEM-OMATIC project being undertaken by CSIRO scientists is an example of a project working to identify field level details across multiple functional assessment instruments.[11] This detail will be foundational for further development of AUCDI and to reduce the level of duplication in data collection.

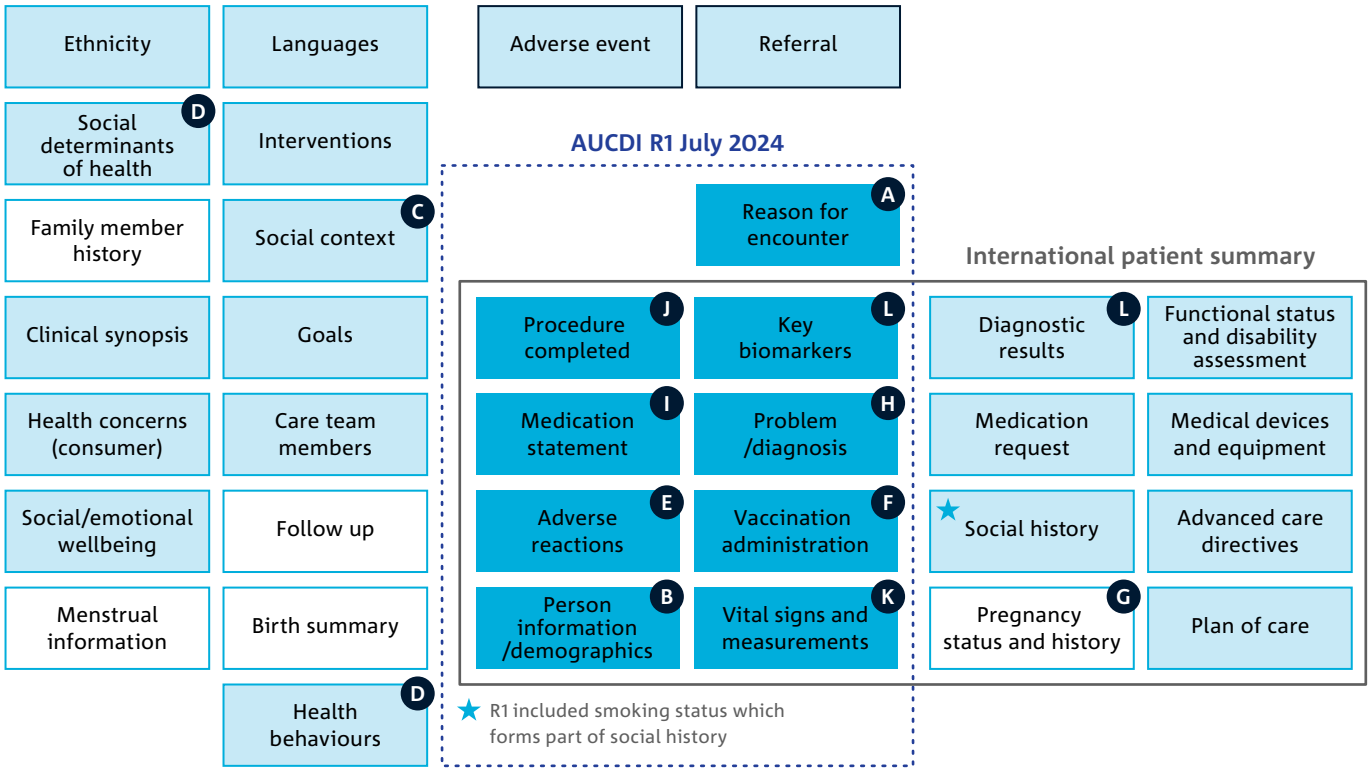

Figure 20. Potential data elements required by aged care sector

4.2.6 Understanding the breadth of assessment frameworks

Assessment data is of specific importance within the aged care sector. Despite this, there is little agreement regarding what assessments and assessment data should be recorded. Factors that affect this include:

- the range of groups undertaking assessments*, including:
  - RAS
  - ACATs
  - independent Australian National Aged Care Classification (AN-ACC) assessors
- funding arrangements driven by standardised assessment frameworks such as AN-ACC, the (now deprecated) NSAF, and the (new) IAT
- standardised assessment frameworks coming out of research groups such as interRAI[48]
- ongoing research by academics in specific fields that generate new assessment frameworks
- frameworks used by individual allied health professionals and others.

The diversity of assessment approaches will affect several key data and digital areas, including:

- data capture and exchange standards
- standardised terminologies
- mapping considerations between alternative assessment frameworks
- functionality from software vendors.

Work is underway by CSIRO scientists to understand the range of tools used and data captured in functional assessments in aged care.[11] This work has identified a lack of collaboration, duplication of data collected and resulting inefficiencies due to the degree of duplication of data elements across OMTs (see section 3.1.1 for more detail). [11]

This and other work must proceed and inform efforts to reduce the duplication of data collection and consolidate on an agreed approach that can then be digitally supported across the sector.

4.3 Improving interoperability of healthcare systems for aged care

Opportunities for improvements in aged care systems need to be supported by improvements and investments in the healthcare systems that interact with the aged care sector.

4.3.1 Interoperability between health and aged care providers

As discussed in section 3.3, interoperability between healthcare and aged care systems is one of the primary challenges facing the sector. Opportunities that exist to improve these capabilities include:

- Setting standards and capabilities for the exchange of clinical notes between healthcare and aged care systems. The Agency is investigating the best approach for this interoperability, but this work is formative.
- Supporting better reconciliation of medication management between aged care and healthcare systems. The move to electronic prescribing and the electronic National Residential Medication Chart, supported by the National Prescribing Delivery System, provide opportunities for better exchange and reconciliation of data between systems.
- The Agency and DoHAC have announced plans to move to a national approach for Health Information Exchange (HIE). Combined with better digital support for allied health professionals, this raises opportunities for clinical systems in aged care to better access up to date health information about care recipients. Equally, healthcare providers could better understand current care assessments and plans for care recipients.
- The secure exchange of data is critical to confidence in aged (and health) care. Use of insecure channels of communication in both aged care and health care, especially regarding care recipients and their caregivers, presents opportunities for improvement.

* As of 9 December 2024, a Single Assessment System for aged care has been introduced, which responds to Recommendation 28 of the Royal Commission.

4.3.2 Focus on clinical systems for allied health professionals

As noted in section 3.2.4, the support for interoperable clinical software in the allied health disciplines is fraught. The Agency has begun work to investigate how the allied health sector could be supported to improve this situation. Given the diversity of requirements and the existence of several established clinical products, this will require significant ongoing work and investment by all parties.

Factors that need to be addressed include:

- making existing clinical software interoperable with My Health Record and other digital health services such as digital referrals
- providing a baseline clinical system for those allied health disciplines not currently supported by clinical systems
- addressing registration requirements that restrict allied health professionals from gaining healthcare provider identifiers
- addressing digital access to the My Aged Care system (as per Section 4.1.2)
- supporting allied health professionals to access relevant patient data, as envisaged using the HIE.

4.3.3 Development of aged care terminology and reference sets

Consistent terminology underpins interoperability, and Australia has adopted the SNOMED CT-AU classification system and the AMT to better support this. However, these are broad ontologies, and it is common to provide focused subsets, known as reference sets, to support ease of use.

Research participants noted that, especially regarding AMT, there were challenges related to the codes available including:

- the many codes available making the system unwieldy to use
- the existence of codes for medications no longer available for prescribing
- the absence of codes for (largely non-PBS) drugs regularly used in aged care
- the inability to identify or exclude drugs for reporting purposes such as polypharmacy reporting which has many exclusions.

Dedicated implementation support for AMT and SNOMED CT is required. This could include technical workshops demonstrating the use of freely available tooling such as Ontoserver and Snap2Snomed which reduce the burden of adoption.

4.4 Continued improvements in supporting technologies

Research participants found other opportunities in a range of technology related areas.

4.4.1 Continued clarity of minimum standards for software vendors

The publication of the minimum requirements for aged care clinical information systems by the Agency is the first step in improving the quality and consistency of software for the aged care sector. More work needs to be done, including:

- improving the data privacy and security of aged care data, considering likely changes to the *Privacy Act* and the ongoing cybersecurity threats
- adoption of consistent data standards across aged care and health care to ensure interoperability between these two areas.

4.4.2 Continued research into technology enablement

In an environment of constrained funding and workforce challenges, aged care can improve data capture using modern digital technologies, including:

- adoption of point of care data capture technology such as tablets and supporting software that streamlines data capture in near-real-time
- use of IoT and ambient data capture technologies to let capture of data be automated where possible.

5 Next Steps

The Commission has laid out a suite of recommendations being implemented by government and the aged care sector. Many of these relate to the way data is collected and used.

This report is intended to inform those engaged with the aged care sector about the challenges and opportunities for improving the way data is "collected once and used many times" in line with recommendation 108 of The Commission.[2] Based upon the feedback from research participants and analysis of the data available, this section lays out some considerations that may inform the next steps in implementing The Commission's recommendations.

It is not the role of this report to map out a full program of work or establish a roadmap for resolving all data issues in the sector. However, the following points are worthy of consideration for those involved in planning programs of work in the aged care and healthcare sectors.

5.1 Standards development

This report has identified a clear link between the work under way in the healthcare standards space and the needs of the aged care sector. This is a primary guardrail for ensuring aged care and health care align their efforts for mutual benefit.

Leveraging programs like the Sparked FHIR Accelerator can allow the aged care sector to 'leapfrog' development of their standards requirements. This also ensures work done by the Sparked FHIR Accelerator aligns with and supports the work needed to support aged care interoperability.

As development of the AUCDI work plan by the Sparked FHIR Accelerator program is a collaboration with government, industry, clinicians and consumers, it provides a unique opportunity to engage the aged care sector and establish which data elements are required in priority order. The first example of this may lie with the international patient summary (IPS) work, as key elements in the IPS intersect with the functional assessments required by aged care. Clearly engagement with the aged care sector will also identify additional items that could be added to this work program.

While standards are critical, these need to be supported with terminology implementations that address the needs of aged care. Accordingly, any program of work would benefit from work with terminology teams to ensure that aged care can be fully supported.

5.2 DoHAC policy

DoHAC continues to focus on the implementation of the recommendations of The Commission, including policy and regulatory programs. This includes the work with AIHW on developing a NMDS and associated reporting.

The Commission's recommendations to support greater interoperability will also require establishing policy positions on standards, in conjunction with the work program for the Agency.

Critically, both will require clarity national approach for functional assessments that is mandated and implemented by all parties.

The separation of purposes between the quality indicators and assessment data would also suggest investigations into how these two groups of data can be more readily aligned. A better understanding of how healthcare data could flow into aged care to support these endeavours would assist.

The continued work to embed national health identifiers in aged care and health care is an important step to allow linkage of data to support research and performance metrics, as well as delivering better care. This needs to support all healthcare and aged care providers.

5.3 AIHW work program

AIHW already has a forward work program focusing on a NMDS and associated reporting with DoHAC. Aligning this work with the standards community will ensure that the aged care sector captures the data required in the format required to allow delivery of national reporting. Continued misalignment will impede this work.

5.4 The Agency work program

The Agency continues to support interoperability in the aged care sector. Ongoing collaboration will be needed to ensure standards development in this area can be implemented as part of the national interoperability plan and will support a HIE approach.

Areas in which further work would be valuable include:

- Ongoing work in areas such as electronic prescribing to allow reconciliation of medications between primary care and aged care, and the elimination of double entry would reduce the risk of errors.
- Development of a clinical notes exchange capability between aged care and primary care could improve the quality of clinical progress notes across both fields.
- The ongoing work to deliver a national HIE need to consider the role of aged care so that this does not need to be addressed as an afterthought.

5.5 Research efforts

Ongoing work in research is required to support other programs. The GEM-OMATIC project provides an opportunity to deliver a detailed look at the data being captured in the aged care sector and how much diversity exists in both nature and duplication.[11] This work will be critical for detailed planning of the AUCDI if aged care is going to be included.

Given the issued identified around dentistry, a follow up study involving a a gap analysis of the functional and technical requirements for ensuring the assessment process can integrate relevant data into the downstream systems.

APPENDIX
A. Understanding the scope of data

In any discussion of a data landscape, it is important to understand what is meant by 'data'. This report does not intend to describe data elements from a technical field-by-field perspective. Rather, this report is looking at broad data elements needed, how these are categorised and grouped, and the way they flow (or not) through the aged care ecosystem. The report also looks at data in the sense of whether it is in 'atomic' digital format (that is, individual fields that are presented by agreed rules and formats) or if the data is in narrative form such as text fields and PDFs.

A.1 Data in the aged care sector

Aged care as a term covers a variety of care settings (e.g. residential, community, support accommodation), with data being recorded on topics including:

- accommodation and services such as catering
- billing and claiming to care recipients and other funders
- human resource management and rostering
- infrastructure and asset management.

While these areas are critically important to the financial viability and quality of services provided to care recipients, this report is focusing on the data associated with care itself. Figure 21 illustrates the three key classes of data being investigated.

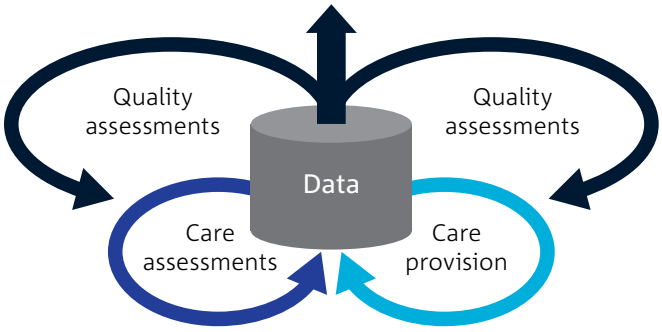

Figure 21. Understanding the broad classification of aged care data

When looking at the data under consideration in this report, we also need to consider the way they interact. The data types and interactions are:

- **Care assessments** cover those data elements used to determine the functional and health state of care recipients (visualised as the dark blue arrow in Figure 21). Assessment data is critical to determining what care provision is required. Data may be collected at specific points in time such as before or after significant health events, or routinely during the provision of care. Functional assessments are a significant part of this category in aged care.
- **Care provision** data includes a record of how care is provided, by whom and when. It is a commonly collected part of routine care provision and is used to inform care assessment activities and resulting data (visualised as the light blue arrow in Figure 21). This leads to a continuous cycle of data collection and assessment for care recipients.
- **Quality assessments** (sometimes called outcome measures) improve the quality and performance of care to recipients, such as quality indicators. While much of quality assessment data is collected for regulatory or legislative reporting requirements to government (visualised as the dark red arrow in Figure 21) organisations routinely gather quality assessment data for their own purposes and continuous improvement activities (visualised as the pink arrows in Figure 21).

Clinical assessment categories

(CSIRO research)

- Health
- Trajectory
- Sensory
- Psychological
- Cognitive
- Nutrition
- Speech
- Goals
- Service/supports
- Environment
- Physical
- Functional
- Social
- Considerations for care
- Empowerment

Aged care Q1 categories

(DoHACB2G QI API)

- Pressure injuries
- Physical restraint
- Unplanned weight loss
- Falls and major injury
- Medication management
- Activities of daily living
- Incontinence care
- Hospitalisation
- Workforce
- Consumer experience
- Quality of life

Priority QI Domains

(Support at Home program)

- Consumer experience
- Quality of life
- Function
- Service delivery/care planning
- Workforce
- Weight loss/nutrition
- Falls/fractures/injury

DHCRC ACDC Projects (QIs)

- Changed behaviours
- Cognition
- Mood state
- Elimination and continence
- Falls, fractures and injuries
- Function
- Hospitalisations
- Infections
- Medication related issues
- Pain
- Skin integrity
- Physical restraints
- Weight loss and nutrition
- End of life care
- Social engagement

Health data categories (CSIRO/HL7/AIHW)

- Ethnicity
- Social determinants of health
- Family member history
- Clinical synopsis
- Consumer health concerns
- Social emotional wellbeing
- Menstrual information
- Languages
- Interventions
- Social context
- Goals
- Care team members
- Follow up
- Birth summary
- Health behaviours
- Reason for encounter *
- Procedure completed *▫
- Medication statement *▫
- Adverse reaction risk summary *▫
- Person information/ demographics *▫
- Key biomarkers *▫
- Problems/diagnosis *▫
- Vaccination administration *▫
- Vital signs and measurements *▫
- Diagnostic results ▫
- Medication request ▫
- Social history ▫
- Pregnancy ▫
- Functional status and disability assessment ▫
- Medical devices and equipment ▫
- Advanced care directives ▫
- Plan of care ▫

*AUCDI R1 ▫IPS categories

Figure 22. Examples of data elements across the three categories of data

These three data categories are not unique to aged care. Undertaking assessments and then recording the provision of care to patients is a normal part of the healthcare environment. These are ongoing and iterative processes in health care and aged care. Equally, undertaking outcome measurements is also part of the broader healthcare sector.

However, in aged care, the (functional) assessment process has a greater significance, as most funding is directly related to these assessments and associated outcome measures. While the health concerns of care recipients vary greatly, the aged care sector and supporting healthcare professionals have formulated many assessment processes to support aged care and continue to do so. Figure 22 provides examples of data elements that are collected, to analyse the three categories of data discussed in this section.

While these classifications are useful for looking at data, there are clear overlaps between each area, and the interactions between them are complex and ongoing.

A.2 Understanding data in the healthcare sector

Aged care is inextricably linked with health care more broadly, and it is worth starting a discussion about aged care data by looking at data within the healthcare system. This is especially useful as the healthcare system has greater digital maturity, resulting from the digital health initiatives that have occurred within Australia over recent decades. This has included significant investments into data exchange standards, terminology and interoperability.

These have largely been focused on optimising the reuse of all healthcare data collected at the point of care and for the tracking and reporting of care. The national terminology service available to all healthcare participants and the current investment in the Sparked FHIR Accelerator program provide a firm foundation on which to build an interoperable aged care sector. This follows Recommendation 108 of The Commission.[2]

These national approaches to categorising healthcare data have been used throughout this report to help illustrate where data for aged care needs to work with the existing data landscape from health.

A.2.1 FHIR standards and the AUCDI

Australia is starting a significant healthcare data standardisation process based around the HL7 FHIR standard.

The AUCDI is being developed under the Sparked program, a collaboration led by CSIRO with HL7 Australia and the Agency. Funded by the DoHAC over a two-year period, the program tries to create FHIR implementation guides that enhance the interoperability of healthcare systems in Australia.

The AUCDI is a key step towards achieving standardised healthcare data across the nation, and engages clinicians, software developers and consumers in the design of the proposed solutions. The AUCDI tries to standardise the capture, structure, usage, and exchange of health data to address the existing fragmentation in Australia's health data systems. This initiative is significant for improving patient care, ensuring clinical safety, aiding clinical decision-making, and enabling efficient HIE.[49]

The Sparked FHIR Accelerator also has identified a work plan of 32 healthcare data categories. Of these, nine data categories were included in the first AUCDI release in July 2024. This group of 32 data categories and the extent of AUCDI Release 1 can be seen illustrated in Figure 23.[50]

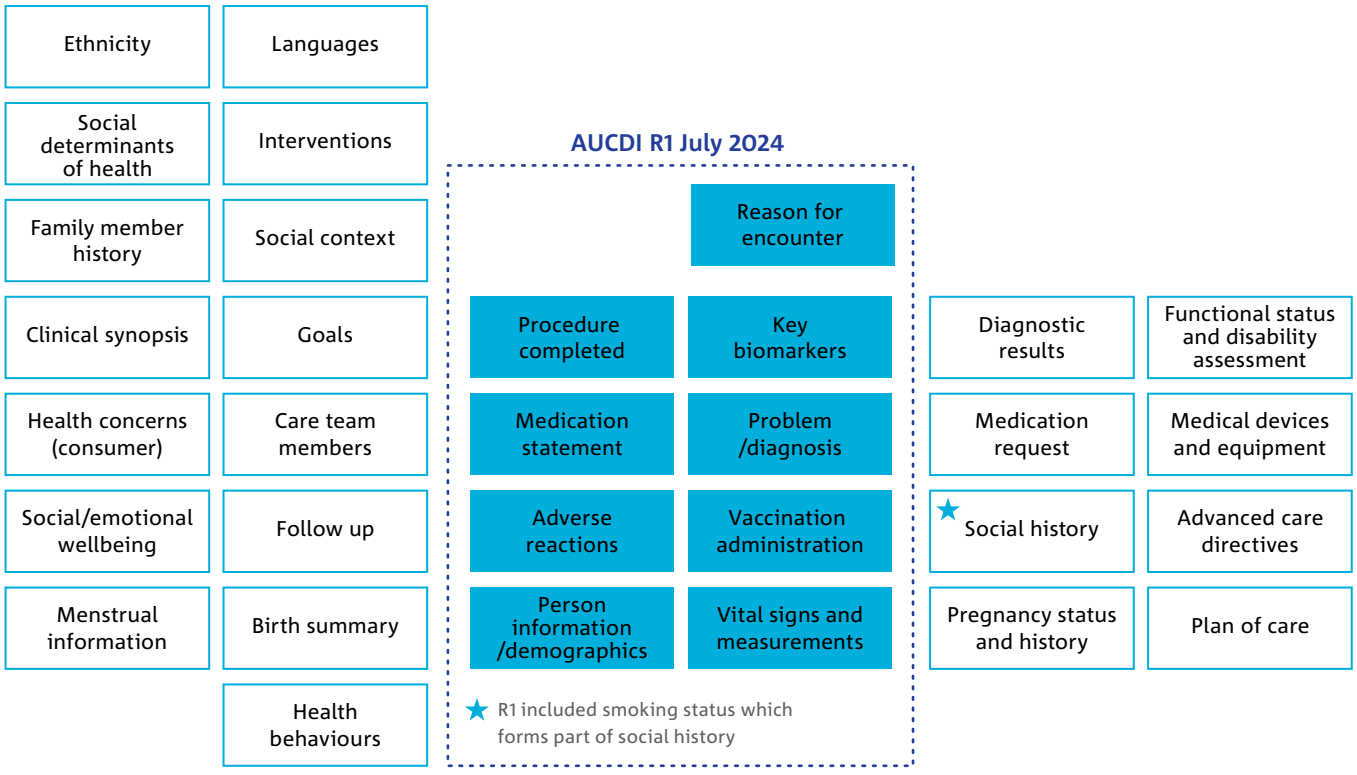

Figure 23. Data categories identified within the AUCDI backlog

A.2.2 The IPS

The IPS is an essential part of the global push towards standardised healthcare data. The IPS tries to provide a concise, standardised set of patient data that can be universally understood and used across different healthcare systems and countries. The IPS includes critical health information such as medical history, allergies, medications, and recent treatments, making sure patients receive consistent and informed care, no matter where they are in the world. As a standardised transfer of care document, the IPS reduces the need for multiple transfer documents that can be used across the health and care sector.

In Australia, the IPS is being integrated into the broader framework of healthcare data interoperability spearheaded by DoHAC and is simply called the 'patient summary'. The intersection of the IPS and AUCDI is illustrated in Figure 24, showcasing how data categories align and overlap.[50] This alignment makes sure the critical elements of patient care are seamlessly mapped and accessible through the AUCDI's FHIR implementation guides. This alignment improves the ability to "collect once, use many times" principle described in Recommendation 108 of The Commission.[2]

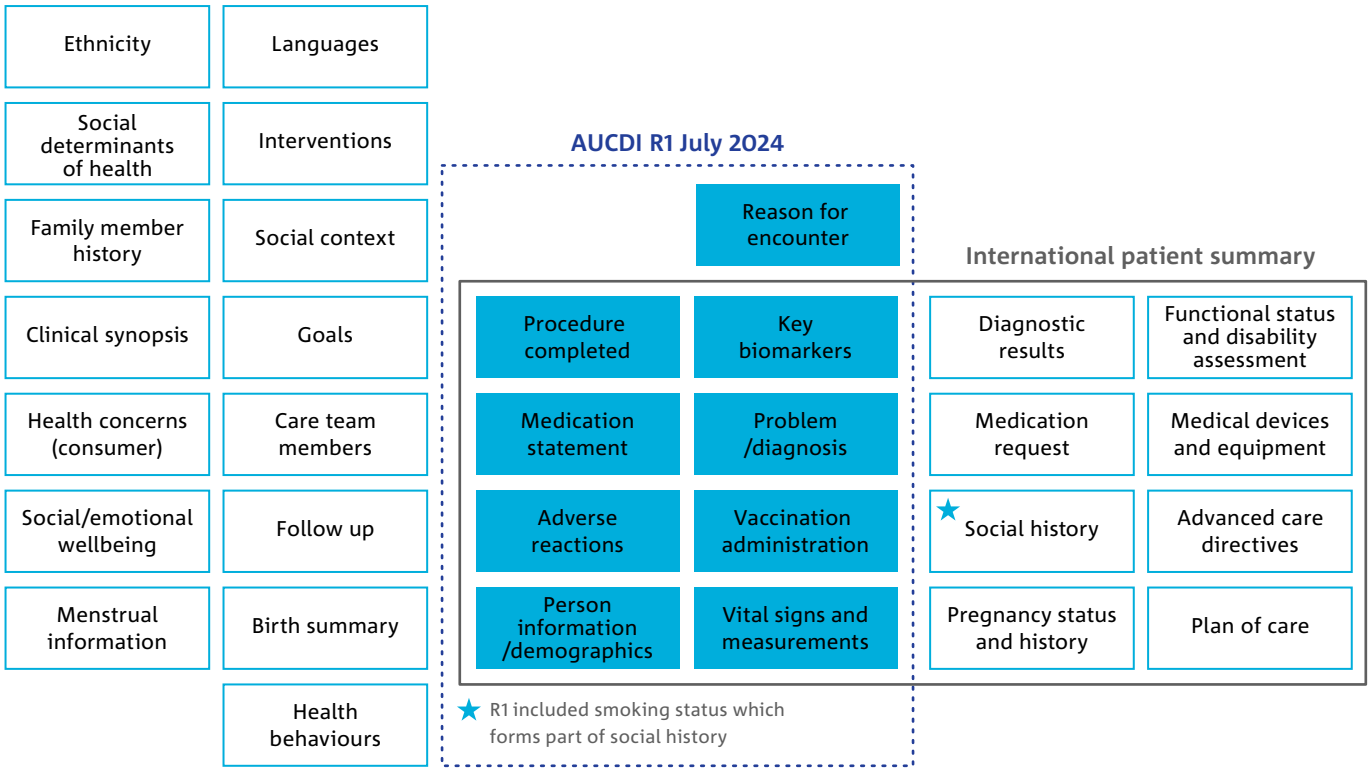

Figure 24. How data categories in the IPS overlap with the AUCDI

A.2.3 The AIHW view on data

The AIHW manages a large pool of health and welfare data. The AIHW model for understanding healthcare data is shown in Figure 25.[50]

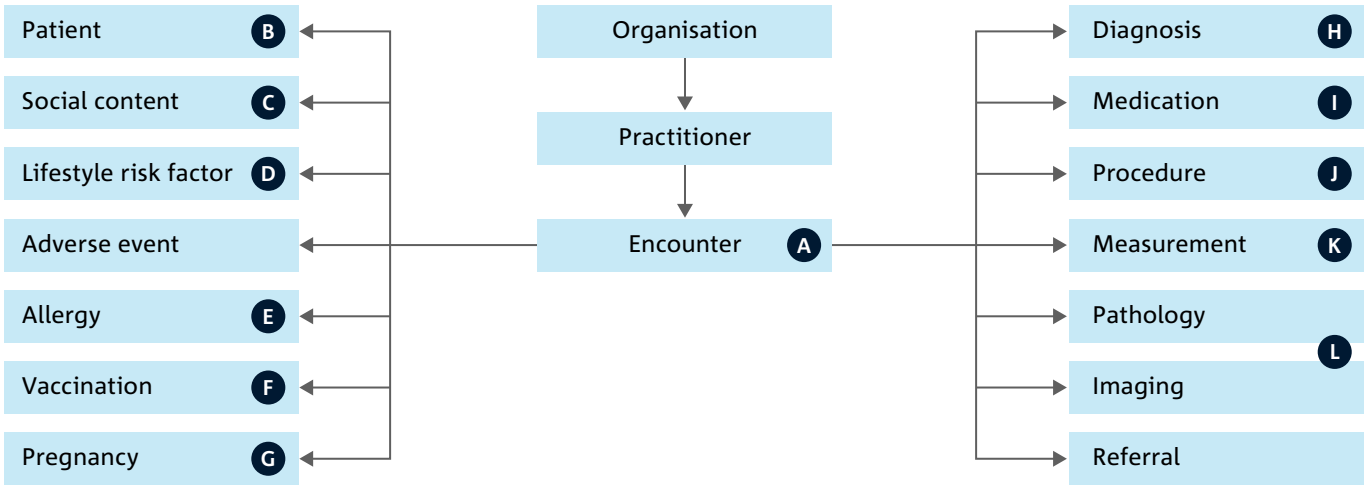

Figure 25. The AIHW view of healthcare data

When the elements (tagged with letters) in Figure 25 are then mapped against the AUCDI work plan, the result can be seen in Figure 26.[50] Two of the AIHW elements (adverse event and referral) cannot be mapped to existing work plan elements and are shown as potential new elements for the work plan.

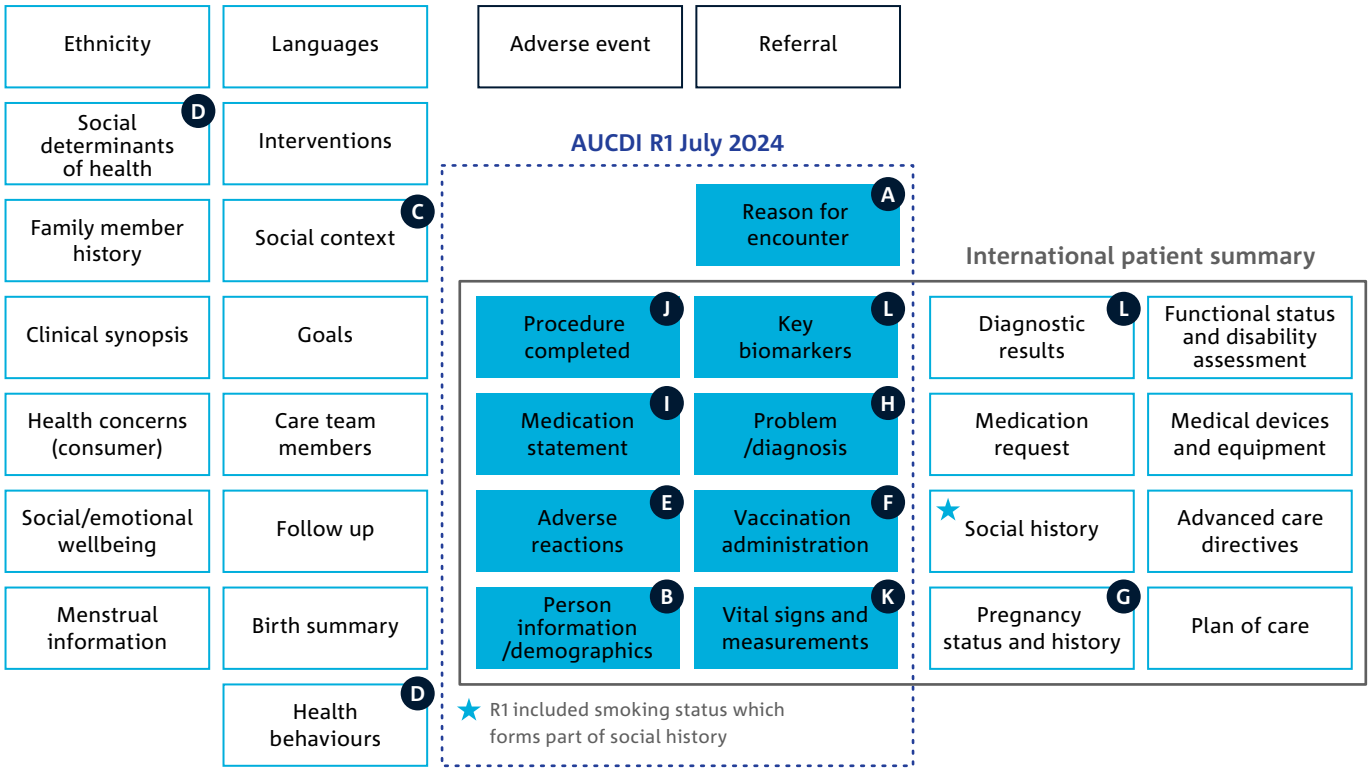

Figure 26. Mapping AIHW to the AUCDI work plan and IPS

A.2.4 Mapping the Aged Care Transfer Summary

The Aged Care Transfer Summary is a set of three records that can be used between an aged care facility and a hospital (see Appendix E for details). While these records largely comprise an attached PDF containing data which can be dependent on the systems generating the content, these can be broadly mapped against the AUCDI work plan, as shown in Figure 27.

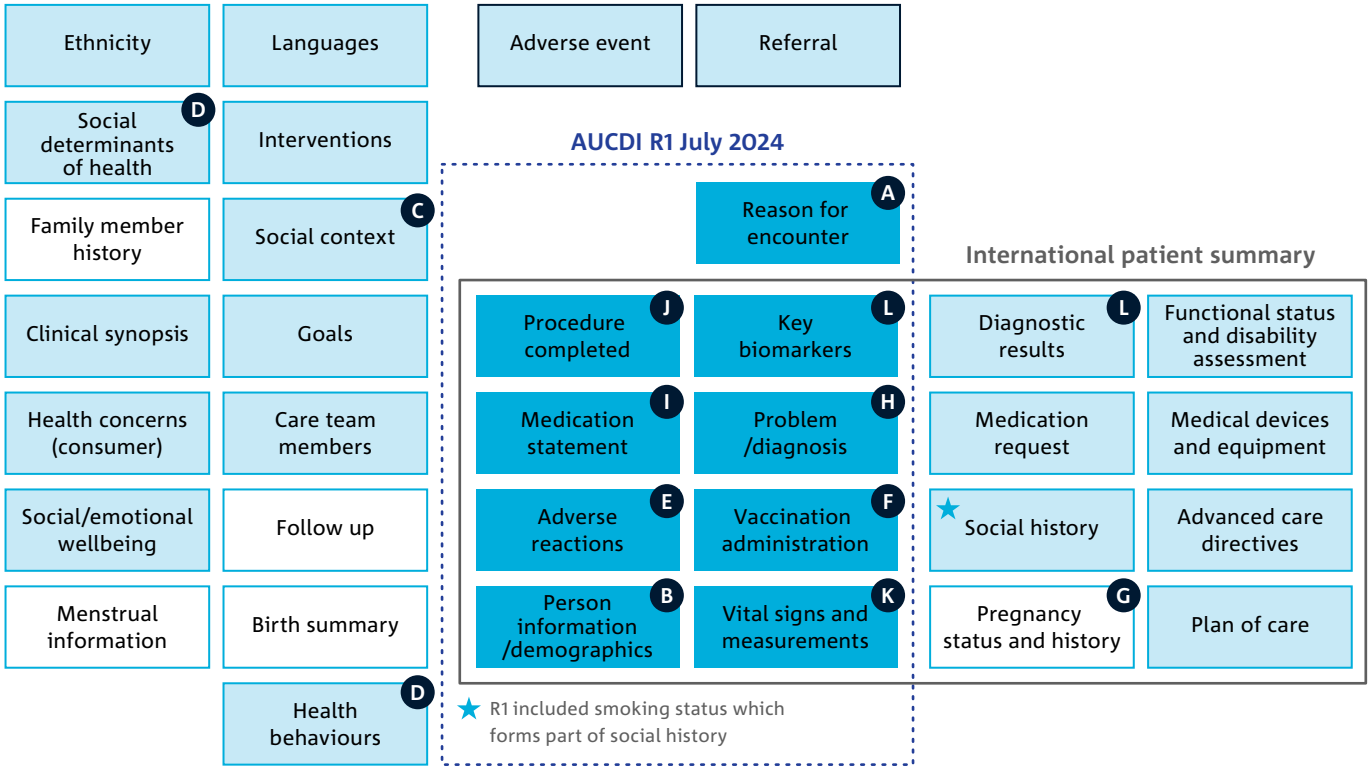

Figure 27. Mapping the ACST records against the AUCDI work plan

B. Stakeholders in the aged care data landscape

In establishing an Australian aged care data landscape, it is important to understand the stakeholders in that ecosystem. Some of these stakeholders are primary sources of aged care data, while others aggregate and report at a population level. This chapter outlines the approach to classifying these stakeholders and how the aged care data landscape supports comparison, between the roles, organisations play.

B.1 Identifying the sector stakeholders

At the highest level, these groups can be identified in the aged care sector:

- government departments and their agencies
- aged care service providers (ACSP)
- healthcare providers
- researchers
- consumers.

Each group is further explored below.

B.1.1 Government departments and their agencies and funded organisations

Government departments and their agencies play an important role in the aged care and community sector by setting policies, standards, and regulations to ensure the quality and safety of services. They also assign funding, oversee compliance, and collect and manage data to inform policy and program improvements.

In Australia, these organisations include:

- **Australian Government DoHAC**, including:
  - **Ageing and Aged Care Division** – the Division's role is to deliver the Australian Government's priorities (outcomes) for aged care, including delivering reforms recommended by The Commission
  - **AIHW** – an independent statutory authority set-up by the Australian Government to improve the health and wellbeing of Australians by providing reliable, regular, and relevant information and statistics on Australia's health and welfare
  - **Australian Digital Health Agency** – is tasked with improving health outcomes for all Australians using digital health technologies
  - **Aged Care Quality and Safety Commission** (ACQSC) – protects and enhances the safety, health, wellbeing and quality of life of aged care consumers
  - **Australian Commission on Safety and Quality in Health Care** (ACSQHC) – leads and coordinates national improvements in the safety and quality of health care
  - **Independent Health and Aged Care Pricing Authority** (IHACPA) – helps the Australian Government to fund hospital and aged care services more efficiently by providing evidence-based price determinations and pricing advice

- **Australian Government Department of Veterans Affairs** (DVA) – the primary service delivery agency responsible for creating programs that help the veteran and defence force communities
- **Australian Government Department of Social Services** (DSS) – responsible for a diverse range of policies, payments, programs and services that improve the lifetime wellbeing of people and families in Australia, including:
  - **National Disability Insurance Agency** (NDIA) – delivers the National Disability Insurance Scheme (NDIS)
- **Healthdirect Australia** – the national virtual public health information service
- **PHNs** – a network of 31 independent organisations funded by DoHAC working to streamline health services – particularly for those at risk of poor health outcomes – and to better coordinate care
- **State & territory health departments** and their agencies are responsible for public hospitals and registration of service providers. Sometimes, state and territory departments also operate aged care facilities.

B.1.2 Aged care service providers

An aged or community care service provider in Australia manages services that cater to older Australians, including residential care, home care, and home support. These providers may run multiple services across various aged care programs and receive funding from the Australian Government for approved services. Services may include:

- **Residential care:** Long-term care provided in a residential facility, including accommodation, meals, personal care, and nursing care for older individuals who can no longer live independently.
- **Home care:** Support services delivered at an individual's home, such as help with daily tasks, personal care, and medical assistance, enabling them to maintain independence and continue living at home.
- **Home support:** Basic assistance provided to older Australians to help them with everyday activities, such as cleaning, gardening, and transportation, aimed at improving their quality of life and supporting their ability to live independently.

Aged care services are run by not-for-profit (religious, charitable and community), government (state, territory or local), and private commercial organisations. They typically employ or have contractual arrangements with clinical staff (such as nurses, allied health professionals and in some case general professionals) and personal care workers.[51]

B.1.3 Healthcare providers

Australia's healthcare system provides comprehensive care through primary, secondary, and tertiary health services. These levels of care make sure Australians receive medical attention based on the complexity and urgency of their health needs.[52]

- **Primary care** - Primary care forms the foundation of the Australian healthcare system. It is the first point of contact for individuals seeking medical assistance and includes a wide range of services aimed at maintaining health, preventing illness, and managing chronic conditions. Primary care providers play an important role in making sure patients receive timely and effective care, which can prevent the progression of diseases and reduce the need for more intensive medical interventions.[53–55] Key providers of primary care include:
  - **GPs:** Primary care doctors who provide comprehensive and ongoing care to patients. They diagnose and treat a wide range of health issues and coordinate patient care with specialists.
  - **Nurses:** Healthcare professionals who provide patient care, administer medications, and support doctors in various medical settings. They can specialise in areas such as aged care, mental health, or emergency care.
  - **Pharmacists:** Professionals who dispense medications, provide drug information, and offer advice on medication management. They work in community pharmacies, hospitals, and other healthcare settings.
  - **Allied health professionals:** A diverse group that includes physiotherapists, occupational therapists, speech therapists, dietitians, dental professionals and social workers. They provide specialised services to support patient health and wellbeing.

    Primary care services in Australia are delivered through a network of local providers, including community health services, which offer a wide range of health and wellbeing services to the community, including preventive care, health education, and support for chronic conditions. The PHNs help to streamline health services and improving care coordination, particularly for those at risk of poor health outcomes.

- **Secondary care:** Secondary care encompasses specialist services that patients are referred to by their primary care providers for further diagnosis, treatment, or management of specific health conditions. It typically involves care provided by medical specialists and other health professionals who have advanced training and knowledge in particular areas of medicine.[54] Key providers of secondary care include:
  - **Specialists:** Doctors who have completed advanced education and training in a specific area of medicine. They provide expert care for complex medical conditions and may work in hospitals or private practices. This can include a range of healthcare providers such as surgeons, anaesthetists, and medical technicians. Of relevance, a geriatrician is a medical doctor specialising in the care, diagnosis, and treatment of elderly patients, focusing on managing their complex health needs and promoting their overall wellbeing.
  - **Mental health services:** Include psychiatrists, psychologists, counsellors, and social workers who provide care and support for individuals experiencing mental health issues.

    Secondary care often requires referral from a GP or other primary care provider. Patients might seek secondary care for conditions that need specialist assessment, such as cardiology, endocrinology, or orthopaedic services. This level of care is essential for managing more complex health issues that cannot be adequately discussed within the primary care setting.

- **Tertiary/quaternary care** - Tertiary/quaternary care involves highly specialised medical treatment and advanced surgical procedures in specialised facilities, often affiliated with medical schools or research institutions. Tertiary care is usually required for severe, complex, or rare conditions that require sophisticated equipment and knowledge.[53] Key providers of tertiary care include:
  - **Tertiary hospitals:** Large, comprehensive hospitals equipped with advanced diagnostic and treatment technologies. They offer a wide range of specialised services, including intensive care units, neonatal care, and advanced surgical procedures.
  - **Specialised centres:** Facilities dedicated to specific types of care, such as cancer treatment centres, transplant units, and cardiovascular centres.
  - **Research and teaching hospitals:** Institutions that provide patient care and engage in medical research and education, contributing to the advancement of medical knowledge and practices.

    Tertiary and quaternary care is often accessed through referral from secondary care providers. This level of care is critical for patients requiring intensive and specialised treatment, such as organ transplants, neurosurgery, or complex cancer therapies.

- **Assessment organisations**: Assessment organisations are responsible for conducting evaluations when care recipients seek aged care services. Aged care needs assessors are qualified professionals who perform assessments for home support and comprehensive care. These assessors can be clinical or non-clinical. They evaluate the needs of care recipients for government-subsidised aged care services, whether at home or in an aged care facility.[56]

B.1.4 Researchers

Researchers in Australia play an important role in creating evidence-based practices. They conduct studies that explore various aspects of ageing, from the effectiveness of different care models to the impact of policies on the wellbeing of the elderly. By analysing data and producing insights, researchers help to identify best practices and areas requiring improvement, ultimately enhancing the quality of care delivered to older Australians. For example, the Ageing and Health Research Group at the University of Sydney focuses on enhancing health, independence, wellbeing, and community participation of older Australians.[57]

Researchers collaborate with healthcare providers, policymakers, and community organisations to translate their findings into practical solutions. They help to evaluate the outcomes of aged care programs, ensuring interventions are both effective and sustainable. Their work supports the ongoing refinement of aged care services, making them more responsive to the evolving needs of the ageing population. For example, the Aged Care Research, Translation and Impact Network established by Australian Health Research Alliance (AHRA) draws on the resources of Australia's most research-intensive health services, universities, and institutes to focus on research translation.[58] Additionally, the ROSA integrates cross-sectoral data to inform aged care policies and practices.[26]

Through rigorous research and continuous inquiry, researchers help to advance the standards of care and inform future health and social care policies. This is clear in various studies and reports, such as those conducted by the AIHW and The Commission.[59,6]

B.1.5 Care recipients (and their caregivers)

In Australia, aged care services are provided in various settings to meet the diverse needs of care recipients. These settings make sure individuals receive care and support, whether they are living independently, with family, or in a residential facility. These settings include:

- **Residential aged care facilities**: These facilities provide 24-hour care and support for older Australians who can no longer live independently. Services include personal care, nursing care, accommodation, meals, and social activities. Residential aged care homes are designed to offer a safe and supportive environment for residents.[61]
- **Home care**: Home care services let consumers receive care and support while remaining in their own homes. This can include help with daily activities such as bathing, dressing, and meal preparation, as well as nursing care and therapy services. Home care aims to help individuals maintain their independence and quality of life.[61]
- **Community care**: Community care services are provided in various community settings, such as community centres or day care centres. These services can include social support, respite care, and health services. Community care helps individuals stay connected with their community and access the support they need.[61]
- **Short-term restorative care**: This care is designed to help individuals improve their independence and quality of life after a hospital stay or a decline in health. It can be in the consumer's home or in a residential care setting and includes services such as physiotherapy, occupational therapy, and nursing care.[61]
- **Respite care**: Respite care provides temporary relief for primary caregivers by offering short-term care for the individual in need. This can be in the consumer's home, in a residential care facility, or in a community setting. Respite care lets caregivers take a break while making sure their loved one continues to receive the necessary care and support.[61]

While the focus of this category is the recipients of care, this also includes those caregivers associated with the care recipient. This may include family and friends, paid caregivers, and those who hold powers of attorney for those care recipients unable to make decisions about their care.

B.1.6 Other sector stakeholders

The following should also be considered as stakeholders to the aged care sector:

- **The Royal Commission into Aged Care Quality and Safety** – Established in 2018 The Commission inquired into the quality of aged care services in Australia, whether those services were meeting the needs of the community, and how they could be improved. While the work of The Commission is complete, implementing its recommendations is ongoing.[1]
- **Office of the Inspector-General of Aged Care** – The Office of the Inspector-General of Aged Care is an independent statutory agency led by the Inspector-General. It has oversight of the administration, regulation, and funding of the aged care system by the Australian Government, including the:
  - Department of Health and Aged Care
  - Aged Care Quality and Safety Commission
  - Independent Health and Aged Care Pricing Authority
  - other services or bodies in the aged care system regulated or funded by the government.[62]
- **IHACPA** – IHACPA is an independent government agency that assists the Australian Government to fund hospital and aged care services more efficiently by providing evidence-based price determinations and pricing advice. In 2022, the scope of IHACPA's functions were expanded under various legislations to provide advice about certain aged care pricing and costing matters to each relevant Commonwealth Minister and to approve higher maximum accommodation payment amounts and extra service fees for residential aged care.[63]
- **Software development community** – The software used by service providers in the aged care sector is developed by Australian and international software vendors. This software covers a range of application areas, including:
  - medication management
  - clinical information systems such as electronic medical records
  - regulatory reporting
  - accommodation and services such as catering
  - billing and claiming to care recipients and other funders
  - human resource management and rostering
  - infrastructure and asset management.[64]
- **Device manufacturers** – A growing community in aged care (and health care) is those organisations developing devices used to monitor the health and welfare of care recipients. This also includes manufacturers of tablet and other point of care computing devices. All these devices capture data that is relevant to the sector and which needs to be standardised to support better interoperability and data reuse.
- **Standards development organisations** – Organisations such as HL7 Australia and openEHR are responsible for creating and maintaining data exchange standards for the healthcare sector.[65,66]
- **interRAI** – An international collaborative network of researchers, interRAI aims to improve the quality of life for vulnerable populations through standardised assessments and data collection in aged care. By providing comprehensive assessment systems, interRAI helps ensure consistent and high-quality care across various settings.[48] interRAI has been mandated for use in functional assessment of older people in countries such as Belgium, most Canadian provinces, Finland, New Zealand, Singapore, Switzerland, and the USA.

C. Applying for an assessment

Application for an assessment is typically made by a care recipient or their caregiver via the My Aged Care website. When this method is chosen, the following details are required when applying for an aged care assessment. This information is typically captured as text fields in the My Aged Care website:

Part A – Eligibility

- Date of birth
- Aboriginal or Torres Strait Islander status
- Type of help needed (in-home or residential)
- Daily activities where help is needed
  - Getting out of bed or chairs
  - Walking
  - Going to the toilet, wipe and redress
  - Taking a bath or shower
  - Getting dressed
  - Eating a meal
  - Preparing a meal
  - Taking medicine
  - Basic housework
  - Driving or taking public transport
  - Shopping for groceries
  - Managing money and paying bills
- **Is care currently being provided?**
- **Recent experiences**
  - Stay at hospital
  - A slip, trip or fall
  - An illness or disease
  - Sudden weight changes
- **Recent feelings**
  - Anxious or depressed
  - Confused or finding it difficult to remember things
  - Behaviour is changing
  - Lonely or socially isolated
- **Changes in circumstances**
  - Family or friends no longer able to help
  - Living arrangements changed
  - Experiencing financial hardship
  - Worry for safety when left alone

Part B – Application

- **Name of proposed care recipient**
- **Medicare card number**
- **Contact details**
  - Address
  - Telephone
  - Email
- **Support person**
  - Name
  - Address
  - Telephone
  - Email
  - Relationship

This is valid as at the date of this report.[67]

D. IAT data elements

The Integrated Assessment Tool (IAT) is the new assessment tool for older Australians who are seeking to access government subsidised aged care services. The IAT builds on the previous National Assessment and Screening Form (NSAF) and learnings from the two trials of previous IAT prototypes in 2022 and 2023.

The IAT has three components:

- Triage – a process to determine priority of assessment needs for older Australians
- Assessment – an assessment of aged care needs for older Australians
- Support plan – a summary of assessment findings, goals and recommendations.

This appendix provides a list of data elements (by section) contained in the IAT (please see Table 16). This information is based on version 2.2 of the *Integrated Assessment Tool (IAT) User Guide*.[68]

Table 16. List of sections and data elements forming the IAT

QUESTION	RESPONSE OPTIONS
TRIAGE SECTION	
Triage Details	
Date of triage	Select date of triage from calendar
Registration screen information collected from	Client, Client's carer, family member and/or other, Client's representative, Client's general practitioner, Representative of service provider, Health professional, Aboriginal liaison officer, Aged care connector and coordinator, Care finder, Via interpreter, Agent, Other – please specify
Is the client currently an admitted hospital in-patient?	No, Yes
Assessor notes	Textbox for written response
Reason for Assessment	
What is the key circumstance that has triggered client/representative making contact?	Referral from health professional, Hospital discharge, Fall(s), Medical condition(s), Difficulties with activities of daily living, Change in caring arrangements, Change in care needs, Change in living arrangements, Change in cognitive status, Change in mental health status, Other
Assessors comments about trigger	Textbox for written response
How long has the client experienced this circumstance?	Recent acute illness/event, Gradual increase in needs over time, Long term disability, Other
Comments about circumstance	Textbox for written response
What is the main reason for seeking assistance?	Improve current level of function and/or independence after a recent acute illness/event, Improve current level of function and/or independence (other), Maintain current level of function and/or independence, Reduce rate of decline in level of function and/or independence, Other
Current access to services	
Are you currently receiving any aged care services?	No, Not sure, Yes
What aged care services are you currently receiving?	Textbox for written response
Function	
Are you able to walk?	Yes, No, Somewhat
Are you able to take a bath or shower?	Yes, No, Somewhat

QUESTION	RESPONSE OPTIONS
Are you able to transfer yourself from a chair, bed etc?	Yes, No, Somewhat
Are you able to dress yourself?	Yes, No, Somewhat
Are you able to get to places out of walking distance?	Yes, No, Somewhat
Are you able to undertake housework?	Yes, No, Somewhat
Are you able to shop for groceries on your own?	Yes, No, Somewhat
Are you able to drive or take public transport?	Yes, No, Somewhat
Are you able to prepare meals?	Yes, No, Somewhat
Are you able to go to the toilet, wipe and re-dress?	Yes, No, Somewhat
Summary of function notes	Textbox for written response
General health	
How much have health issues affected your normal activities (outside and/or inside the home) during the past 4 weeks?	Not at all, Slightly, Moderately, Quite a bit
Have you had any recent falls or near miss falls in last 4 weeks?	Yes, No, Unsure
During the past month, has it often been too painful to do many of your day to day activities?	Yes, No, Unsure
Do you have any weight loss or nutritional concerns?	Yes, No, Unsure
General health notes	Textbox for written response
General wellbeing and safety	
Do you ever feel lonely, down or socially isolated?	No not at all, Occasionally, Sometimes, Most of the time. Not sure
Do you think you have any memory loss or confusion?	No not at all, Occasionally, Sometimes, Most of the time. Not sure
Are there any risks, hazards or safety concerns in your home including any environmental concerns?	Yes, No, Unsure
General wellbeing and safety notes	Textbox for written response
Advice for assessment	
What type of assessor is recommended for client assessment?	Clinical, Non-clinical, Not eligible for assessment
Require an urgent assessment?	High urgency - Client is in hospital, High urgency - Client is at immediate risk of self-harm or in a crisis situation (e.g. client carer incapacitated), High urgency - Client from a vulnerable cohort and/or has complexity, Medium urgency - Client at home but needing services, Urgent assessment not required
Linking supports suggested for assessment	Textbox for written response
Priority of assessment	High, Medium, Low
Outcome/advice for assessment notes	Textbox for written response

QUESTION	RESPONSE OPTIONS
ASSESSMENT DETAILS SECTION	
Date of assessment	Select date of assessment from calendar
Stakeholders consulted prior to the assessment	Yes, No
Mode of assessment	Face-to-face, Over the phone, Via telehealth
Assessment setting	Client's home, Carer's home, Other community setting, Residential aged care service, Private hospital, Public hospital, Other hospital in-patient setting – private, Other hospital in-patient setting – public, Clinic or other health setting not otherwise specified, Other
Assessment information collected from	Client, Client's carer, Client's representative, Client's GP, Service provider, Healthcare professional, Aboriginal liaison officer, Aged care connector and coordinator, Care finders, Via interpreter, Agent, Other – provide details
Professions who participated in the client assessment	Medical practitioners (Generalist medical practitioner, Geriatrician, Psychogeriatrician, Psychiatrist, Rehabilitation specialist, Other medical practitioners), Nursing Professionals (Nurse manager, Nurse educator and researcher, Registered nurse, Registered mental health nurse, Registered development disability nurse, Other nursing professional), Health Professionals (Occupational therapist, Physiotherapist, Speech pathologist/therapist, Podiatrist, Pharmacist, Aboriginal health worker, Other health professional), Social Welfare Professionals (Social worker, Welfare and community worker, Counsellor, Psychologist, Other social professional), Interpreter, Other professional
Assessor notes	Text box for written response
REASON FOR ASSESSMENT SECTION	
Circumstance triggering contact	Referral from a health professional, Hospital discharge, Fall(s), Medical condition(s), Difficulties with activities of daily living, Change in caring arrangement, Change in care needs, Change in living arrangement, Change in cognitive status, Change in mental health status, Experiencing social isolation/loneliness, Other
How long has the client experienced this circumstance?	Recent acute illness/event, Gradual increase in needs over time, Long term disability, Other
What is the main reason for seeking assistance?	Improve current level of function and/or independence after a recent acute illness/event, Improve current level of function and/or independence (other), Maintain current level of function and/or independence, Reduce rate of decline in level of function and/or independence, Other
CARER PROFILE SECTION	
How many people excluding the client live in the same household as the client?	Text box for number response
Carer	
Is the client receiving help from a carer, family member, friend, or someone else?	Yes, No
If 'yes', please select an option below	Has a carer(s), Has no carer, Not applicable – no carer required, Not applicable – paid carer
Details of carer(s)	Text box for name and phone number
Relationship to client	Partner, Mother, Father, Daughter, Son, Daughter in law, Son in law, Other relative, Friend/ neighbour, Other (please specify)
Does the person helping live with the client?	Yes, No
Does the person helping the client have paid employment?	Yes, full time, Yes, part time, No
Types of support provided by person helping the client	Light cleaning/housework, Heavy cleaning/housework, Shopping, Cooking/meals, Showering/ bathing, Transport, Laundry (including washing and hanging), Dressing, Social support/company, Mobility, Medication management, Supervision, Care coordination, Accompanying to medical appointments, Community access, Therapy assistance, Help with administration/paperwork, Decision making support, Behaviour support, Emotional support, Communication support, Overnight assistance, Chronic disease management, Continence support, Wound care, Other
Are there factors affecting carer availability and sustainability of care relationship?	Yes, No

QUESTION	RESPONSE OPTIONS
Factors affecting carer availability and sustainability of care relationship	Carer's emotional health and wellbeing, Carer's physical health and wellbeing, Carer has other responsibilities, Carer's work/study hours, Other impacts of care
Typical hours per day carer provides help	Textbox for written response
Respite and emergency care	
Are there formal and/or informal respite arrangements in place?	Yes, No
Are there any respite arrangements short (12 weeks or less) or long term in place?	Short-term, Long-term
Is there emergency care plan in place?	Yes, No
Details	Textbox for written response
Assessors notes about caring relationship	Textbox for written response
Client as a Carer	
Client is providing support to someone else	Yes, No
Name	Textbox for written response
Relationship to the person the client is caring for	Partner, Mother, Father, Daughter, Son, Daughter in law, Son in law, Other relative, Friend/ neighbour, Other (please specify)
Which category does the person the client is caring for match?	≥ 65 years old and not Aboriginal or Torres Strait Islander, ≥ 50 years old and is an Aboriginal or Torres Strait Islander, ≥ 45 years old and is an Aboriginal or Torres Strait Islander and homelessness or at risk of homelessness as a result of experiencing housing stress or not having secure accommodation, ≥ 50 and over and not Aboriginal and Torres Strait Islander and who are homeless or at risk of homelessness as a result of experiencing housing stress or not having secure accommodation, Does not meet any of above criteria, Other (please describe)
Describe the types of support provided by client	Textbox for written response
Assessors notes	Textbox for written response
MEDICAL AND MEDICATIONS SECTION	
Medical Treatments	
Client in receipt of medical treatments	Drip infusion in vein, Home Dialysis (peritoneal or haemodialysis), Centre/hospital Dialysis, Stoma care, Oxygen Therapy, Use of ventilator, Tracheostomy care, Nursing care for pain, Enteral Feeding Supplement – Bolus, Enteral Feeding Supplement – Non-bolus, Parenteral feeding (intra-venous hyperalimentation), Care for chronic ulcer, Urethral catheter
Health Conditions	
Health conditions	Select from dropdown
Diagnosis status	Client reported, GP confirmed, Hospital confirmed, Other health practitioner confirmed
Impact of health issues on normal activities (outside or inside the home) during the past 4 weeks	Not at all, Slightly, Moderately, Quite a bit
Advanced Medical Assessment	
Recent GP visits and health checks	Yes, No
Specify	Textbox for written response
Recent hospital admittance	No, Yes planned, Yes unplanned
Details	Textbox for written response
Allergies and/or sensitivities	Yes, No
Specify	Textbox for written response
Source of reported allergies/ sensitivities	Client reported, Health professional reported

QUESTION	RESPONSE OPTIONS
Medications	
Is the client taking medications?	Yes, No
How many medications does the client currently take, including over the counter medicines?	0 to 4, 5 to 14, 15 or more
Assessors notes – medication	Textbox for written response
Assessor notes	Textbox for written response
FUNCTIONS SECTION	
General observations of client	Textbox for written response
Health literacy difficulties	Yes, No
Details of health literacy difficulties	Textbox for written response
Get to places out of walking distance	
Get to places out of walking distance	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Ability to drive	
Does the client drive?	Yes, No
If client does not drive, who assists the client to get to places out of walking distance?	Partner, Parent, Other family member (daughter, daughter-in-law, son-in-law, other relative), Friend/neighbour, Taxi, Aged care service provider transport service, Other
Undertake light housework	
Are you able to undertake light housework?	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Undertake housework (heavy or moderate)	
Undertake housework (heavy/ moderate)	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Go shopping	
Go shopping (assuming transportation)	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Prepare meals	
Prepare meals	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response

QUESTION	RESPONSE OPTIONS
Take medicine	
Take medicine	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Handle money	
Handle money	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Use telephone	
Use telephone	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Use other communication device/s	
Use other communication device/s	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Use online services	
Use online services	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Walk	
Walk	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Wheelchair mobility	
Wheelchair mobility	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Climb stairs	
Climb stairs	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response

QUESTION	RESPONSE OPTIONS
Take a bath or shower	
Take a bath or shower	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Dressing	
Dressing	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Grooming	
Grooming	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Eating	
Eating	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Transfers	
Transfers	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Upper body strength	
Upper body strength	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Toilet use	
Toilet use	Without help, With some help, Completely unable
Who helps?	No one, Informal carer(s), Aged care service provider(s), Other
Is the need being met?	Completely unmet, Partially met, Completely met, Client does not require assistance
Any additional details?	Textbox for written response
Toileting – bladder	
Toileting – bladder	Continent (for over 7 days), Occasional accident (max. once per 24 hours), Incontinent, or catheterised and unable to manage
Is client managing urinary incontinence issue?	Yes, No
Is the client able/willing to complete the Revised Urinary Incontinence Scale?	Yes, No

QUESTION	RESPONSE OPTIONS
Urine leakage related to the feeling of urgency	Not at all, Slightly, Moderately, Greatly
Urine leakage related to physical activity, coughing or sneezing	Not at all, Slightly, Moderately, Greatly
Small amounts of urine leakage (drops)	Not at all, Slightly, Moderately, Greatly
How often do you experience urine leakage?	Never, Less than once a month, A few times a month, A few times a week, Every day and/or night
How much urine do you lose each time?	None, Drops, Small splashes, More
Toileting – Bowels	
Toileting – Bowels	Incontinent (or needs to be given enemata), Occasional accident (once/week), Continent
Is client managing bowel incontinence issue?	Yes, No
Is the client able to complete the Revised Faecal Incontinence Scale?	Yes, No
Client bowel incontinence severity	Occasional, Mild, Moderate, Severe
Do you leak, have accidents or lose control with solid stool?	Never, Rarely i.e. less than once in the past four weeks, Sometimes i.e. less than once a week, but once or more in the past four weeks, Often or usually i.e. less than once a day but once a week or more, Always i.e. once or more per day or whenever you have a bowel movement
Do you leak, have accidents or lose control with liquid stool?	Never, Rarely i.e. less than once in the past four weeks, Sometimes i.e. less than
DEMMI MODIFIED SECTION	
Bridge	Unable, Able
Roll onto side	Unable, Able
Lying to sitting	Unable, Minimal assistance, Supervision, Independent
Sit unsupported in chair	Unable, 10 seconds
Sit to stand from chair	Unable, Minimal assistance, Supervision, Independent
Sit to stand without using arms	Unable, Able
Stand unsupported	Unable, 10 seconds
Stand feet together	Unable, 10 seconds
Stand on toes	Unable, 10 seconds
Tandem stand with eyes closed	Unable, 10 seconds
Walking distance +/- gait aid	Unable, 5 metres, 10 metres, 20 metres, 50 metres
Walking independence	Unable, Minimal assistance, Supervision, Independent with gait aid, Independent without gait aid
PHYSICAL, PERSONAL HEALTH AND FRAILTY SECTION	
Sensory concerns	Yes, No
Vision concerns	Low vision, Monocular blindness, Binocular blindness, Other
Hearing concerns	Poor hearing, Deafness, Other
Speech concerns	Yes, No
Somato Sensory (relating to sensation anywhere in the body)	Pressure, Pain, Warmth, Other
Any oral health concerns? (e.g. problems with teeth, mouth and/or dentures)	Yes, No
Do you have any problems with swallowing causing difficulties when you eat or drink?	No, Yes always (provide details), Yes sometimes (provide details), Yes rarely (provide details), Other (provide details)

QUESTION	RESPONSE OPTIONS
Any foot problems that affect your ability to walk or move about?	Yes, No
Foot problems	Painful feet including painful corns, arthritis, Bunions, Gout, Swollen ankles/feet, Toe deformities (hammer, mallet, and claw toes), Fallen arches, Other
Any major skin conditions?	Yes, No
Select all that apply	Pressure ulcer, Other skin ulcer, Healing surgical wounds, Other skin tears, cuts and lesions, Other skin problems (e.g. bruising, rashes, itching, eczema etc), Other, please specify
During the past month, has it often been too painful to do many of your day to day activities?	Yes, No
Do you experience any difficulties with sleep (e.g. difficulty falling asleep, fragmented sleep, insufficient sleep)?	Yes, No
How often do you have six or more drinks on one occasion?	Never, Less than monthly, Monthly, Weekly, Daily or almost daily
Do you smoke or have you smoked in the past?	Never smoked, Has quit smoking, Currently smokes
When did you quit smoking?	Textbox for written response
Do you want to be a smoker?	Yes, No
In the past year, have you used an illegal or prescriptive drug for non-medical reasons?	Never, Once or twice, Monthly, Weekly, Daily or almost daily
Have you had any falls or near falls in the last 12 months?	Yes, No
How many falls or near falls in the last 12 months?	Textbox for written response
Have you had any falls or near falls in the last 4 weeks?	Yes, No
How many falls or near falls in last 4 weeks?	Textbox for written response
Assessors notes about falls	Textbox for written response
Have you unintentionally lost any weight in the last three months?	No weight loss, 1-5 kgs or less than 5% of body weight, More than 5kg or more than 5% of body weight
How much of your time in the past 4 weeks did you feel tired?	All the time, Some, a little or none of the time
In the past 4 weeks, by yourself and not using aids, do you have any difficulty walking up 10 steps without resting?	Yes, No
In the past 4 weeks, by yourself and not using aids, do you have any difficulty walking 300 m or around the block?	Yes, No
Does the client have any of these illnesses?	Hypertension, Diabetes, Cancer (not a minor skin cancer), Chronic lung disease, Heart attack, Congestive heart failure, Angina, Asthma, Arthritis, Kidney disease
Assessors notes about frailty	Textbox for written response
SOCIAL SECTION	
Do you ever feel lonely, down or socially isolated?	No, not at all, Occasionally, Sometimes, Most of the time, Not sure
Do you get to have a yarn and spend time with family or friends?	All the time, Most of the time, Sometimes, Not much, Never

QUESTION	RESPONSE OPTIONS
Do you feel you spend enough time connecting to country?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel connected to the Aboriginal community?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel connected to cultural ways?	All the time, Most of the time, Sometimes, Not much, Never
Do you do things to take care of your health?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel respected and valued as an elder/older person?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel you can share your knowledge and stories with the younger mob?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel the services you use are respectful and support your needs?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel you have a safe place to live?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel safe and supported in your spiritual beliefs?	All the time, Most of the time, Sometimes, Not much, Never
Do you feel you have things in place as you grow older? (e.g. your future health and care, funeral wishes, family looked after)	All the time, Most of the time, Sometimes, Not much, Never
Do you feel you have enough money to get by? (e.g. for food, housing, clothing)	All the time, Most of the time, Sometimes, Not much, Never
Other than members of your family, how many persons in your local area do you feel you can depend on or feel very close to?	None, 1-2 people, More than 2 people
How many times during the past week did you spend time with someone who does not live with you, that is, you went to see them or they came to visit you or you went out together?	None, Once, Twice, Three times, Four times, Five times, Six times, Seven or more times
How many times did you talk or communicate to someone, friends, relatives or others on the telephone, mobile (e.g. text message) or social media (e.g. Facebook, Snapchat, Instagram) in the past week (either they contacted you or you contacted them)	None, Once, Twice, Three times, Four times, Five times, Six times, Seven or more times
About how often did you go to meetings of clubs, religious meetings or other groups that you belong to in the past week?	None, Once, Twice, Three times, Four times, Five times, Six times, Seven or more times
Does it seem that your family and friends (people who are important to you) understand you?	Hardly ever, Some of the time, Most of the time
Do you feel useful to your family and friends (people important to you)?	Hardly ever, Some of the time, Most of the time
Do you know what is going on with your family and friends?	Hardly ever, Some of the time, Most of the time

QUESTION	RESPONSE OPTIONS
When you are talking with your family and friends, do you feel you are being listened to?	Hardly ever, Some of the time, Most of the time
Do you feel you have a definite role (place) in your family and among your friends?	Hardly ever, Some of the time, Most of the time
Can you talk about your deepest problems with at least some of your family and friends?	Hardly ever, Some of the time, Most of the time
How satisfied are you with the kinds of relationships you have with your family and friends?	Very dissatisfied, Somewhat dissatisfied, Satisfied
Assessors observation about family, community engagement and support	Textbox for written response
COGNITION SECTION	
Does client have a confirmed dementia diagnosis from a geriatrician or neurologist?	Yes, No
Is it suitable the client complete the KICA COG?	Yes, No
Is it suitable the client complete the KICA COG regional urban?	Yes, No
Is it suitable the client complete the Step 1 GP Cog?	Yes, No
Is there an informant available to complete GPCog – Step 2?	Yes, No
Is there is an informant available to complete KICA carer?	Yes, No
What is the date? (exact only)	Correct, Incorrect
Please mark in all the numbers to indicate the hours of a clock (correct spacing required)	Correct, Incorrect
Please mark in hands to show 10 minutes past eleven o'clock (11:10)	Correct, Incorrect
Can you tell me something that happened in the news recently?	Correct, Incorrect
What was the name and address I asked you to remember?	Correct, Incorrect for one of the following items: John, Brown, West Street, Kensington, 42
Does the patient have more trouble remembering things that have happened recently than s/he used to?	Yes, No, Don't know, Not applicable
Does he or she have more trouble recalling conversations a few days later?	Yes, No, Don't know, Not applicable
When speaking, does the patient have more difficulty in finding the right word or tend to use the wrong words more often?	Yes, No, Don't know, Not applicable
Is the patient less able to manage money and financial affairs (e.g. paying bills, budgeting)?	Yes, No, Don't know, Not applicable
Does the patient need more assistance with transport (either private or public)? (If the patient has difficulties due only to physical problems, e.g. bad leg, tick 'no')	Yes, No, Don't know, Not applicable

QUESTION	RESPONSE OPTIONS
Short term memory problems	Unable to determine, Never, Occasionally, Regularly, Always
Long term memory problems	Unable to determine, Never, Occasionally, Regularly, Always
Impaired judgement	Unable to determine, Never, Occasionally, Regularly, Always
Delirium	Unable to determine, Never, Occasionally, Regularly, Always
At risk behaviour	Unable to determine, Never, Occasionally, Regularly, Always
Confusion	Unable to determine, Never, Occasionally, Regularly, Always
Disorientation – time	Unable to determine, Never, Occasionally, Regularly, Always
Disorientation – place	Unable to determine, Never, Occasionally, Regularly, Always
Disorientation – people	Unable to determine, Never, Occasionally, Regularly, Always
Assessors notes	Textbox for written response
BEHAVIOUR SECTION	
Does the client experience feeling aggression, agitated or have found themselves wandering?	Yes, No
Are there any reported changes in the client's personality?	Yes, No
Aggressive Behaviour – Verbal	Unable to determine, Never, Occasionally, Regularly, Always
Aggressive Behaviour – Physical	Unable to determine, Never, Occasionally, Regularly, Always
Resistive behaviour	Unable to determine, Never, Occasionally, Regularly, Always
Agitation	Unable to determine, Never, Occasionally, Regularly, Always
Hallucinations/delusions	Unable to determine, Never, Occasionally, Regularly, Always
Wandering	Unable to determine, Never, Occasionally, Regularly, Always
Assessors notes on behaviours	Textbox for written response
PSYCHOLOGICAL SECTION	
PHQ4: 1. Feeling nervous, anxious or on edge the last 2 weeks?	No, not at all (0), Several days (1), More than half of the days (2), Nearly every day (3)
PHQ4: 2. Not being able to stop or control worrying last 2 weeks?	No, not at all (0), Several days (1), More than half of the days (2), Nearly every day (3)
PHQ4: 3. Little interest or pleasure in doing things last 2 weeks?	No, not at all (0), Several days (1), More than half of the days (2), Nearly every day (3)
PHQ4: 4. Feeling down, depressed or hopeless last 2 weeks?	No, not at all (0), Several days (1), More than half of the days (2), Nearly every day (3)
Has the client experienced stressful events over the past three months (e.g. bereavement, severe illness or injury of self/family/friend, separation from family/partner, major financial loss or being a victim of a crime)	Yes, No
Please describe	Textbox for written response
Disturbed sleep/insomnia	Unable to determine, Never, Occasionally, Regularly, Always
Anxiety	Unable to determine, Never, Occasionally, Regularly, Always
Symptoms of depression	Unable to determine, Never, Occasionally, Regularly, Always
Apathy	Unable to determine, Never, Occasionally, Regularly, Always
Loneliness	Unable to determine, Never, Occasionally, Regularly, Always
Where a client lacks engagement with others, has a minimal number of social contacts and is deficient in fulfilling quality relationships.	Unable to determine, Never, Occasionally, Regularly, Always

QUESTION	RESPONSE OPTIONS
Do you want to complete the Geriatric Depression Scale?	Yes, No
Are you basically satisfied with your life?	Yes, No
Have you dropped many of your activities or interests?	Yes, No
Do you feel that your life is empty?	Yes, No
Do you often get bored?	Yes, No
Are you in good spirits most of the time?	Yes, No
Are you afraid that something bad is going to happen to you?	Yes, No
Do you feel happy most of the time?	Yes, No
Do you feel helpless?	Yes, No
Do you prefer to stay at home, rather than go out and do things?	Yes, No
Do you feel that you have more problems with memory than most?	Yes, No
Do you think it is wonderful to be alive now?	Yes, No
Do you feel pretty worthless the way you are now?	Yes, No
Do you feel full of energy?	Yes, No
Do you feel that your situation is hopeless?	Yes, No
Do you think that most people are better off then you are?	Yes, No
Assessor psychological observations	Textbox for written response
HOME AND PERSONAL SAFETY SECTION	
Access the home and garden and ask the client about: Any difficulty/ unsteadiness/need to hold onto doors or walls when on steps/ stairs or getting in and out of shower Any trouble getting on and off toilet Any trouble navigating the house at night Any near slips or trips on surfaces	Home and garden are safe, Minimal environmental hazards, Moderate environmental hazards requiring modification, Extremely unsafe environment
General observations of the home environment	Textbox for written response
Home safety equipment client has	Smoke alarm(s), Personal alarm, Personal emergency plan, Other technology
Characteristics of client's house	Single storey no steps inside or outside home, Single storey with some internal or external steps, Multi storey with stairs, Multi storey with stairs and chair lift or elevator in home
Characteristics of client's garden	Mowing and/or gardening (weeding, hedging etc.) required, Mowing only required, Gardening only (weeding, hedging etc) required, No garden
Home maintenance (including gardening) concerns	Yes, No
Please specify	Textbox for written response
There is help for client's home maintenance	Yes, No

QUESTION	RESPONSE OPTIONS
If yes, who helps?	Partner, Mother, Father, Daughter, Son, Daughter in law, Son in law, Other relative, Friend/ neighbour, Service provider, Other
Is the client living in unstable accommodation, such as having short term accommodation, having previous accommodation end, or living in a boarding house without the security of tenure?	Yes, No
Home and personal safety assessor notes	Textbox for written response
FINANCIAL OR LEGAL SECTION	
Are there any financial and legal issues?	Yes, No
Is the client capable of making their own decisions?	Yes, No
Is there a power of attorney?	Yes, No
Who makes or assist the client in making health decisions?	Self, Power of attorney, Advance health directive, Person responsible or appointed guardian
Who makes or assist the client in making financial decisions?	Self, Power of attorney, Advance health directive, Person responsible or appointed guardian
Do you have enough financial resources to meet emergencies?	Yes, No
Is the client subject to a Mental Health Act order under the relevant state/territory Mental Health Act?	Yes, No
Does the client have an Advance Care Plan?	Yes, No
What is the client's employment status?	Home duties, Retired for age, Retired for disability, Other
Financial or legal observations	Textbox for written response
SUPPORT CONSIDERATIONS SECTION	
At risk of, or suspected, or confirmed elder abuse?	Yes, No
What types of elder abuse is the client at risk of or suspected?	Financial, Physical (including restraint), Emotional, Sexual, Social, Neglect, Other
Is the client refusing assistance or services when they are clearly needed to maintain safety and wellbeing?	Yes, No
Any evidence that the client is self-neglecting of personal care, nutrition or safety?	Yes, No
Please specify	Textbox for written response
Risk client may cause harm to themselves or others	Yes, No
Does the client identify as:	from a culturally and linguistically diverse background, an Aboriginal and/or Torres Strait Islander person, Living in a rural or remote area, Financially or socially disadvantaged, A Veteran, Homeless, At risk of being homeless, a lesbian, gay, bisexual, transgender, or intersex person, A person separated from parents or children by forced adoption or removal, A socially isolated individual, Other – please specify
Assessor notes	Textbox for written response

QUESTION	RESPONSE OPTIONS
SUPPORT PLAN SECTION	
Assessment Summary	Textbox for written response
Functional Needs	Textbox for written response
Other Considerations	Social and community participation, Carer sustainability, Respite, Health literacy, Sensory concerns, Communication difficulties, Slips, trips and falls, Driving, Oral Health, Swallowing, Appetite, weight loss and fluid intake, Skin conditions, Pain, Sleep, Physical activity, Alcohol use, Recent hospitalisation, Health conditions, Allergies and/or sensitivities, Changes in memory and thinking, Changes in personality, Changes in behaviour, Feelings of nervousness or depression, Feelings of loneliness or social isolation, Psychological considerations, Home safety, Home maintenance (including gardening), Personal safety, Tobacco use
Complexity Indicators	Client is living in inadequate housing or with insecure tenure or is already homeless which compromises their health, wellbeing, and ability to remain living in the community, There is risk of, or suspected or confirmed abuse, Client has emotional or mental health issues that significantly limits self-care capacity, requires intensive supervision and/or frequent changes to support, Client is experiencing financial disadvantage or other barriers that threaten their access to services essential to their support, Client has experienced adverse effects of institutionalisation and/or system abuse (e.g. spending time in institutions, prisons, foster care. Residential care or out of home care) and is refusing assistance or services when they are clearly needed to maintain safety and wellbeing, Client is exposed to risks due to drug and/or alcohol related issues and likely to cause harm to themselves or others, Client is exposed to risks or is self-neglecting of personal care and/or safety and likely to cause harm to themselves or others, Client is exposed to risks or is self-neglecting personal care and/or safety and likely to cause harm to themselves and others, Client has a memory problem or confusion that significantly limits self-care capacity, requires intensive supervision and/or frequent changes to support
What is the area of concern?	Textbox for written response
What is the Client's Goal?	Textbox for written response
What are the client's current strengths and abilities in relation to this goal?	Textbox for written response
What are the client's current areas of difficulty or activities where the client needs support in order to achieve this goal?	Textbox for written response
What support does the client's carer provide to achieve this goal?	Textbox for written response
What is the focus of the goal for the client?	To regain a function? (e.g. physical, cognitive or social), To compensate for a declining function? (e.g. physical, cognitive or social), To receive care for a lost or declining function? (e.g. physical, cognitive or social)
How important is it to the client to achieve this goal?	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Goal Status	In progress, Achieved, No longer relevant
General Recommendations	Textbox for written response

QUESTION	RESPONSE OPTIONS
Service Recommendations	Allied Health and Therapy Services – ATSI Health Worker; Dietitian or Nutritionist; Diversional Therapy; Exercise Physiologist; Hydrotherapy; Occupational therapy; Ongoing Allied Health and Therapy Services; Other Allied Health and Therapy Services; Physiotherapy; Podiatry; Psychologist; Restorative Care Services; Social Work; Speech Pathology. Assistance with Care and Housing – Advocacy – Financial, Legal etc.; Assessment – Referrals etc.; Hoarding and Squalor. Case Management. Centre-based Respite – Centre Based Day Respite; Community Access – Group; Residential Day Respite. Client Care Coordination. Cottage Respite – Overnight Community Respite. Domestic Assistance – General House Cleaning; Linen services; Unaccompanied Shopping (delivered to home). Flexible Respite – Flexible Respite; Host Family Day Respite; Host Family overnight Respite; In-home Day Respite; In-home Overnight Respite; Mobile Respite; Other planned respite. Goods, equipment and assistive technology – Car Modification; Communication aids; Medical care aids; Other goods and equipment; Reading aids; Self-care aids; Support and mobility aids. Home maintenance – Garden Maintenance; Major Home Maintenance and Repairs; Minor Home Maintenance and Repairs. Assistive Technology/Home modifications (ATHM). Meals – At Centre; At Home. Multi-Purpose Service – Residential – Shared room + Ensuite; Shared room + no bathroom or Ensuite; Shared room + shared Bathroom; Single room + Ensuite; Single room + no bathroom or Ensuite; Single room + shared Bathroom. National ATSI Aged Care Program (NATSIFAC). Nursing. Other Food Services – Food Advice, Lessons, Training, Food Safety; Food Preparation in the Home. Personal Care – Assistance with client self-administration of medicine; Assistance with Self-Care. Social Support Group. Social Support Individual – Accompanied Activities e.g. Shopping; Telephone/Web Contact; Visiting. Specialised Support Services – Client Advocacy; Continence Advisory Services; Dementia Advisory Services; Hearing Services; Other support services; Vision Services. Transport – Direct (driver is volunteer or worker); Indirect (through vouchers or subsidies).
Recommend a period of linking support	Short term assistance to access aged care services, short term assistance to access support outside aged care, Urgent intervention to address risks or issues, Interim support to access specialist linking service, Interim support to access ongoing case management service, Supplementary support to access services in addition to Assistance with Care and Housing, Assistance with Care and Housing unavailable in region, Other
Recommend a period of reablement	Rebuild confidence and independence in mobility, Support the development/relearning of daily activities, Task simplification and energy conservation for managing housework, promote social contact, community access and integration, Skills development in using public transport, To supporting independence through assessment for appropriate aids and equipment, Training in the use of assistive technology, Helping people to manage personal finances, Other
Add a recommended long-term living arrangement	Private residence, independent living within a retirement village, Supported community accommodation, Residential aged care service, Hospital, Other institutional care, Other community
Add a care type for Delegate Decision	Home Care Package Level 1, Home Care Package Level 2, Home Care Package Level 3, Home Care Package Level 4, Residential Permanent, Residential Respite High Care, Residential Respite Low Care, Short-Term Restorative Care, Transition Care, No Care Approval, No Change to Existing Approvals
Add 'No care type under the Act'	Client withdrew application, Client hasn't applied for care
People associated with support plan	Add person
Schedule a review	Select date from a calendar
Reason for review	Textbox for written response

E. Aged Care Transfer Summary

The ACTS is a digital solution using My Health Record that facilitates access to health information relating to an aged care resident to support clinical hand-over when an individual is transferred from an aged care setting to acute hospital care.[17]

The ACTS implements three new record types into the My Health Record system for the sharing of residential health information from Residential Aged Care Facilities (RACF) systems. These include a Residential Care Transfer Reason, Residential Care Medication Chart and Residential Care Health Summary.

While each of these record types includes information useful in such transfers, the data is provided in PDF format, which limits its utility for data exchange.

E.1 Residential Care Transfer Reason

A residential care transfer reason is generated by the originating residential care facility and contains the particulars of the transfer from a residential care setting including provider information, reason for transfer, and date of transfer. Table 17 shows the structure of the data elements as documented in the *Aged Care Transfer Summary v1.1 - Conformance Profile v1.2*.[69]

Table 17. Content description for the Residential Care Transfer Record

CONTENT	CARDINALITY	DATA TYPE	MANDATORY
Subject of care	1..1		Mandatory
Participation type	1..1	Subject of care	Mandatory
Role	1..1	Patient	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	IHI	Mandatory
• Address	0..*		Mandatory
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Demographic data	0..1		Mandatory
- Sex	0..1		Mandatory
- Date of birth	0..1		Mandatory
- Indigenous status	0..1		Mandatory
Document author	1..1		Mandatory
Participation type	1..1	Document author	Mandatory
Role	1..1	Not applicable	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-I or alternative identifier	Mandatory
• Address	0..*		Optional
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Employment detail	0..1		Mandatory

CONTENT	CARDINALITY	DATA TYPE	MANDATORY
- Employer organisation	0..1		Mandatory
- Organisation	0..1		Mandatory
- Organisation name	0..1		Mandatory
- Organisation identifier	0..1	HPI-O or alternative identifier	Mandatory
- Organisation address	0..1		Mandatory
- Electronic communication	0..1		Mandatory
Health event started	0..1		Mandatory
Health event ended	0..1		Mandatory
Healthcare facility	0..1		Mandatory
Participation type	1..1	Facility	Mandatory
Role	1..1	e.g. Hospital, Clinic	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-O or alternative identifier	Mandatory
• Address	0..*		Mandatory
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Organisation	Mandatory
- Organisation	0..1		Mandatory
- Organisation name	1..*		Mandatory
Document identifier	1..1		Mandatory
Document type	1..1		Mandatory
Document title	1..1	Residential Care Transfer Reason	Mandatory
Participant	0..1		Mandatory
Participation type	1..1	Participant	Mandatory
Role	1..1	Primary healthcare provider	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-I or alternative identifier	Mandatory
• Address	0..*		Optional
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Employment detail	0..1		Mandatory
- Employer organisation	0..1		Mandatory
- Organisation	0..1		Mandatory
- Organisation name	0..1		Mandatory
- Organisation identifier	0..1	HPI-O or alternative identifier	Mandatory
- Organisation address	0..1		Mandatory
- Electronic communication	0..1		Mandatory
Narrative	1..1		Mandatory
Transfer data	1..1		Mandatory
Primary reason for transfer	1..1		Mandatory
Action taken to treat presenting condition	0..1		Optional

E.2 Residential Care Health Summary

A residential care health summary contains information about a residential care individual's environment, health and care to support continuity of care. Table 18 shows the structure of the data elements as documented in the *Aged Care Transfer Summary v1.1 - Conformance Profile v1.2*.[69]

Table 18. Content description for the Residential Care Health Summary

CONTENT	CARDINALITY	DATA TYPE	MANDATORY
Subject of care	1..1		Mandatory
Participation type	1..1	Subject of care	Mandatory
Role	1..1	Patient	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	IHI	Mandatory
• Address	0..*		Mandatory
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Demographic data	0..1		Mandatory
- Sex	0..1		Mandatory
- Date of birth	0..1		Mandatory
- Indigenous status	0..1		Mandatory
Document author	1..1		Mandatory
Participation type	1..1	Document author	Mandatory
Role	1..1	Not applicable	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-I or alternative identifier	Mandatory
• Address	0..*		Optional
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Employment detail	0..1		Mandatory
- Employer organisation	0..1		Mandatory
- Organisation	0..1		Mandatory
- Organisation name	0..1		Mandatory
- Organisation identifier	0..1	HPI-O or alternative identifier	Mandatory
- Organisation address	0..1		Mandatory
- Electronic communication	0..1		Mandatory
Health event started	0..1		Mandatory
Health event ended	0..1		Mandatory
Healthcare facility	0..1		Mandatory
Participation type	1..1	Facility	Mandatory
Role	1..1	e.g. Hospital, Clinic	Mandatory

CONTENT	CARDINALITY	DATA TYPE	MANDATORY
Participant	1..1		Mandatory
• Identifier	0..*	HPI-O or alternative identifier	Mandatory
• Address	0..*		Mandatory
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Organisation	Mandatory
- Organisation	0..1		Mandatory
- Organisation name	1..*		Mandatory
Document identifier	1..1		Mandatory
Document type	1..1		Mandatory
Document title	1..1	Residential Care Health Summary	Mandatory
Participant	0..1		Mandatory
Participation type	1..1	Participant	Mandatory
Role	1..1	Primary healthcare provider	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-I or alternative identifier	Mandatory
• Address	0..*		Optional
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Employment detail	0..1		Mandatory
- Employer organisation	0..1		Mandatory
- Organisation	0..1		Mandatory
- Organisation name	0..1		Mandatory
- Organisation identifier	0..1	HPI-O or alternative identifier	Mandatory
- Organisation address	0..1		Mandatory
- Electronic communication	0..1		Mandatory
PDF attachment	1..1		Mandatory
Mandatory inclusions		• Allergies and adverse reactions • Medical history • Vital signs • Emergency contact details • Weight • Diet and fluid	Mandatory
Recommended inclusions		• Pain • Resident history • Behavioural profile • Cognitive impairment • Clinical frailty • Activities of daily living or pre-morbid condition • Implants and devices • Falls and fractures • Wound management • Pressure injuries • Care needs summary	Optional

E.3 Residential Care Medication Chart

A residential care medication chart is used as a record of orders and administration of prescription medicines, non-prescription medicines and nutritional supplements for individuals living in residential care facilities. Table 19 shows the structure of the data elements as documented in the *Aged Care Transfer Summary v1.1 - Conformance Profile v1.2*.[69]

Table 19. Content description for the Residential Care Medication Chart

CONTENT	CARDINALITY	DATA TYPE	MANDATORY
Subject of care	1..1		Mandatory
Participation type	1..1	Subject of care	Mandatory
Role	1..1	Patient	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	IHI	Mandatory
• Address	0..*		Mandatory
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Demographic data	0..1		Mandatory
- Sex	0..1		Mandatory
- Date of birth	0..1		Mandatory
- Indigenous status	0..1		Mandatory
Document author	1..1		Mandatory
Participation type	1..1	Document author	Mandatory
Role	1..1	Not applicable	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-I or alternative identifier	Mandatory
• Address	0..*		Optional
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Employment detail	0..1		Mandatory
- Employer organisation	0..1		Mandatory
- Organisation	0..1		Mandatory
- Organisation name	0..1		Mandatory
- Organisation identifier	0..1	HPI-O or alternative identifier	Mandatory
- Organisation address	0..1		Mandatory
- Electronic communication	0..1		Mandatory
Health event started	0..1		Mandatory
Health event ended	0..1		Mandatory
Healthcare facility	0..1		Mandatory

CONTENT	CARDINALITY	DATA TYPE	MANDATORY
Participation type	1..1	Facility	Mandatory
Role	1..1	e.g. Hospital, Clinic	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-O or alternative identifier	Mandatory
• Address	0..*		Mandatory
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Organisation	Mandatory
- Organisation	0..1		Mandatory
- Organisation name	1..*		Mandatory
Document identifier	1..1		Mandatory
Document type	1..1		Mandatory
Document title	1..1	Residential Care Medication Chart	Mandatory
Participant	0..1		Mandatory
Participation type	1..1	Participant	Mandatory
Role	1..1	Primary healthcare provider	Mandatory
Participant	1..1		Mandatory
• Identifier	0..*	HPI-I or alternative identifier	Mandatory
• Address	0..*		Optional
• Electronic communication	0..*		Mandatory
• P/O/D	1..1	Person	Mandatory
Person	0..1		Mandatory
- Person name	1..*		Mandatory
- Employment detail	0..1		Mandatory
- Employer organisation	0..1		Mandatory
- Organisation	0..1		Mandatory
- Organisation name	0..1		Mandatory
- Organisation identifier	0..1	HPI-O or alternative identifier	Mandatory
- Organisation address	0..1		Mandatory
- Electronic communication	0..1		Mandatory
PDF attachment	1..1		Mandatory
Mandatory inclusions		• Allergies and adverse reactions • Current medicines • Ceased medicines (if applicable • Withheld (equivalent to suspended) medicines (if applicable) • Functional status for medicines administration • Weight	Mandatory
Recommended inclusions		• Pharmacy organisation details • Prescriber details • Nutritional supplement	Optional

F. API access to provider information

DoHAC provides a business-to-government (B2G) API so software providers can retrieve information about service providers and the services available. Data types are derived from the FHIR data types. This content was derived from the Business to Government (B2G) Developer Portal.[21] Please refer to Tables 20–22 for details.

Table 20. Registered provider data elements

DATA ELEMENT	DATA TYPE	MANDATORY
Resource type (set to "Provider")	String	Yes
Id	String	No
Identifier	Objects	No
Name (see Table 21)	Objects	No
Organisation type	String	No
Organisation purpose	String	No
Location	String	No
Record creation date	Date	No

Table 21. Data elements supporting organisational name changes

DATA ELEMENT	DATA TYPE	MANDATORY
Id	String	No
Organisation name	String	No
Name type code	Code	No
Start date	Date	No
End date	Date	No

Table 22. Data elements for services provided

DATA ELEMENT	DATA TYPE	MANDATORY
Resource type (set to "HealthcareService")	String	Yes
Id	String	No
Identifier	String	No
Active	Boolean	No
Status	Code	No
Provided by (link to provider)	Object	No
Type (coded concepts)	Objects	No
Name	String	No
Specialty (coded concepts)	Objects	No
Location	String	No
Coverage area	String	No

G. Quarterly QI data uploads

The Quality Indicators (QI) Program requires quarterly reporting against eleven quality indicators across crucial care areas. The question phrasing, definitions, assessment, and data collection instructions are explained in version 3.0 of the National Aged Care QI Program manual. This content was derived from the Business to Government (B2G) Developer Portal.[21] Please refer to Table 23 for details.

Table 23. Data elements for quarterly QI uploads

Data area	Metrics
NAPS Service ID	
Reporting Period Name	
Pressure Injuries	Number of care recipients assessed for pressure injuries
	Number of care recipients excluded because they withheld consent to undergo an observation assessment for pressure injuries for the entire quarter
	Number of care recipients excluded because they were absent from the service for the entire quarter
	Number of care recipients with one or more pressure injuries
	Number of care recipients with one or more pressure injuries reported against each of the six pressure injury stages: Stage 1 Pressure Injury
	Number of care recipients with one or more pressure injuries reported against each of the six pressure injury stages: Stage 2 Pressure Injury
	Number of care recipients with one or more pressure injuries reported against each of the six pressure injury stages: Stage 3 Pressure Injury
	Number of care recipients with one or more pressure injuries reported against each of the six pressure injury stages: Stage 4 Pressure Injury
	Number of care recipients with one or more pressure injuries reported against each of the six pressure injury stages: Unstageable Pressure Injury
	Number of care recipients with one or more pressure injuries reported against each of the six pressure injury stages: Suspected Deep Tissue Injury
	Number of care recipients with one or more pressure injuries acquired outside of the service during the quarter
	Number of care recipients with one or more pressure injuries acquired outside of the service during the quarter, reported against each of the six pressure injury stages: Stage 1 Pressure Injury
	Number of care recipients with one or more pressure injuries acquired outside of the service during the quarter, reported against each of the six pressure injury stages: Stage 2 Pressure Injury
	Number of care recipients with one or more pressure injuries acquired outside of the service during the quarter, reported against each of the six pressure injury stages: Stage 3 Pressure Injury
	Number of care recipients with one or more pressure injuries acquired outside of the service during the quarter, reported against each of the six pressure injury stages: Stage 4 Pressure Injury
	Number of care recipients with one or more pressure injuries acquired outside of the service during the quarter, reported against each of the six pressure injury stages: Unstageable Pressure Injury
	Number of care recipients with one or more pressure injuries acquired outside of the service during the quarter, reported against each of the six pressure injury stages: Suspected Deep Tissue Injury
	Comments

Data area	Metrics
Physical Restraint	The collection date for the quarter
	Number of care recipients whose records were assessed for physical restraint over the three-day assessment period
	Number of care recipients excluded because they were absent from the service for the entire three-day assessment period
	Number of care recipients physically restrained (once or more and including through the use of secure areas) on any occasion during the three-day assessment period
	Number of care recipients physically restrained during the three-day assessment period exclusively through the use of a secure area
	Comments
Unplanned Weight Loss - Significant	Number of care recipients assessed for significant unplanned weight loss
	Number of care recipients excluded because they withheld consent to be weighed on the finishing weight collection date
	Number of care recipients excluded because they are receiving end-of-life care
	Number of care recipients excluded because they did not have the required weights recorded (e.g. previous and/or finishing weights). Include comments as to why the weight recording/s are absent
	Number of care recipients who experienced significant unplanned weight loss of 5% or more when comparing their finishing weight and previous weight
	Comments
Unplanned Weight Loss - Consecutive	Number of care recipients assessed for consecutive unplanned weight loss
	Number of care recipients excluded because they withheld consent to be weighed on the starting, middle and/or finishing weight collection dates
	Number of care recipients excluded because they are receiving end-of-life care
	Number of care recipients excluded because they did not have the required weights recorded (e.g. previous, starting, middle and/or finishing weights). Include comments as to why the weight recording/s are absent
	Number of care recipients who experienced consecutive unplanned weight loss of any amount when comparing their previous, starting, middle and finishing weights
	Comments
Falls and Major Injury	Number of care recipients whose records were assessed for falls and major injury
Medication Management - Polypharmacy	Number of care recipients excluded because they were absent from the service for the entire quarter
	Number of care recipients who experienced one or more falls at the service during the quarter
	Number of care recipients who experienced one or more falls at the service resulting in major injury during the quarter
	Comments
	The collection date for the quarter
	Number of care recipients assessed for polypharmacy
	Number of care recipients excluded because they were admitted in hospital on the collection date
	Number of care recipients prescribed nine or more medications based on a review of their medication charts and/or administration records as they are on the collection date
	Comments
Medication Management - Antipsychotics	The collection date for the quarter
	Number of care recipients assessed for antipsychotic medications
	Number of care recipients excluded because they were admitted in hospital for the entire seven-day assessment period
	Number of care recipients who received an antipsychotic medication
	Number of care recipients who received an antipsychotic medication for a medically diagnosed condition of psychosis
	Comments

Data area	Metrics
Activities of Daily Living	Number of care recipients assessed for ADL function
	Number of care recipients excluded because they were receiving end-of-life care
	Number of care recipients excluded because they were absent from the service for the entire quarter
	Number of care recipients excluded because they did not have an ADL assessment total score recorded for the previous quarter. Include comments as to why the previous recording is absent
	Number of care recipients with an ADL assessment total score of zero in the previous quarter
	Number of care recipients who experienced a decline in their ADL assessment total score of one or more points
	Comments
Incontinence Care	Number of care recipients assessed for incontinence care
	Number of care recipients excluded because they were absent from the service for the entire quarter
	Number of care recipients excluded from incontinence associated dermatitis (IAD) assessment because they did not have incontinence
	Number of care recipients with incontinence
	Number of care recipients with incontinence who experienced IAD
	Number of care recipients with incontinence who experienced IAD, reported against each of the four IAD sub-categories: 1A Persistent redness without clinical signs of infection
	Number of care recipients with incontinence who experienced IAD, reported against each of the four IAD sub-categories: 1B Persistent redness with clinical signs of infection
	Number of care recipients with incontinence who experienced IAD, reported against each of the four IAD sub-categories: 2A Skin loss without clinical signs of infection
	Number of care recipients with incontinence who experienced IAD, reported against each of the four IAD sub-categories: 2B Skin loss with clinical signs of infection
	Comments
Hospitalisation	Number of care recipients assessed for hospitalisation
	Number of care recipients excluded because they were absent from the service for the entire quarter
	Number of care recipients who had one or more emergency department presentations during the quarter
	Number of care recipients who had one or more emergency department presentations or hospital admissions during the quarter
	Comments
Workforce	Number of staff who worked any hours as care management staff in the previous quarter
	Number of staff who worked any hours as nurse practitioners or registered nurses in the previous quarter
	Number of staff who worked any hours as enrolled nurses in the previous quarter
	Number of staff who worked any hours as personal care staff or assistants in nursing in the previous quarter
	Number of staff who were employed as care management staff at the start of the quarter
	Number of staff who were employed as nurse practitioners or registered nurses at the start of the quarter
	Number of staff who were employed as an enrolled nurses at the start of the quarter
	Number of staff who were employed as personal care staff or assistants in nursing at the start of the quarter
	Number of staff employed as care management staff who stopped working during the quarter
	Number of staff employed as nurse practitioners or registered nurses who stopped working during the quarter
	Number of staff employed as enrolled nurses who stopped working during the quarter
	Number of staff employed as personal care staff or assistants in nursing who stopped working during the quarter
	Comments

Data area	Metrics
Consumer Experience	Number of care recipients offered a consumer experience assessment (QCE-ACC) through self-completion, interviewer facilitated completion or proxy-completion
	Number of care recipients excluded because they were absent from the service for the entire quarter
	Number of care recipients excluded because they did not choose to complete the QCE-ACC for the entire quarter
	Number of care recipients who reported consumer experience through self-completion of the QCE-ACC, against the category: 'Excellent' (care recipients who score between 22–24)
	Number of care recipients who reported consumer experience through self-completion of the QCE-ACC, against the category: 'Good' (care recipients who score between 19–21)
	Number of care recipients who reported consumer experience through self-completion of the QCE-ACC, against the category: 'Moderate' (care recipients who score between 14–18)
	Number of care recipients who reported consumer experience through self-completion of the QCE-ACC, against the category: 'Poor' (care recipients who score between 8–13)
	Number of care recipients who reported consumer experience through self-completion of the QCE-ACC, against the category: 'Very poor' (care recipients who score between 0–7)
	Number of care recipients who reported consumer experience through interviewer facilitated completion of the QCE-ACC, against the category: 'Excellent' (care recipients who score between 22–24)
	Number of care recipients who reported consumer experience through interviewer facilitated completion of the QCE-ACC, against the category: 'Good' (care recipients who score between 19–21)
	Number of care recipients who reported consumer experience through interviewer facilitated completion of the QCE-ACC, against the category: 'Moderate' (care recipients who score between 14–18)
	Number of care recipients who reported consumer experience through interviewer facilitated completion of the QCE-ACC, against the category: 'Poor' (care recipients who score between 8–13)
	Number of care recipients who reported consumer experience through interviewer facilitated completion of the QCE-ACC, against the category: 'Very poor' (care recipients who score between 0–7)
	Number of care recipients who reported consumer experience through proxy-completion of the QCE-ACC, against the category: 'Excellent' (care recipients who score between 22–24)
	Number of care recipients who reported consumer experience through proxy-completion of the QCE-ACC, against the category: 'Good' (care recipients who score between 19–21)
	Number of care recipients who reported consumer experience through proxy-completion of the QCE-ACC, against the category: 'Moderate' (care recipients who score between 14–18)
	Number of care recipients who reported consumer experience through proxy-completion of the QCE-ACC, against the category: 'Poor' (care recipients who score between 8–13)
	Number of care recipients who reported consumer experience through proxy-completion of the QCE-ACC, against the category: 'Very poor' (care recipients who score between 0–7)
	Comments

Data area	Metrics
Quality of Life	Number of care recipients offered a quality of life (QOL-ACC) assessment through self-completion, interviewer facilitated completion or proxy-completion
	Number of care recipients excluded because they were absent from the service for the entire quarter
	Number of care recipients excluded because they did not choose to complete the QOL-ACC for the entire quarter
	Number of care recipients who reported quality of life through self-completion of the QOL-ACC, against the category: 'Excellent' (care recipients who score between 22–24)
	Number of care recipients who reported quality of life through self-completion of the QOL-ACC, against the category: 'Good' (care recipients who score between 19–21)
	Number of care recipients who reported quality of life through self-completion of the QOL-ACC, against the category: 'Moderate' (care recipients who score between 14–18)
	Number of care recipients who reported quality of life through self-completion of the QOL-ACC, against the category: 'Poor' (care recipients who score between 8–13)
	Number of care recipients who reported quality of life through self-completion of the QOL-ACC, against the category: 'Very poor' (care recipients who score between 0–7)
	Number of care recipients who reported quality of life through interviewer facilitated completion of the QOL-ACC, against the category: 'Excellent' (care recipients who score between 22–24)
	Number of care recipients who reported quality of life through interviewer facilitated completion of the QOL-ACC, against the category: 'Good' (care recipients who score between 19–21)
	Number of care recipients who reported quality of life through interviewer facilitated completion of the QOL-ACC, against the category: 'Moderate' (care recipients who score between 14–18)
	Number of care recipients who reported quality of life through interviewer facilitated completion of the QOL-ACC, against the category: 'Poor' (care recipients who score between 8–13)
	Number of care recipients who reported quality of life through interviewer facilitated completion of the QOL-ACC, against the category: 'Very poor' (care recipients who score between 0–7)
	Number of care recipients who reported quality of life through proxy-completion of the QOL-ACC, against the category: 'Excellent' (care recipients who score between 22–24)
	Number of care recipients who reported quality of life through proxy-completion of the QOL-ACC, against the category: 'Good' (care recipients who score between 19–21)
	Number of care recipients who reported quality of life through proxy-completion of the QOL-ACC, against the category: 'Moderate' (care recipients who score between 14–18)
	Number of care recipients who reported quality of life through proxy-completion of the QOL-ACC, against the category: 'Poor' (care recipients who score between 8–13)
	Number of care recipients who reported quality of life through proxy-completion of the QOL-ACC, against the category: 'Very poor' (care recipients who score between 0–7)
	Comments

H. Aged Care Royal Commission recommendations excerpt

This report notes a number of touchpoints to recommendations made in The Commission[3]. This section excerpts the formal recommendations report to show the specific areas noted. The table below list the recommendations referenced in the report.

RECOMMENDATION	TITLE
22	Quality indicators
23	Using quality indicators for continuous improvement
24	Start ratings: performance information for people seeking care
25	A new aged care program
68	Universal adoption by the aged care sector of digital technology and My Health Record
108	Data governance and a National Aged Care Data Asset
109	ICT architecture and investment in technology and infrastructure
124	Standardised statements on services delivered and costs in home care

H.1 Recommendation 22: Quality Indicators

Recommendation 22: Quality indicators

1. By 15 July 2021, the responsible Minister should refer to the Australian Commission on Safety and Quality in Health and Aged Care responsibility for the introduction, implementation and amendment of aged care quality indicators, including:
   a. ongoing research into the use and evidence basis for quality indicators
   b. publication of guidance on use of indicator data to identify risks and to undertake evidence-based risk management.
2. By 1 July 2023, the Australian Commission on Safety and Quality in Health and Aged Care should:
   a. expand the quality indicators for care in residential aged care
   b. develop quality indicators for care at home, and
   c. implement a comprehensive quality of life assessment tool for people receiving aged care in residential care and at home.
3. In the interim, in addition to the existing commitment to implement quality indicators in the new domains of falls and fractures and medication management, the Australian Government should expand the National Mandatory Indicator Program, as set out in the 2019 PwC Consultation Paper 'Development of Residential Aged Care Quality Indicators', to use more comprehensive indicators for the existing domains of pressure injuries, physical restraint and unplanned weight loss.

H.2 Recommendation 23: Using quality indicators for continuous improvement

Recommendation 23: Using quality indicators for continuous improvement

By 1 July 2022, the Australian Government should implement reporting and benchmarking of provider performance against quality indicators. To achieve this:

a. the Australian Commission for Safety and Quality in Health and Aged Care should develop a methodology to enable providers to be benchmarked against similar providers

b. the Australian Government should track sector and provider performance and set progressive improvement targets to raise performance against quality indicators over time

c. the Australian Government should publicly report on sector and provider performance against benchmarks.

H.3 Recommendation 24: Star ratings: performance information for people seeking care

Recommendation 24: Star ratings: performance information for people seeking care

1. By 1 July 2022, the Australian Government should develop and publish a system of star ratings based on measurable indicators that allow older people and their families to make meaningful comparisons of the quality and safety performance of services and providers. The star ratings and accompanying material should be published on My Aged Care.
2. The star ratings should incorporate a range of measurable data and information, including, at a minimum:
   a. graded assessment of service performance against Standards
   b. performance against relevant clinical and quality indicators
   c. staffing levels
   d. robust information from people receiving aged care services, their families and advocates, when available.
3. The overall star rating should be accompanied by appropriate additional information on performance and outcomes, in a readily understandable form and capable of comparison across services and providers. This should include all performance information that is relevant to the performance of a service, even if it is not reflected in the overall star rating outcome. For example, it should include:
   a. details about current and previous assessment by the Quality Regulator, including notices of non-compliance, sanctions, withdrawal of accreditation or approved provider status
   b. benchmarked performance for all quality indicators that are suitable for publication, including changes in performance over time
   c. information from older people, their families and advocates
   d. serious incident reports data
   e. complaints data.
4. The Australian Aged Care Commission should assume responsibility for the star ratings system from 1 July 2023 onwards. **Commissioner Pagone**

H.4 Recommendation 25: A new aged care program

Recommendation 25: A new aged care program

By 1 July 2024, the System Governor should implement a new aged care program that combines the existing Commonwealth Home Support Programme, Home Care Packages Program, and Residential Aged Care Program, including Respite Care and Short-Term Restorative Care. The new program should retain the benefits of each of the component programs, while delivering comprehensive care for older people with the following core features:

a. a common set of eligibility criteria identifying a need (whether of a social, psychological or physical character) to prevent or delay deterioration in a person's capacity to function independently, or to ameliorate the effects of such deterioration, and to enhance the person's ability to live independently as well as possible, for as long as possible
b. an entitlement to all forms of support and care which the individual is assessed as needing
c. a single assessment process based upon a common assessment framework and arrangements followed by all assessors
d. certainty of funding and availability based upon assessed need
e. genuine choice and flexibility accorded to each individual about how their aged care needs are to be met (including choice of provider and level of engagement in managing care, and appropriate and adapted supports to enable people from diverse backgrounds and experiences to exercise choice)
f. access to one or multiple categories of the aged care program simultaneously, based on need
g. portability of entitlement between providers throughout Australia.

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

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:

a. every approved provider of aged care delivering personal care or clinical care:
    i. 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
    ii. invites each person receiving aged care from the provider to consent to their care records being made accessible on My Health Record
    iii. 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
b. the Australian Digital Health Agency immediately prioritises support for aged care providers to adopt My Health Record.

H.6 Recommendation 108: Data governance and a National Aged Care Data Asset

Recommendation 108: Data governance and a National Aged Care Data Asset

1. By 1 July 2022, the *Australian Institute of Health and Welfare Act 1987* (Cth) should be amended to require and empower the Australian Institute of Health and Welfare to perform the below functions, which should be funded from the Aged Care Research and Innovation Fund.
2. The new functions of the Australian Institute of Health and Welfare will be:
   a. to collect (directly or in association with other bodies or people), store and manage aged care-related information and statistics (including information on the aged care workforce, the economics of aged care, the operation of the aged care market, and the delivery of aged care services), in consultation with the Australian Bureau of Statistics if necessary
   b. to coordinate the collection and production of aged care-related information and statistics by other bodies or persons
   c. to publish aged care-related information and statistics, whether by itself or in association with other bodies or persons
   d. subject to the enactment and commencement of the proposed *Data Availability and Transparency Act* (Cth), to develop and enter into data sharing agreements, in accordance with that proposed Act, with accredited users and data service providers to obtain and provide access to the use of aged care-related data
   e. to develop methods and undertake studies designed to assess the provision, use, cost and effectiveness of aged care services and aged care technologies
   f. to conduct and promote research into aged care services in Australia
   g. to develop, in consultation with the Australian Bureau of Statistics and the Australian e-Health Research Centre, specialised statistical standards and classifications relevant to aged care services (including national minimum datasets), and to advise the Bureau on the data to be used by it for the purposes of aged care-related statistics
   h. to oversee the development of a standard format for presentation of aged care data, including consideration of data interoperability with the health care sector
   i. to curate and make publicly available a National Aged Care Data Asset, which should at a minimum include data on:
      i. the demographics, clinical characteristics and care needs of aged care recipients, and the aged and health care services they use
      ii. the demographics, skills and wages and conditions of the aged care workforce
      iii. the financial performance of aged care providers, the quality of care provided, and their ownership types, operating segments, size and any other characteristics deemed relevant by the Australian Institute of Health and Welfare to analyse the aged care sector's functioning
   j. to publish information about the quality and safety of aged care services at facility or service level
   k. to ensure that Australian Government entities with responsibility for or involvement in aged care, researchers, and other bodies as appropriate, have access to aged care-related information and statistics held by the Institute or by bodies or persons with whom contracts or arrangements have been entered into by the Institute
   l. to publish methodological and substantive reports on work carried out by or in association with the Institute under this recommendation
   m. to make recommendations to the System Governor, as well as to the responsible Minister, on the improvement and promotion of aged care services in Australia.

3. The Australian Institute of Health and Welfare should have appropriate government funding and resourcing for the employees and information and communications technology needed to perform its functions, including 'business to government' and 'government to government' data sharing in or near real time.
4. For the avoidance of doubt, nothing in the above is intended to prevent the System Governor or the Quality Regulator from collecting and analysing data in administering the aged care system, or commissioning research on the aged care system.
5. The new Act should require that:
    a. the System Governor
    b. the Quality Regulator
    c. the Pricing Authority, and
    d. approved providers of aged care

    provide data to the Australian Institute for Health and Welfare in accordance with its requirements within three months of the end of the relevant reporting period, and that they respond to other requests for aged care-related data by the Australian Institute for Health and Welfare in a timely manner.
6. The Australian Institute of Health and Welfare should store, manage and refine for presentation, and regularly publish, the National Aged Care Data Asset, with the first such publication by 1 July 2025. The Institute is to accredit software used for collection of data for the data asset, quality indicator data and data relating to compliance with the Aged Care Quality Standards.
7. The System Governor should be responsible for the following additional functions:
    a. to facilitate the development of software and Information and Communications Technology systems to enable automatic reporting by approved providers on mandatory reporting obligations, quality indicators, prudential arrangements, data for the Aged Care National Data Asset and other responsibilities
    b. to establish arrangements consistent with the 'collect once, use many times' principle, including:
        i. information and communications technology interoperability arrangements between the System Governor and the Australian Commission on Safety and Quality in Health and Aged Care to enable the sharing of data related to aged care
        ii. ensuring administrative data relevant to approved providers, such as assessment data, is made available to providers
        iii. ensuring a mechanism exists for approved providers to transfer, in an effective and secure manner, information about an individual when the individual changes service providers.
8. In carrying out its functions, the Australian Institute of Health and Welfare should be guided by the principle that de-identified data is to be made publicly available to support research into, and scrutiny of, the provision of aged care services, but personal information must not be released
9. From 1 July 2022, the System Governor should establish and chair a 'management group' of senior representatives from:
    a. the Australian Institute of Health and Welfare
    b. the Pricing Authority
    c. the Australian Commission on Safety and Quality in Health and Aged Care
    d. the Australian Bureau of Statistics

to manage the development of a framework for the national minimum aged care datasets, informed by reference to the aged care quality indicators that are to be developed by the Australian Commission on Safety and Quality in Health and Aged Care, and the development of the datasets themselves.

Commissioner Pagone

H.7 Recommendation 109: ICT Architecture and investment in technology and infrastructure

Recommendation 109: ICT Architecture and investment in technology and infrastructure

1. From 1 July 2022, the Australian Government should invest in technology and information and communications systems to support the new aged care system. That investment should have the following elements:
   a. systems that are designed to enable better services for older people, including
      i. a new service-wide client relationship management system interoperable with My Health Record for care management, case monitoring and reporting systems built around older people's care, that would move progressively to real-time and automated reporting within five years
      ii. data and information that is accessible, complete, accurate and up to date, and
      iii. standardised systems and tools to make the user experience easy and efficient, with minimal separate portals and a single point of entry for older people and approved providers
   b. pre-certified assistive technologies and smart technology to support both care and functional needs and manage safety, and to support the quality of life of older people. These technologies are to:
      i. be universally available and enabled through internet and wifi access, and funded by the Australian Government
      ii. be put into older people's homes to help in the provision of care and improve older people's level of social engagement, and
      iii. support the development and use of mobile care finder and mobile assessment applications
   c. interoperability of information and communications systems to enable the sharing of data and information about people receiving care between aged care and health care providers and relevant government agencies. Where appropriate, this interoperability should be enabled by expanding the scope of the Aged Care Data Compare project to encompass care in the home so that a full set of Fast Health Care Interoperability Resources data standards is developed for aged care assessment and services.
2. By July 2022, the System Governor should develop an Aged Care Information and Communications Technology Strategy in consultation with older people and various stakeholders to provide a road map to implement these and related initiatives.

Commissioner Briggs

H.8 Recommendation 124: Standardised statements on services delivered and costs in home care

Recommendation 124: Standardised statements on services delivered and costs in home care

1. The Australian Government should develop and implement a standardised statement format for home care providers to record services delivered and costs incurred on behalf of Home Care Package holders.
2. From 1 July 2022, providers should be required to issue completed statements in the standardised format to people receiving their care on a monthly basis.
3. From 1 July 2022, providers should be required to provide reports on a quarterly basis in a standard format setting out total direct care staffing hours provided each day at each home they service, specifying the different employment categories (including personal care workers, enrolled nurses engaged in direct care provision, registered nurses engaged in direct care provision, and allied health care professionals engaged in direct care provision).

Commissioner Briggs

I. Table of abbreviations

ABBREVIATION	MEANING
ACAT	Aged Care Assessment Teams
ACDC	Aged Care Data Compare
ACG	Aged Care Gateway
ADHA	Australian Digital Health Agency
AEHRC	Australian eHealth Research Centre
AHPA	Allied Health Professions Australia
AHRA	Australian Health Research Alliance
AIHW	Australian Institute of Health and Welfare
AMT	Australian Medicines Terminology
API	Application Programming Interface
AUCDI	Australia Core Data for Interoperability
CHMHREC	CSIRO Health and Medical Human Research Ethics Committee
CHSP	Commonwealth Home Support Programme
CIS	Clinical information system
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSV	Comma separated value
DHCRC	Digital Health Cooperative Research Centre
DISC	Data Integration Services Centre
DoHAC	Department of Health and Aged Care
EMR	Electronic medical record
ETP	Electronic Transfer of Prescriptions

ABBREVIATION	MEANING
EY	Ernst & Young
FHIR	Fast Healthcare Interoperability Resources
GP	General practitioners
GPMS	Government Provider Management System
HIE	Health Information Exchange
IAT	Integrated Assessment Tool
ICT	Information and communications technology
IHI	Individual Healthcare Identifier
IPS	International patient summary
LOINC	Logical Observation Identifiers Names and Codes
NACDA	National Aged Care Data Asset
NACDC	National Aged Care Data Clearinghouse
NDIS	National Disability Insurance Scheme
NMDS	National Minimum Data Set
NSAF	National Screening and Assessment Form
PBS	Pharmaceutical Benefits Scheme
PDF	Portable Document Format
RACF	Residential aged care facilities
RAS	Regional Assessment Service
ROSA	Registry of Senior Australians
XLS	Excel Spreadsheet format

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