FINAL REPORT

RESIDENTIAL AGED CARE FACILITIES USE OF CLINICAL CARE SOFTWARE

ACIITC
Aged Care Industry
Information Technology Council

OCTOBER 2023

RESIDENTIAL AGED CARE FACILITIES USE OF CLINICAL CARE SOFTWARE FINAL REPORT

A research report delivered by the Aged Care Industry Information Technology Council in 2021 and 2022.

The Residential Aged Care Facilities Use of Clinical Care Software Research Report has been developed in collaboration with the Australian Digital Health Agency (The Agency). The collaboration with the Agency has assisted in producing the document that can be used by aged care sector to improve their understanding of the use of clinical care systems in service delivery.

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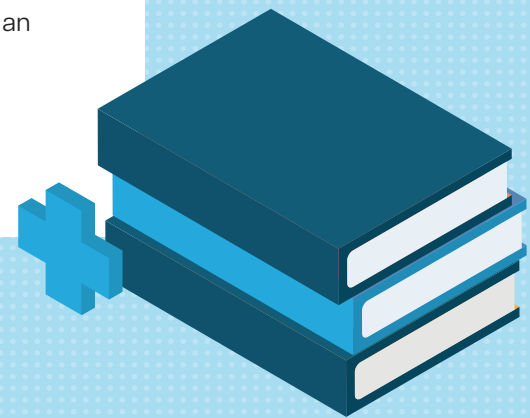

FOREWORD

Aged Care Industry Information Technology Council (ACIITC) has embarked on the *Residential Aged Care Facilities Report on the Use of Clinical Care Systems Software* project in collaboration with the Australian Digital Health Agency (the Agency).

ACIITC is committed to promoting the evidence available to demonstrate the benefits of incorporating innovation and technology in aged and community care.
ACIITC is proud to participate in this project as one of our range of international and national research activities to spotlight best practice, digital enhanced service delivery and improvements in quality outcomes for older Australians and their families.

Significantly, this report identifies a range of challenges and barriers for aged care providers when adopting clinical care software in their practice. The findings also detail the opportunities and potential for enhanced uptake of clinical care software for residential care providers in respect to improving data collection, enhanced care planning, and providing a better quality of care for older Australians.

This is a critical time for the aged and community care sector.

This is a critical time for the aged and community care sector in light of the Commonwealth Government aged care reform agenda driven by the Royal Commission into Aged Care Quality and Safety (Royal Commission). ACIITC highlights the "Universal adoption by the aged care sector of digital technology and My Health Record" (recommendation 68) which recommends every approved provider of aged care delivering personal care or clinical care to enhance their uptake of clinical software as well as develop comprehensive policies and procedures relating to the collection and safety of this data.

ACIITC acknowledges the Agency for contracting this important project and the project team who contributed to this work. ACIITC project team members who led this important project were Ms Anne Livingstone and Ms Georgie Gould. The project team was supported by a residential aged care facilities expert focus group and a clinical technology focus group. ACIITC acknowledges our appreciation for the opportunity to work with these industry experts and thanks each person for their contribution to the outcomes of this research.

ACIITC trusts that this research report will provide valuable insights and be used to ensure that all stakeholders can work together to achieve the Royal Commissions Recommendation 68 and contribute to advancing a more innovative, sustainable, and digitally mature aged and community care sector for older Australians and their families.

October 2023

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EXECUTIVE SUMMARY

In 2021, the Australian Digital Health Agency (the Agency) contracted the Aged Care Industry Information Technology Council (ACIITC) to undertake an investigation of the use of clinical care software systems in residential aged care. Further work was undertaken in 2022 to identify the use of clinical care systems in the Northern Territory.

The Agency contracted Aged Care Industry Information Technology Council (ACIITC) to investigate the use of clinical care software systems in residential aged care.

The project developed a research paper titled Residential Aged Care Facilities Use of Clinical Care Software. This report identifies a range of challenges and barriers for aged care providers when adopting clinical software in their practice.

The findings also detail the opportunities and potential for enhanced uptake of clinical software for residential aged care providers including improving data collection, enhanced care planning and providing a better quality of care for older Australians.

The research undertaken in 2021-22 identified the unique characteristics of all elements associated with the deployment and quality of the use of clinical care systems in residential aged care.

Specifically, the report findings focus on the following areas:

- The diversity of the current technology infrastructure in residential aged care facilities
- The external use of clinical care software in residential aged care
- Residential aged care facilities integration with My Health Record
- Aged care providers future strategies for innovation and technology.

The opportunities and potential for enhanced uptake of clinical care software are identified throughout the report including the need for the use of more consistent terminology and data sets to improve data collection and the requirements for enhanced care planning for all professional involved in the care of older Australians.

OVERVIEW OF KEY FINDINGS

ACIITC has benchmarked the use of clinical care software in residential aged care facilities in this study. This report outlines a number of key findings and recommendations identified from undertaking various activities including a national survey, an environmental scan, and a series of industry expert focus groups.

FINDING ONE

There is a need for consistent and standardised terminology within the residential aged care sector across a range of items from workforce roles, clinical activities undertaken and the process and procedural considerations.

FINDING TWO

There is a diversity of current technology infrastructure being used in residential aged care.

FINDING THREE

External parties, including visiting clinicians, external agencies and visiting GPs, require well-defined access and integration within residential aged care clinical software to facilitate efficient data management and transitions of care for residents.

FINDING FOUR

There needs to be a consideration on how clinical care systems integrate with My Health Record.

FINDING FIVE

Residential aged care providers need to consider their future strategies for innovation and technology.

THE NEED FOR CONSISTENT AND STANDARDISED TERMINOLOGY

The project identified no consistent terminology within the residential aged care sector across a range of items from workforce roles, clinical activities undertaken, and process and procedural considerations. Constructing, undertaking, and analysing the survey provided considerable challenges.

For the report, the following terminology is used:

ADMINISTRATION
Residential aged care provider administration employee responsible for following up referrals, seeking consent to capture data in clinical software and preparing application information and forms.

AGED CARE FUNDING INSTRUMENT (ACFI)[1]
Residential aged care providers did use the ACFI to claim a residential care subsidy for each resident that permanently enters their care. At the time of this research, ACFI was being used by residential aged care. Since the report development, AN-ACC has replaced ACFI. The Australian National Aged Care Classification (AN-ACC) funding model provides subsidies to approved aged care providers based on service type and each residents' care needs.

CLINICAL CARE MANAGER
A residential aged care provider employee responsible for assessing the client by home/hospital/facility interview, review of documentation, assessment of client suitability, and progress notes discussion and actions.

CLINICAL SOFTWARE
The technology application used to manage the care and quality of life of recipients of care services in residential aged care and home care services.

FACILITY MANAGER
A residential aged care provider employee responsible for collecting client application documentation electronic or paper-based, uploading for clinical software, and progress note discussions and actions.

GENERAL PRACTITIONERS (GP)
Visiting clinicians responsible for client minor or chronic health issues.

RESIDENT / AGED CARE CONSUMER
Term referred to defining consumer, customer, user, client, family carers or personal representatives.

MY AGED CARE[2]
Australian Government-funded telephone line and website to help older Australians, their families and carers gain access to help, and support required. Information on a different type of services available, assessment of needs to identify eligible funding, and access to referrals to find required support.

ORGANISATION
A survey responder who provides support services in aged care and is an approved provider of aged care.

RESIDENTIAL AGED CARE FACILITIES (RACF)
An approved provider of aged care services under the Aged Care Act 1997. For the purposes of this project, services such as Transitional Care Program, Short Term Restorative Care, Multipurpose Centres and National Aboriginal and Torres Strait Islander Flexible Aged Care Program were excluded.

1 Department of Health 2021, The Aged Care Funding Instrument, https://www.health.gov.au/initiatives-and-programs/residential-aged-care/funding-for-residential-aged-care/the-aged-care-funding-instrument-acfi

2. Commonwealth of Australia 2021, My Aged Care, https://www.myagedcare.gov.au/about-us

DIVERSITY OF THE CURRENT TECHNOLOGY INFRASTRUCTURE

A number of survey questions asked respondents to detail current technology infrastructure available in residential care: The key findings are:

- The number of technology devices used in individual residential aged care facilities varies between 1 to 200 devices, however, the highest response from organisations was between 21 – 50 devices per site (37% of responses).
- The most common technology devices used in clinical staff roles are desktop computer (95%), smart tablets (83%), laptop computer (74%) and smart phones (56%).
- A majority of organisations indicated they provide Wi-Fi connectivity to all residential aged care facilities (89%).
- Our project included in the clinical care software any platforms which is used to manage the care and quality of life of recipients of care. In this broader definition, 94% of residential aged care providers indicated that they used some of these platforms. To narrow the definition to that of the Agency which defines clinical care systems as systems that support direct health and care management such as electronic adoption that supports direct health and care management, such as electronic medication management systems, electronic medical or health records or patient administration systems (Australian Digital Health Agency 2023). Section 4.1 details the systems in operation.
- From the 233 responses, 218 aged care providers indicated they used clinical software (94%).
- Of the organisations who use clinical software, a majority believe they use extensively (77%).
- A majority of aged care providers who operate multiple residential aged care facilities (60%) indicate they deploy the same clinical software across all facilities (95%).
- The feedback from the national survey indicates a high percentage of clinical software has been in deployment for between 5 – 10 years (33%).
- The top workforce roles directly using and inputting into residential aged care facility clinical software have been identified as a registered nurse (96%), management personnel (86%), administration personnel (80%), personal care workers (79%), enrolled nurse (79%), visiting allied health (77%), and visiting GPs (77%).
- In exploring the barriers to clinical software adoption, the main cluster of barriers has been identified as cost of product, training, upgrading, employee resistance, time and resources required for training and implementation, and fear of technology / digital literacy.
- 287 unique clinical care systems were identified as being used by the sector.
- When asked if different clinical systems integrate with each other, the results indicated their systems did integrate (50%), their systems did not integrate (41%), and some indicated that they did not know if there were any integrations (9%).
- The aged care providers that implemented clinical software (60%) indicated that they did not have integration between their medical, clinical and enterprise resource planning systems.
- A majority of aged care providers (45%) indicated a low level of data entry duplication for core clinical information, with fewer than 10% of personnel requiring multiple data entries into clinical technology systems. However, it is noteworthy that a significant proportion of aged care providers (between 20% [26%] and 30% [17%]) reported the occurrence of duplication, as core clinical information is sometimes entered into more than one clinical system.
- 99 out of 228 survey respondents (43%) indicate they provide training to their employees on the use of clinical software systems.

EXTERNAL USE OF CLINICAL SOFTWARE IN RESIDENTIAL AGED CARE

A number of survey questions asked respondents to detail external stakeholders use of clinical software in residential care. The key findings are:

- The results found visiting clinicians have higher access to input, extract, and review data on-site (92%) than remotely (57%).
- Of the 66 organisations who responded to how visiting (external) clinicians uses the organisation's clinical software when interacting with residential aged care facilities, a majority indicated that they are using it to directly input resident data (51%), others are using it to review residents' data (39%), and only a small number are using it to extract residents' data (3%).

WHY VISITING CLINICIANS USE RESIDENTIAL AGED CARE FACILITY SOFTWARE

51%

OVER HALF USE IT
TO ADD RESIDENT DATA

39%

NEARLY 2 FIFTHS USE USE IT
TO REVIEW RESIDENT DATA

- External agencies such as Aged Care Quality and Safety Commission and various auditing personnel access data within an organisation. 148 organisations indicated they provide electronic copy/access only, with 48 organisations providing electronic and paper copies and 13 organisations providing paper copies only.
- For a majority of residential aged care providers, clinical software does not integrate with visiting clinicians' software (70%).
- Aged care providers who responded indicated that their clinical software integrates fully with community pharmacy software (42%). However, when asked about clinical software specifically, their systems only partially integrated (24%) or does not integrate at all (34%).
- In relation to prescribing medication for residents and visiting GPs, interface with residential aged care facility clinical software varies. Organisations responded that they provide visiting GPs with full interface with the organisation's clinical software (39%), provide a partial interface (27%) or indicated visiting GPs have no interface with the organisation's clinical software (29%). A number of respondents indicated that they did not know if there was any interface (4%).
- Response from organisation clinical software supporting and enabling a resident transition of care vary from 44% does and 38% does not.

OF AGED CARE PROVIDERS **DON'T INTEGRATE** WITH VISITING CLINICANS SOFTWARE

INTEGRATION WITH MY HEALTH RECORD

A number of survey questions asked respondents to detail the current integration of My Health Record.

The key findings are:

- A majority of organisations do not know if their residents use My Health Record (71%).
- The majority of organisations have clinical software which does not record data with resident's My Health Record (77%).
- A majority of aged care providers who responded reported their clinical software does not currently interface with My Health Record (71%).

71%

DON'T KNOW

IF THEIR RESIDENTS USE MY HEALTH RECORD

FUTURE OF STRATEGIES FOR INNOVATION AND TECHNOLOGY

A number of survey questions asked respondents to detail the organisations future strategies for innovation and technology.

The key findings are:

- Future technology investment strategies for organisations vary, many do have a technology investment strategy (46%), some have not considered this (34%). Some responders did not know if their organisation had a technology investment strategy (20%).
- Organisations indicated that they have a technology strategy or roadmap specially focused on clinical software (45%), some indicated that their organisation did not have such a strategy (36%) and others indicated that they did not know if their organisation had a focus on this (19%).

01.

INTRODUCTION:
RESIDENTIAL AGED CARE FACILITIES CLINICAL USE OF CLINICAL SOFTWARE

1. INTRODUCTION: RESIDENTIAL AGED CARE FACILITIES CLINICAL USE OF CLINICAL SOFTWARE

1.1 PROJECT OBJECTIVE

ACIITC was contracted by the Agency on 26 March 2021 to undertake a research report on residential aged care facilities clinical use of clinical software.

The project undertook a codesign approach with the residential aged care sector to ensure the outcomes of the research project reflected contemporary sector issues.

What is meant by 'clinical care software'?

For this report, clinical care software is defined as the applications used to manage the care and quality of life of recipients of care services in residential aged care services (this would include medication, quality & risk management systems)[1].

1.2 PROJECT METHOD

The project proposed a multi-faceted approach that has produced a mix of quantitative and qualitative information derived from four components.

01.

An environmental scan was undertaken to provide an overview of the current landscape of residential aged care facilities and the use of clinical software. The scan was based on a search of grey literature and the recently published Community Care Innovation and Technology Capabilities and Readiness (CARE-IT) Report (Bartlett et al. 2020), particularly the findings on My Health Record, clinical management and reporting systems.

The literature review also included a review of the Australian Commission on Safety and Quality in Health Care (ACSQHC) Review of Electronic Health Records in Residential Aged Care Facilities, Australian Digital Health Agency Customer Experience Team's Value Map and Aged Care Journey Maps, Royal Commission into Aged Care Quality and Safety ICT Strategy and Architecture Review Report, and Royal Commission into Aged Care Quality and Safety Final Report.

1 Royal Commission into Aged Care Quality and Safety 2021

02.

A national survey of residential aged care providers across Australia was designed to ensure high-quality data collection. The survey questions were meticulously designed and developed through collaboration. Validated surveys were utilised, drawing from the extensive literature review, codesign sessions with providers and valuable input from an expert advisory committee. The national survey was conducted with the goal of assessing Residential Aged Care Facilities' Use of Clinical Software nationwide. A total of 338 residential aged care facilities had access to the survey and 230 providers successfully completed it. After the data collection phase, an analysis was performed. The collected responses were carefully examined to identify patterns, trends, and key insights.

03.

Expert focus groups were undertaken to discuss and outline important factors of residential aged care facilities use of clinical software. The focus group members ranged from residential aged care providers and technology experts.

04.

Report on findings.

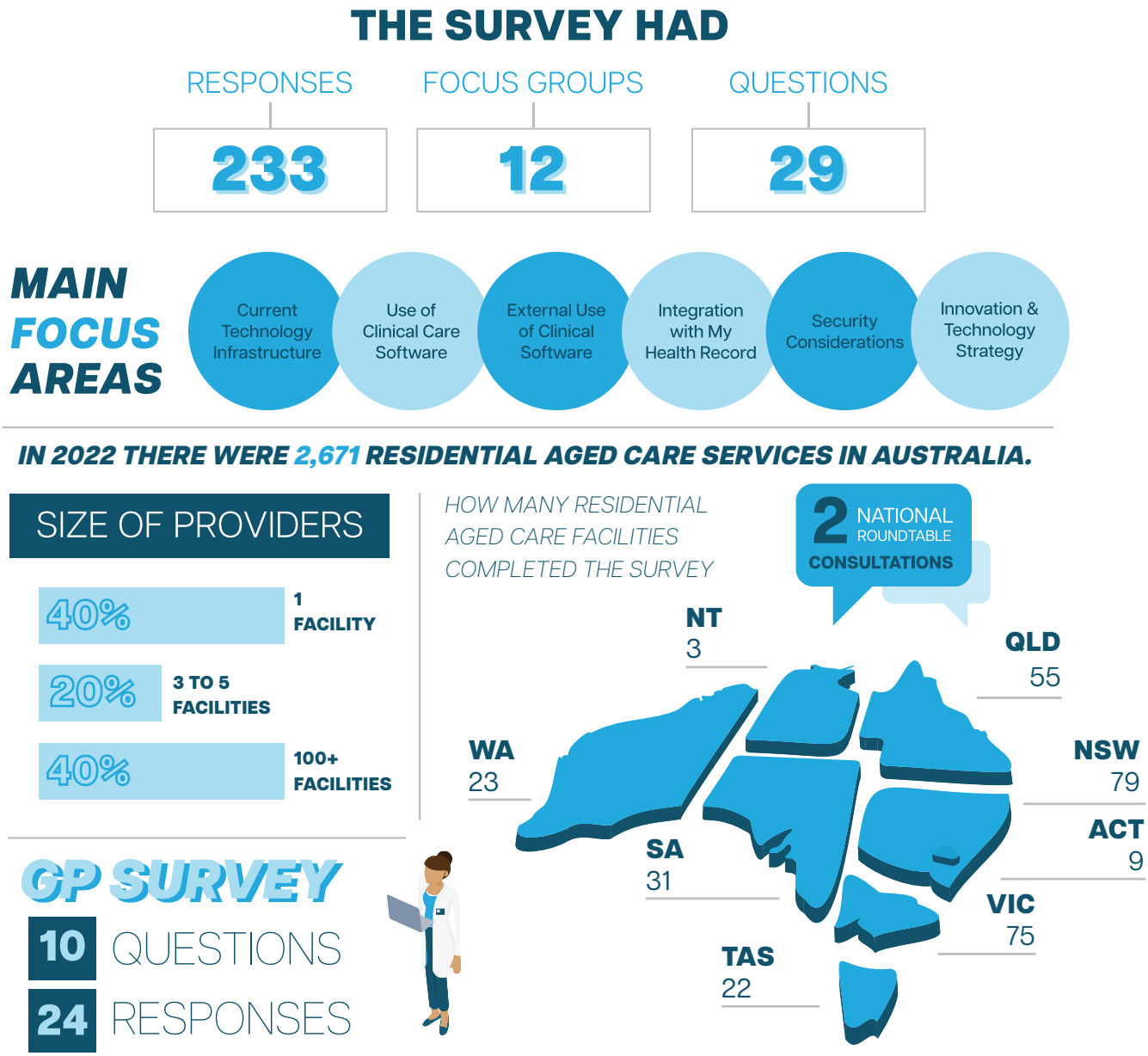

Figure 1: Overview of scope of the project

1.3 PROJECT GOVERNANCE

The project has been managed and guided by a nationally respected project and expert advisory committee.

PROJECT TEAM

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Project Team Leader and Project Manager, Executive Lead, Aged Care Industry Information Technology Council

Ms Georgie Gould
Project Coordinator and Administrative Lead, Secretariat, Aged Care Industry Information Technology Council

Ms Emma Pearse
Project Assistant, Aged Care Industry Information Technology Council

Ms Jade Gissing
Project Assistant, Aged Care Industry Information Technology Council

ACIITC acknowledges the various members of the national roundtables engaging specific sectors of the industry, including technology-specific and service model and workforce reform.

EXPERT ADVISORS

Mr Jeff Carson	I.T Governance & Cybersecurity Specialist
Mr Gavin Tomlins	I.T Specialist
Dr Claire Mason	Principal Research Scientist, CSIRO's Data61

RESIDENTIAL AGED CARE FACILITY EXPERT FOCUS GROUP

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Ms Kaye Coates	Residential Manager, Bolton Clarke
Dr Eleanor Horton	Senior Lecturer in Nursing, University of the Sunshine Coast
Ms Cindy Pieterse	Business Operations Manager, OzCare
Ms Lanna Ramsay	Head of Aged Care, Ozcare
Ms Glenys Webby	Director, Webby Advisory
Ms Summer Wright	Project Manager, Operation Support Team, OzCare
Ms Maria Paz	Chief Information Officer, Villa Maria Catholic Homes (VMCH)

CLINICAL TECHNOLOGY FOCUS GROUP

Mr Dan Beeston	Chief Information Officer, Juniper
Mr Rob Binskin	Business Solution Manager, BaptistCare
Mr Cameron Mackay	Group Executive, ICT, Japara Healthcare Ltd
Mr Peter Newing	Chief Information Officer, Presbyterian Aged Care NSW / ACT
Mr Brett Wallis	Manager Enterprise Applications, Information Communication Technology, Anglicare SEQ
Mr Emmanoel Katris	Business & ITC Services Expert

1.4 PROJECT REPORT

This report brings together the findings from the first four components of the project being the national survey, national focus groups, case studies and literature review, as well as material gained from the following three existing reports, which include:

1. Technology Roadmap for Aged Care in Australia (Aged Care Industry Information Technology Council 2017).

2. Aged and Community Sector Technology and Innovative Practice – A Report on What the Research and Evidence is indicating (Barnett et al. 2019).

3. Community Care Innovation and Technology Capabilities and Readiness (CARE-IT) Report (Barnett et al. 2020).

The reference section of this main report is divided into themes reflecting the areas of focus of the findings.

02.

CURRENT ENVIRONMENT:
EVIDENCE AND RESEARCH ON RESIDENTIAL AGED CARE FACILITIES CLINICAL USE OF CLINICAL SOFTWARE

2. CURRENT ENVIRONMENT: EVIDENCE AND RESEARCH ON RESIDENTIAL AGED CARE FACILITIES, CLINICAL USE OF CLINICAL SOFTWARE

A review of the research was undertaken to identify the current environment that residential aged care facilities operate within in relation to the use of clinical software specifically focusing on issues related to current uptake, barriers to uptake and gaps.

In this report the primary documents reviewed included:

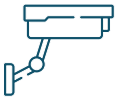
- Community Care Innovation and Technology Capabilities and Readiness (CARE-IT) Report (Bartlett et al. 2020).
- Australian Commission on Safety and Quality in Health Care (ACSQHC) Review of Electronic Health Records in Residential Aged Care Facilities.
- Australian Digital Health Agency Customer Experience Team's Value Map and Aged Care Journey Maps.
- Royal Commission into Aged Care Quality and Safety ICT Strategy and Architecture Review Report.
- Royal Commission into Aged Care Quality and Safety Final Report.

2.1 KEY FINDINGS FROM CARE-IT PROJECT

In 2020, ACIITC was contracted by the Department of Health to undertake the Capabilities in Aged & Community Care Readiness: An Evaluation of Innovation & Technology (CARE-IT) research project (Barnett et al. 2020). This project aimed to assess the innovation and technology capabilities and readiness within the aged and community care industry in the following areas:

Business support & administration

Reporting & online access to government



Surveillance & monitoring technologies

Telehealth

Smart care at home technologies

The outcomes of the CARE-IT Project have been used to identify a benchmark for technology and innovation within the sector.

KEY FINDINGS IN MY HEALTH RECORD

The CARE-IT Report explored the aged and community care interaction with My Health Record. There was an array of key findings that this research project uncovered, including that, out of all respondents, only 5.9% of aged care organisations have adopted My Health Record into their integration of telehealth and telecare services.

Furthermore, over 73% of participating organisations were unaware of their clients who have adopted the use of My Health Record. Over 20% of the remaining organisations have reported having less than 20% of their consumers using the My Health Record system.

This divide emphasises the need for My Health Record to be widely accepted and utilised withinhealth ecosystems before it can be fully embraced by aged care organisations. It should also be noted that there is an additional obstacle within the aged care sector of the interface with My Health Record and My Aged Care.

These results demonstrate that there has been a significant missed opportunity within aged care organisations to increase quality control while also reducing duplication and uploading times. This becomes clearer after considering that only 4.6% of respondents to the CARE-IT Survey have integrated their consumer data with My Health Record.

KEY FINDINGS IN CLINICAL CARE SOFTWARE

The CARE-IT report key findings on clinical software included that 1 in 3 aged care organisations have holistic consumer records within their organisation. At this stage, it is most common for organisations to have separate records for each team; financial, clinical, rostering and administration. Currently, clinical records that are not linked to virtual care provision must be accessed separately. This is clear evidence that the existing system is built on underdeveloped digital health infrastructure, and there needs to be further development in this area to create a single system with virtual care being embedded in the workflows and operational processes of an organisation.

Other key findings included that at the time of the survey, 59% of organisations were monitoring consumers' clinical needs using electronic clinical systems. Additionally, electronic care plans were utilised by 67% of organisations, with staff in 60% of participating organisations able to access digital records at the point of care in real-time. Furthermore, information captured during home care service provision is uploaded automatically to client records in 58% of organisations. This indicates residential aged care providers are concentrating efforts to incorporate digital care into the daily practices of their services and that more focus is being given to data collection at the point of care and service provision.

> **While most organisations participating in the CARE-IT Survey could not identify the platforms to which their telecare and telehealth services are integrated, 25.5% of respondents nominated that they used organisation clinical systems.**

The survey also found that only 55% of aged care organisations that participated utilise clinical governance systems for their core business.

KEY FINDINGS IN AUTOMATION OF DATA

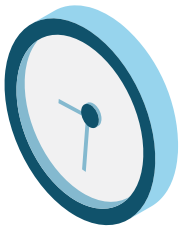
The CARE-IT report detailed the interactions with respect to automated uploads associated with individual government portals. According to the CARE-IT data, the portals with the most automated uploads and downloads of data were the Single Touch Payroll of Australian Taxation Office (28.3%), followed by My Aged Care (12.4%) and Services Australia (8%). The CARE-IT report identified over 40% of aged care providers are manually uploading data to My Aged Care Portal.

03.
FOCUS GROUPS

3. FOCUS GROUPS

The focus groups involved key stakeholders who were identified as expert advisors to assist the project team to better understand the needs and barriers of residential aged care facilities regarding their use of clinical systems.

The focus groups were undertaken in two-hour sessions and discussed residential aged care providers experience with clinical software, technology infrastructure, and the integration of a range of software.



A further opportunity was taken to workshop some of the key findings with participants of the Australasian Institute of Clinical Governance, comprising nineteen (19) clinical leaders across various health and primary care settings.

3.1 RESIDENTIAL AGED CARE PROVIDERS FEEDBACK

The agenda covered during the virtual residential aged care provider focus groups was focused on providing an overview of the project, discussion of clinical workflows, and the National Survey.

During these focus group activities, the expert advice of residential aged care facility providers in respect to the use of clinical software was captured, including the success, failure and lessons learnt.

The following list details the key points raised during the focus groups:

- Importance of including visiting clinicians including dementia behaviour specialists, specialist State and Territory health teams, and palliative care teams.
- Visiting clinicians required electronic access to documents; otherwise, duplication and higher workloads are created by the requirements of scanning and uploading.
- An example of sophisticated security access was highlighted by residential aged care provider granting 24-hour logins to clinical systems to various external stakeholders (including Quality and Safety Commission) to review, input and update progress notes and granting 72-hour login to regular GPs.

- A barrier for residential aged care facilities to incorporating more clinical systems is finding integrated system solutions.
- A barrier for smaller facilities with limited resources is the lack of awareness of integration requirements. Smaller facilities invest in one solution and discover the system does not integrate with anything and cannot afford multiple system solutions.
- Concerns about how to encourage uptake of My Health Record by the two-year timeframe (as detailed in the Royal Commission into Aged Care Quality and Safety Recommendation 68).
- For the sector to uptake My Health Record, government needs to fix interface issues with government systems. Staffing and technology considerations need focus.
- A significant barrier to the uptake of My Health Record is the digital literacy of the sector.
- One system to solve all issues is unrealistic in the view of the focus group.
- There is a priority requirement for integration between clinical software and My Health Record.
- Software security is set up based on roles not divided by location.
- State and Territory Governments firewalls will be a barrier to uptake of My Health Record and integrated clinical platforms for all providers of residential aged care facilities.
- Technology vendors have clinical workflow diagrams that would be important to access.
- Automation does not give an opportunity for personalisation (custom-built decision-making pathways).
- There is limited interaction between residential aged care facilities and allied health.
- A barrier to the customisation of systems is cost.
- A reasonable requirement of any clinical software system is to enter data at any point of the assessment journey.
- Data integration between residential aged care providers and community care is required.
- No consistent terminology in the residential aged care sector.

A significant barrier to the uptake of My Health Record is the digital literacy of the sector.

3.2 TECHNOLOGY EXPERT FEEDBACK

The main agenda items covered during the virtual technology focus groups were the introduction to the project, the parameters of clinical software definitions, technical terminology, and scoping a national survey focused on clinical software in residential aged care facilities.

During the focus group activity's expert opinion in respect to the use of clinical software in aged care was captured, including the success, failure, and terminology. The following lists the key points raised during the focus groups:

- The importance of understanding clinical software includes a variety of tasks, including case management, serious injury reporting etc.
- A barrier to the uptake of clinical software by doctors is their hesitance to participate in software training, e.g., doctors expect to be paid to attend training.

- Suggestion to use personas to tell a story and detail user case study in the research.
- The survey purpose should be benchmarking, establishing a starting position, and identifying a case study for more funding.
- There was an identified need and importance highlighted to demonstrate and quantify the return-on-investment of technology.
- The initial request for information on the use of computers was too broad and needed to drill down to what devices, including tablets, computer, phones etc. were in use.
- Participants highlighted the funding from government in 2004 which invested $1,000 a bed funding for technology - this is needed again.
- Each care stage undertakes a new assessment of the client, for example, ambulance to palliative care and often this is recorded on different platforms thus many duplications in the system which need to be reduced.
- Security and cybersecurity resources are required, and this needs to be included in future research.

Participants highlighted the funding from government in 2004 which invested $1,000 a bed funding for technology. This is needed again.

Providers involved in focus groups covered rural, remote, regional and metropolitan areas.

Figure 2: Map of national residential aged care focus groups

04.

CURRENT TECHNOLOGY:
INFRASTRUCTURE IN RESIDENTIAL AGED CARE

4. CURRENT TECHNOLOGY INFRASTRUCTURE IN RESIDENTIAL AGED CARE

This section of the report highlights the current technology infrastructure in Australian residential aged care facilities.

Of the 230 organisations which responded, the number of devices used in individual residential aged care facilities sites vary between 1 – 10 devices (20%), 11 – 20 devices (23%), 21 – 50 devices (37%), 51 – 100 devices (11%), 101 – 200 (3%) and more than 200 + devices (2%). Some organisations did not know the number of digital devices in each residential aged care facility site (4%).

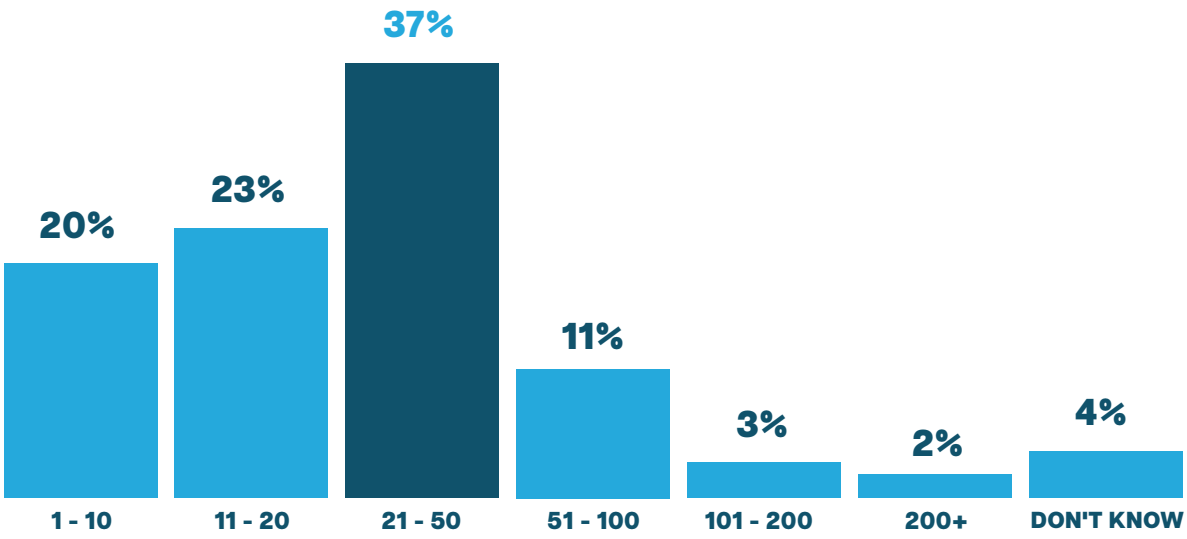


Figure 3: Number of digital devices in each residential aged care facility site (N=233)

Aged care providers report using a variety of technology hardware to undertake particular workforce roles. The most common technology devices used in clinical staff roles are desktop computer (95%), smart tablets (83%), laptop computer (74%) and smart phones (56%).

A majority of organisations provide a landline phone (92%) and fax (80%). Aged care providers indicated they provide technology hardware to external personnel / contractors, with the most common technology devices being desktop computers (49%), laptop computers (23%) and smart tablets (20%), some external personnel were provided with smart phones (12%). See Figure 4.

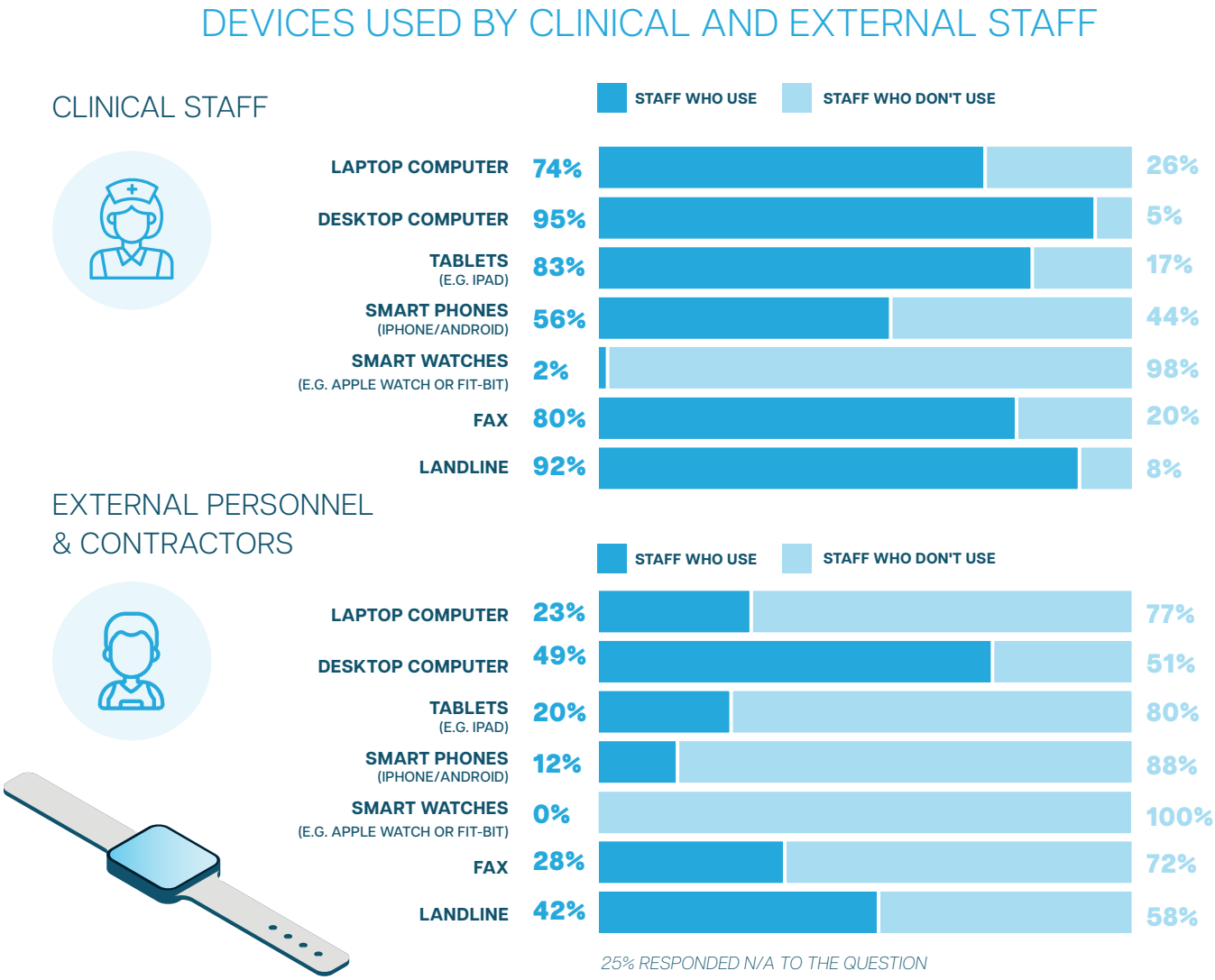


Figure 4: Digital devices used by each role (N=233)

A majority of organisations (89%) indicated they provide Wi-Fi connectivity to their residential aged care facilities. Of the aged care providers who provide Wi-Fi access in their facilities, certain individuals are provided access to the WIFI, including staff (94%), residents (92%), external clinicians (71%), visitors (62%) and external contractors (59%).

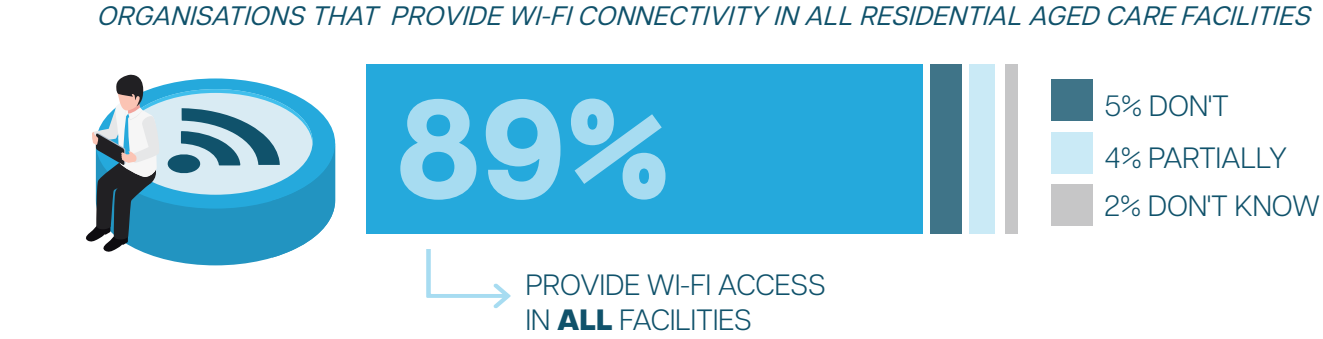


Figure 5: Wi-Fi connectivity in residential aged care facilities (N=232)

4.1 USE OF CLINICAL SOFTWARE

Our project included in the clinical care software any platforms which is used to manage the care and quality of life of recipients of care. In this broader definition, 94% of residential aged care providers indicated that they used some of these platforms. To narrow the definition to that of the Agency which defines clinical

care systems as systems that support direct health and care management such as electronic adoption that supports direct health and care management, such as electronic medication management systems, electronic medical or health records or patient administration systems. The direct health and care management systems in use from respondents include:

- Clinical/care management system 100%
- Incident management 96%
- Resident management system 94 %
- Clinical benchmarking and governance 92%
- Medication management system 92%
- Pharmacy 91%
- Health monitoring 84%

Figure 6: Use of clinical software (N=233)

Of the organisations that use clinical software, a majority believe they use it extensively (77%), and some believe they use it across a range of clinical functions (20%). A majority of aged care providers that operate multiple residential aged care facilities (60%) indicate they deploy the same clinical software across all facilities (95%). The top workforce roles directly using and inputting into residential aged care facility clinical software have been identified as a registered nurse (96%), management personnel (86%), administration personnel (80%), personal care workers (79%), enrolled nurse (79%), visiting allied health (77%), and visiting GPs (77%). Refer to Figure 8.

Our project included in the clinical care software any platforms which is used to manage the care and quality of life of recipients of care. In this broader definition, 94% of residential aged care providers indicated that they used some of these platforms. To narrow the definition to that of the Agency which defines clinical care systems as systems that support direct health and care management such as electronic adoption that supports direct health and care management, such as electronic medication management systems, electronic medical or health records or patient administration system. The direct health and care management systems used from respondents are outlined in Figure 8.

Figure 7: Extensive use of clinical software (N=222)

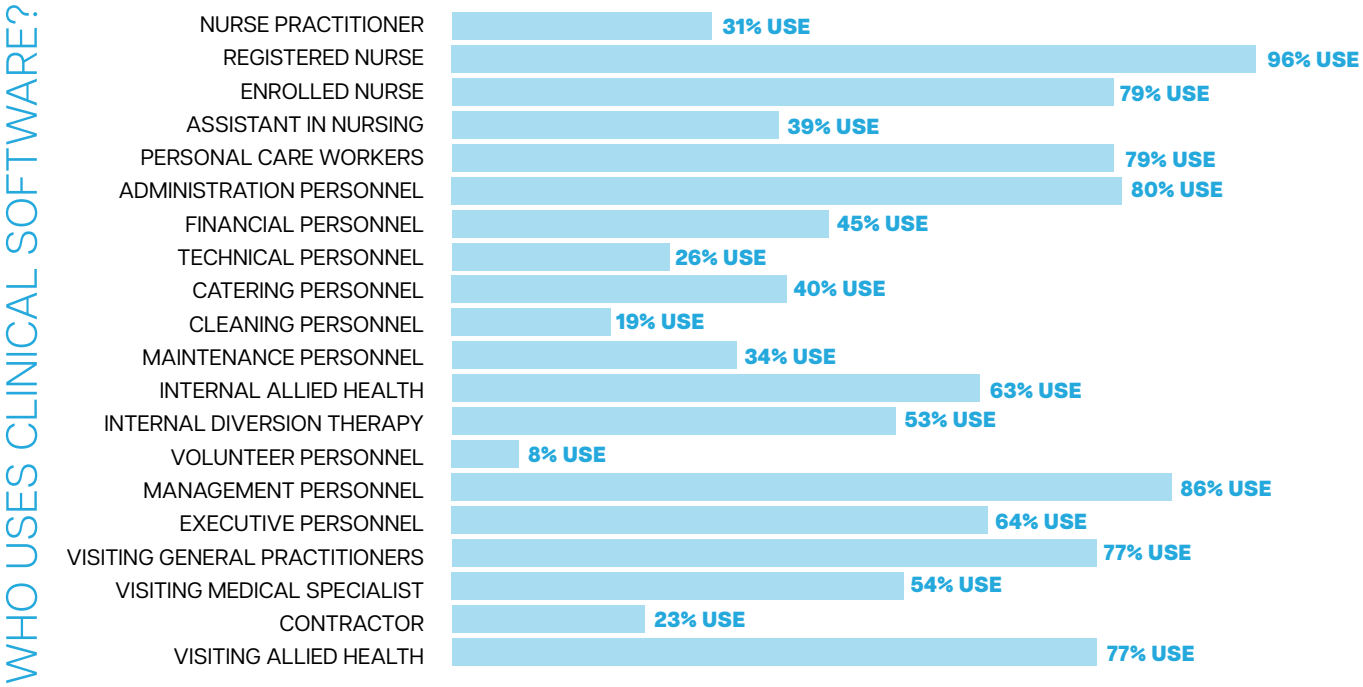


Figure 8: Residential aged care facility roles utilising clinical software (N=221)

4.2 CLINICAL CARE SOFTWARE SOPHISTICATION

The feedback from the national survey indicates clinical care software has been in deployment for between 5 – 10 years.

This highlights the level of redundancy of technology currently in use and may indicate the level of continuity of using the same technology vendor over a period of time. When organisations were asked if their clinical software was redundant of the 152 respondents, 39 organisations indicated they understood that their software was not redundant.

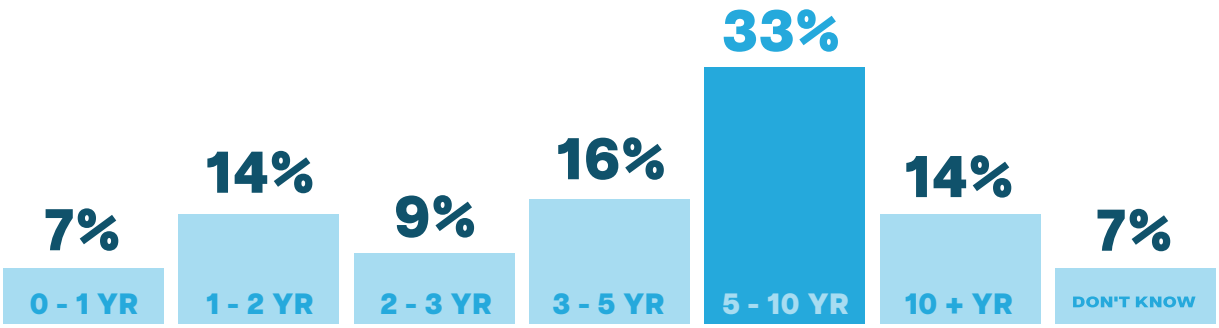


Figure 9: Clinical care software age (N=220)

When asked if any of the organisation's technology systems did not provide the functionality to operate a facility effectively, 53% indicated the technology systems do provide functionality and 39% believed the technology systems did not provide functionality and 7% do not know the level of functionality of the clinical software.

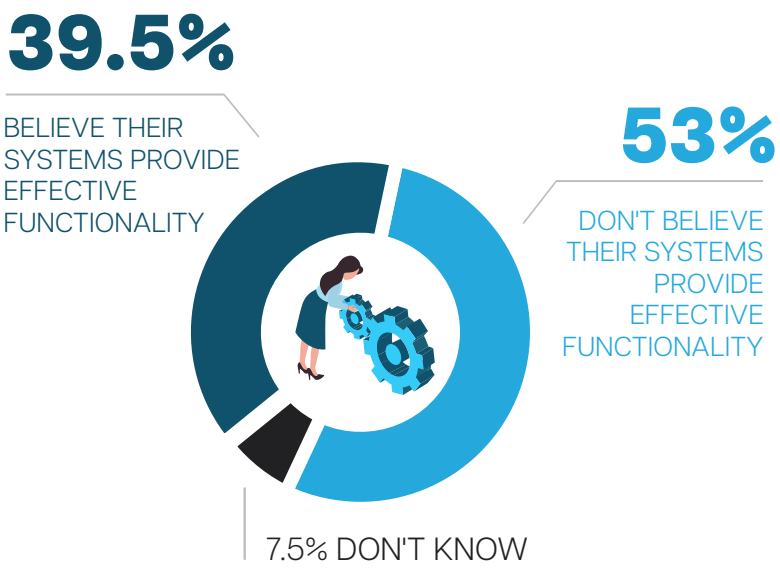


Figure 10: Functionality of clinical software (N=218)

On a rating scale of emerging, consolidating, mature, sophisticated, and innovative, aged care providers were asked to rate the level of sophistication of the clinical software used in residential aged care facilities. Respondents indicated that their level of sophistication was consolidating (31%) mature (36%) and a small percentage believed their organisation was in the innovative bracket (7%).

LEVEL OF SOFTWARE SOPHISTICATION AT RESIDENTIAL AGED CARE FACILITY PROVIDERS

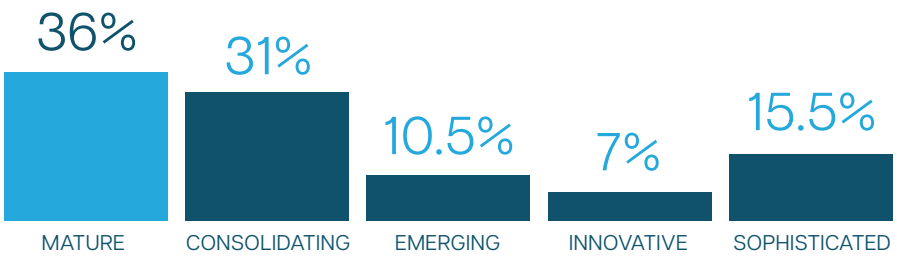


Figure 11: Clinical software sophistication (N=218)

4.3 BARRIERS TO ADOPTION

In exploring the barriers to clinical software adoption, the national survey identified a range of barriers:

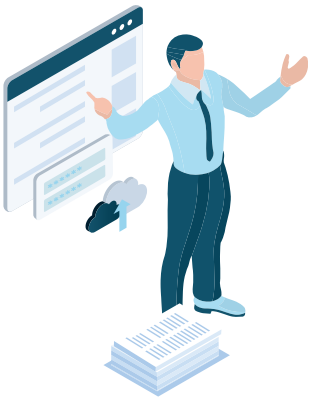
Figure 12: Barriers to adoption of clinical software (N= 152)

4.4 CLINICAL CARE SOFTWARE SOLUTIONS

The national survey identified software system vendors in twelve (12) areas, including:

- CLINICAL / CARE MANAGEMENT
- PHARMACY
- RESIDENTIAL MANAGEMENT
- RESIDENTIAL AGREEMENT GENERATOR
- INCIDENT MANAGEMENT
- RISK / COMPLAINTS / WORKPLACE HEALTH AND SAFETY
- CLINICAL BENCHMARKING & GOVERNANCE
- HEALTH MONITORING
- MEDICATION MANAGEMENT
- CUSTOMER
- HUMAN RESOURCES
- FINANCIAL

The national survey accessed by 338 aged care providers and completed by 230 respondents, identified 287 unique clinical care software vendors utilised to deliver clinical software in residential aged care. ACIITC undertook a national survey in 2020 titled Capabilities in Aged & Community Care Readiness: An Evaluation of Innovation & Technology (CARE-IT) identified 420 unique vendors in the areas of the core business, security and protection, workforce management communication and service provision and advanced technologies (Bartlett et al. 2020).



287

UNIQUE CLINICAL CARE SOFTWARE VENDORS IDENTIFIED

Figure 13: Unique technology vendors (N = 230)

4.5 INTEGRATION

The project has highlighted the importance of integration between systems and not just interfaces.

There was a divide between aged care providers when asked if their different clinical systems integrate with each other. Aged care providers which have clinical systems that integrate (50%) suggest these integrate due to the choice of clinical software solution and its capability to integrate with other software solutions.

> **A few examples of the compatible solution pathways are clinical software to Medicare, clinical software to pharmacy, clinical software to clinical software, medication management software to clinical management software, and human resource management systems to clinical software.**

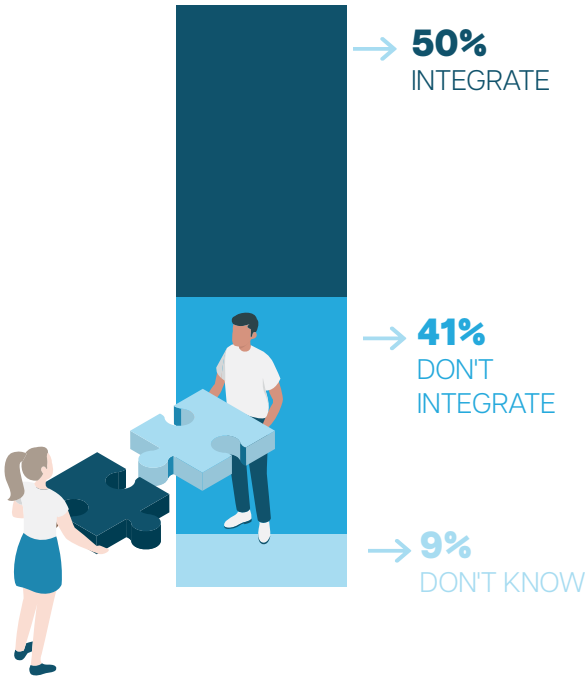


Figure 14: Clinical system integration (N= 221)

The majority of aged care providers who implement clinical software do not integrate medical, clinical and enterprise resource planning systems (59%).

PROVIDERS THAT INTEGRATE MEDICAL, CLINICAL & ENTERPRISE RESOURCE PLANNING (ERP) SYSTEMS

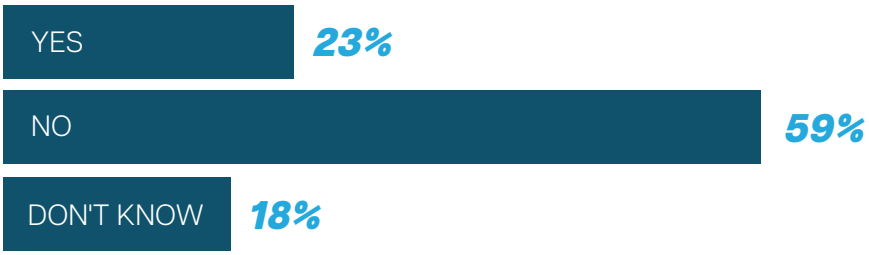


Figure 15: Integration between medical, clinical and enterprise resource planning systems (N= 220)

4.6 CLINICAL SOFTWARE IMPACT ON BUSINESS PROCESS

45% of aged care providers reported that less than 10 per cent of clinical information is keyed in more than once.

26% of aged care providers also reported more than 20 percent of data is keyed into more than one system and 17% reported more than 30% of data is keyed into multiple systems. Other organisations did not know if personnel have to repeat core clinical information between clinical technology systems (12%).

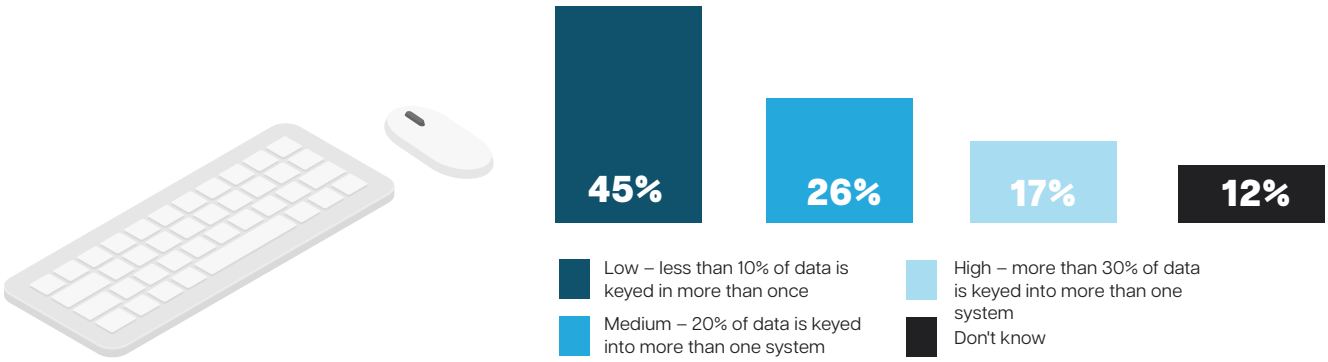


Figure 16: Repeat of core clinical information (N=220)

The national survey identified 39% had in-built decision-making pathways that were used in clinical software platforms with 41% of respondents not including in-built decision-making pathways. Another 20% responded that they did not know if any inbuilt decision-making pathways were present.

In respect to in-built decision-making pathways, many organisations (64%) had no or did not know if tailored or custom-built software was in place for the organisation.

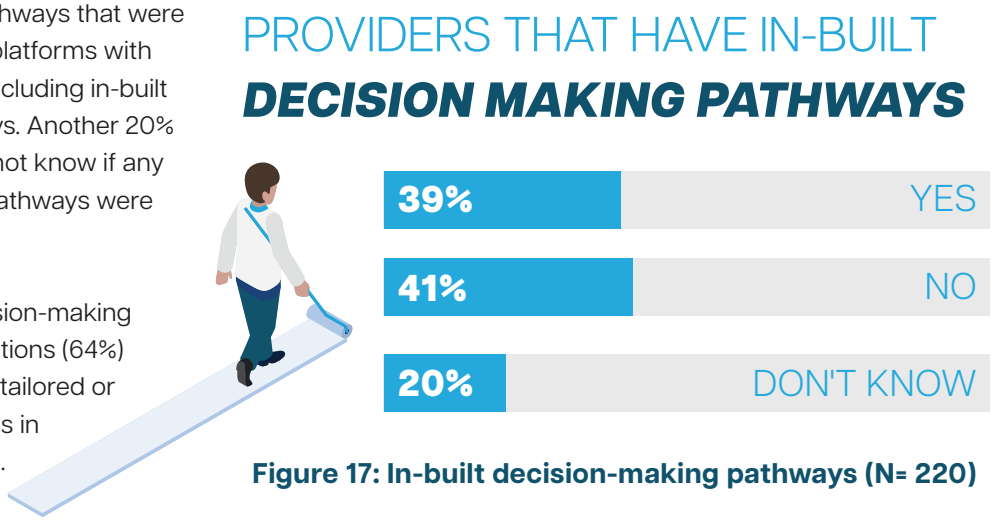


Figure 17: In-built decision-making pathways (N= 220)

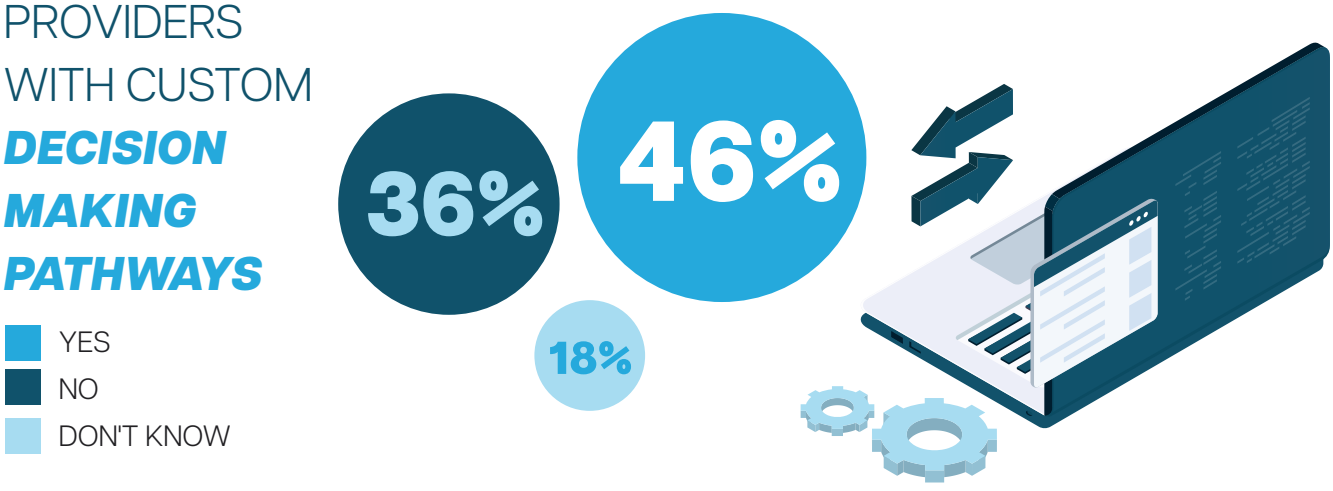


Figure 18: Custom-built clinical software decision-making pathways (N= 130)

4.7 CLINICAL SOFTWARE TRAINING

The survey found that organisations are providing clinical software training to a range of internal and external roles within residential aged care facilities. 99 out of 231 survey responses train all employees (43%). Other roles which are trained include administration, lifestyle roles†, housekeeping, management, and care staff. 53% of roles specifically focused on clinical care received training. Other internal roles receiving training are volunteers (8%) and board members (6%). The external roles which receive clinical software training include contractors (46%), visiting GPs (52%), visiting allied health professional (60%) and external auditors (24%).

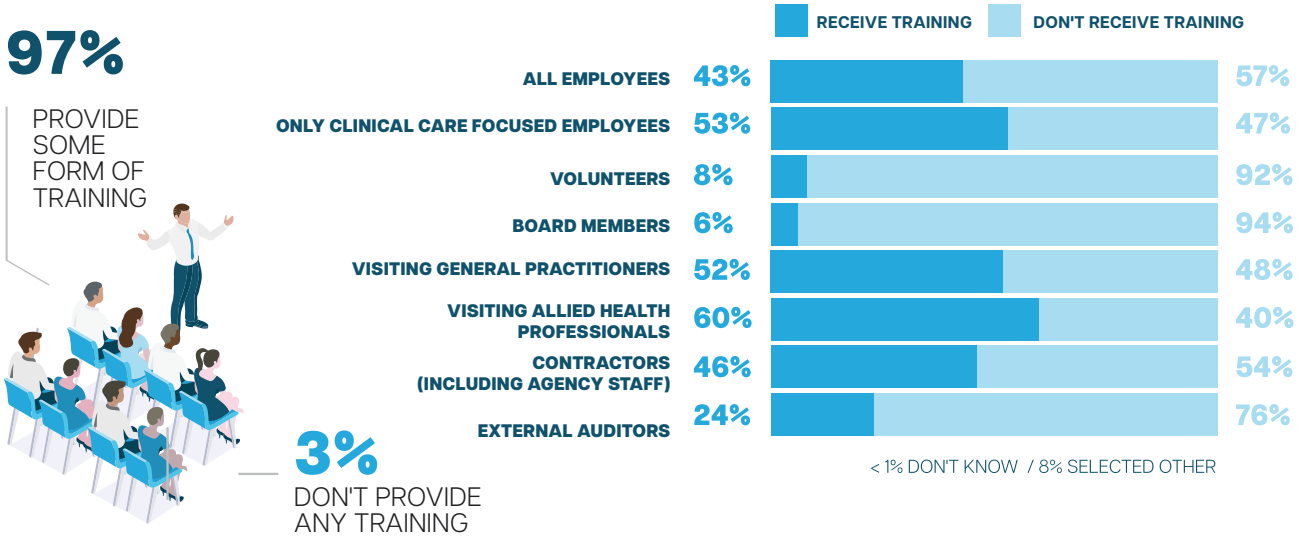


Figure 19: Internal and external roles provided with clinical software training (N= 231)

4.8 SECURITY CONSIDERATIONS

A total of 227 organisations provided detailed information about their use of security systems, specifically the use of centralised identity management systems.

What is meant by 'centralised identity management system'?

For this report, a centralised identity management system is the management of individual identification, including their authentication, authorisation, roles, and privileges within or across clinical software.

Centralised identity management systems are used for 62% employees and 45% external personnel.

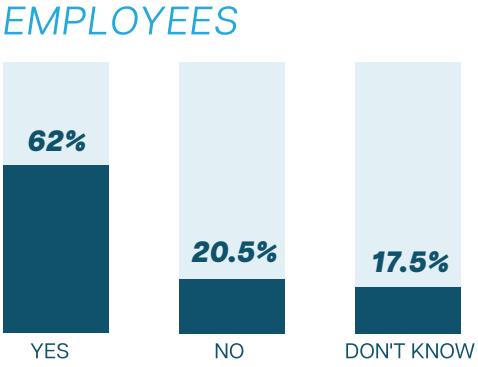


Figure 20: Use of centralised identity management system for employees (N=227)

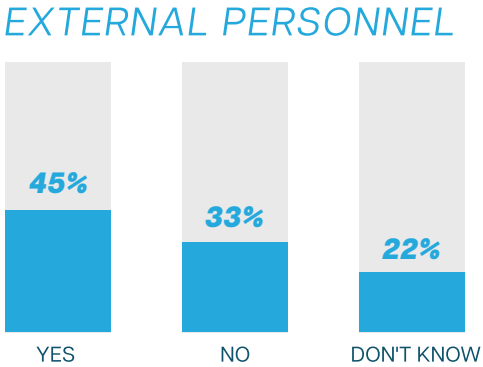


Figure 21: Use of centralised identity management system for external personnel (N=227)

† Plans and implements activities based on the residents identified needs (Royal Commission 2022).

CASE STUDY 01.

A VIEW FROM THE BUSINESS OPERATION SIDE – A STATEWIDE PROVIDER OF A RANGE OF SERVICE TYPES

CASE STUDY

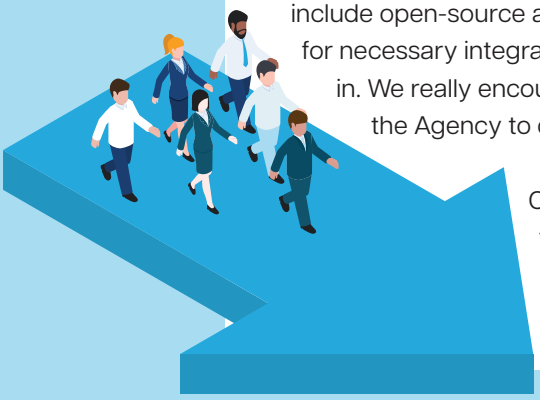
Our organisations' strategy about incorporating any technologies or new processes is directly tied to our Business Transformation Strategy. Every change needs to have a comprehensive business case and ultimately add value to our organisation and improve the quality of care to individuals.

We have a three-year strategy that should see us achieving a totally integrated point of care approach in all our residential care facilities. To do this, we need to get over a lot of barriers and obstacles. These are many and include our current non-conformant software, which the organisation has invested in significantly, this is used so far away from the point of care, and its reporting is very limited.

Our future strategy will include a number of new technologies to monitor and record a range of information for our residents at the point of care or at the time an event occurs. We have identified a range of settings and issues where we think we can really drive quality improvements in our care.

One particular area we would like to stress the importance of is that the sector really needs to develop a minimum standard for the technology platforms that we accept to run a contemporary service.

One particular area we would like to stress the importance of is that the sector really needs to develop a minimum standard for the technology platforms that we accept to run a contemporary service. This must include open-source and truly allowing for necessary integrations to be built in. We really encourage ACIITC and the Agency to develop a strategic approach to this requirement.



Codesign and emphasis on providing an evidence-based to new technologies are extremely important to be considered a priority for future focus.

05.

EXTERNAL USES:
CLINICAL SOFTWARE IN RESIDENTIAL AGED CARE

5. EXTERNAL USES: CLINICAL SOFTWARE IN RESIDENTIAL AGED CARE

This section of the report highlights the current technology infrastructure in Australian residential aged care facilities.

In respect to visiting clinicians' access to clinical software, the survey explored the right to input, extract or review data onsite and remotely. The results found visiting clinicians have higher access to input, extract, and review data on-site (92%) than remotely (57%).

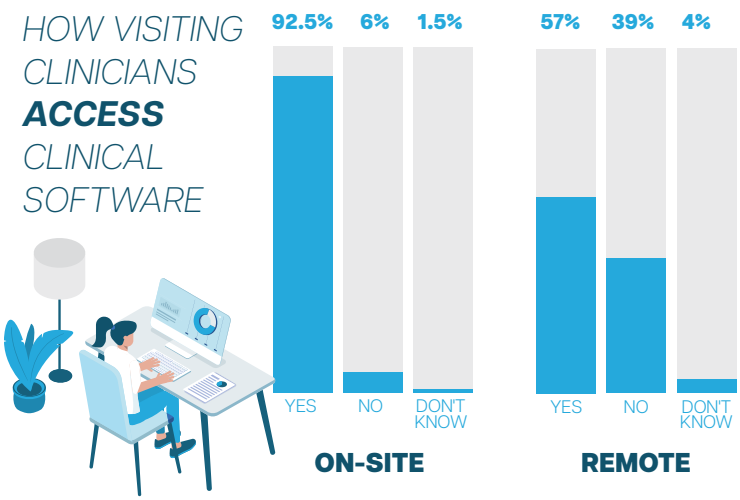


Figure 22: Visiting clinicians use of clinical software (N=221)

VISITING CLINICALS INTERACTION WITH RESIDENTIAL AGED CARE FACILITY CLINICAL SOFTWARE

Of the 66 organisations responding to the questions regarding how visiting (external) clinicians uses the organisation's clinical software when interacting with residential aged care facilities, 52% indicated they are using it to directly input resident data and 39% indicated they use it to review residents' data. Only a few are using the system to extract residents' data (3%), and 6% do not know how external clinicians interact with residential aged care facility clinical software. See Figure 23.

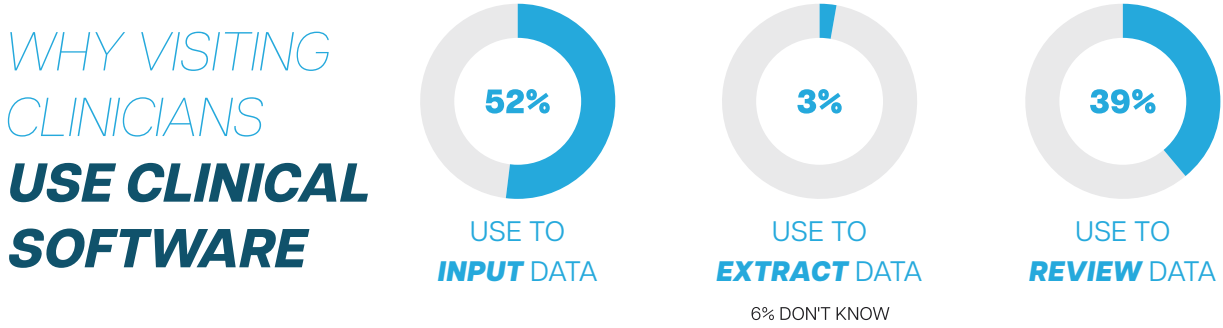
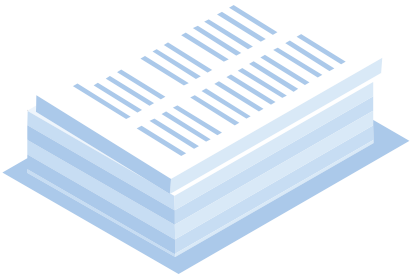


Figure 23: External clinicians interaction of residential aged care facility clinical software (N=66)

EXTERNAL AGENCIES USE OF RESIDENTIAL AGED CARE FACILITY CLINICAL SOFTWARE

Of the 221 organisations responding to how external agencies such as Aged Care Quality and Safety Commission, accreditation agencies, and standards monitoring organisations get access to the data within an organisation clinical system, 148 organisations indicated they provide electronic copy/ access only, with 48 organisation providing electronic and paper copies and 13 organisations providing paper copies only.



5.1 INTEGRATION OF VISITING CLINICIAN SOFTWARE

As the figure below indicates, aged care providers surveyed identified that their visiting clinicians' software struggles to integrate with the residential aged care facility clinical software.

> **Residential aged care providers clinical software was reported as not integrating with the visiting clinicians' software (70%). With only a few indicating their organisations clinical software can integrate between external and internal clinical software (13%).**

Other organisations did not know if visiting clinician's software integrated with residential aged care facility clinical software (17%).

Residential aged care facilities providers who integrate with visiting clinician software

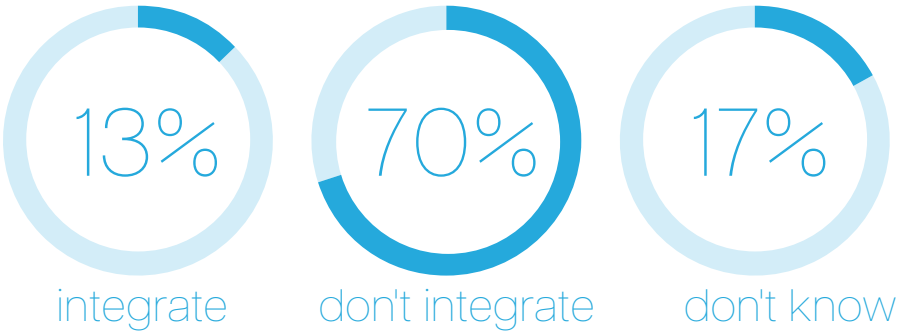
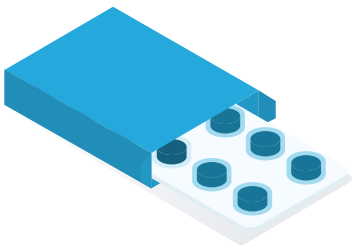


Figure 24: Visiting clinicians software integration with residential aged care facility clinical software (N=221)

5.2 CLINICAL SOFTWARE INTERFACE WITH COMMUNITY PHARMACY SOFTWARE

In respect to residential aged care facility clinical software interfaces with community pharmacy software, respondents reported that it fully integrates for 42% of respondents. Others partially integrated (24%) and 34% indicated that there was no integration between residential aged care facility clinical software and community pharmacy software.



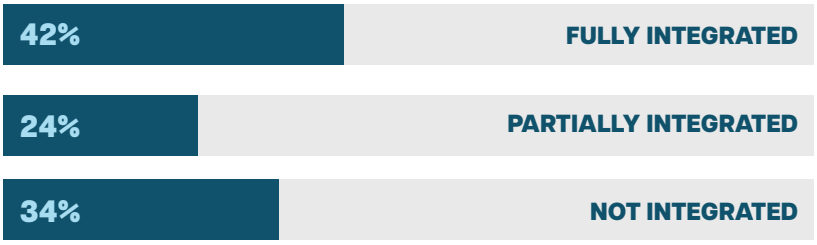


Figure 25: Interface with community pharmacy software (N=219)

5.3 COMMUNITY PHARMACY SOFTWARE WORKFLOW

LEGEND

Fax | GP Software | Clinical Software | Pharmacy Software

Clinical Care Facilitator | Pharmacist | GP

START

01. GP arrives to residential aged care facility, checks in with Clinical Care Facilitator and undertakes a routine checkup with resident.

02. GP makes changes to Resident Care Plan and fills out paper medical form.

Ideally, Electronic Prescribing System would be used at this step to prevent use of paper work and ensure Pharmacy can dispense medicine straight away instead of waiting for GP to fax prescription.

03. Residential aged care facility fax paper medical form to Pharmacy to process prescription.

04. Pharmacy prepares prescription and updates residential aged care facility Clinical Software to update Resident Care Plan.

Some Pharmacists will dispense medication based on the changes to a printed and signed residential aged care facility medication form as an interim and time-saving measure while the pharmacy waits for a formal script from a GP.

05. GP fax medication prescription to Pharmacy.

06. Once the Pharmacy receives a medication prescription, a Pharmacist dispenses medicine to residential aged care facility.

END

07. Residential aged care facility signs paper work on receipt of medicine and administers medication to resident.

Figure 26: Workflow: Medicine prescribed, dispensed, and administered within residential aged care facilities

5.4 GENERAL PRACTITIONER INTERFACE WITH CLINICAL SOFTWARE

When prescribing medication for residents, the survey found that a visiting GPs interface with residential aged care facility clinical software varies. Aged care organisations provided by visiting GPs with the full interface (39%) with the organisation's clinical software and provided a partial interface (27%). Other organisations indicated visiting GPs have no interface with the organisation's clinical software (29%) or that they did not know (4%).

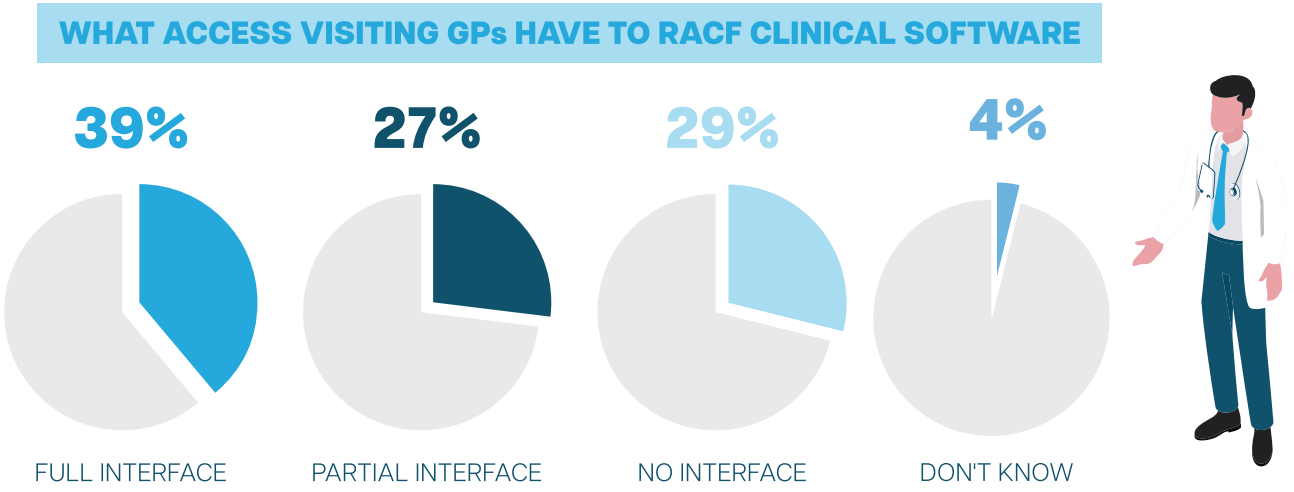


Figure 27: General Practitioner access to residential aged care facility clinical care software (N=219)

5.5 CLINICAL SOFTWARE SUPPORT OF TRANSITION OF CARE

When asked if the organisation's clinical software supports and enables a resident's transition of care, organisations gave mixed responses. Organisations indicated clinical software does support and enable a resident's transition of care (44%).

Other organisations indicated that their clinical software does not support or enable the transition of care (38%) or they indicated that they did not know if their clinical software supports the transition of care (18%).

A total of 57 providers identified how clinical software assists with the transition of care from residential care to other residential care facilities, residential care to community care, residential care of the ambulance, residential care to rehabilitation, residential care to hospitals, and residential care to Health and Emergency Service of State or Territory records.

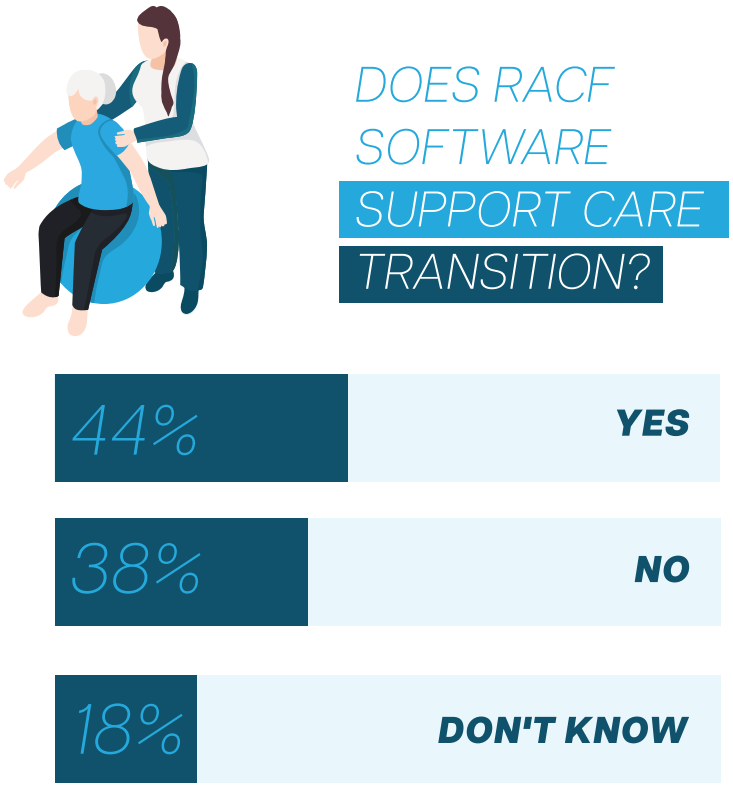


Figure 28: Residential aged care facility clinical software support of transition of care (N=221)

WHAT THE INDUSTRY IS SAYING

RESIDENTIAL CARE TO OTHER RESIDENTIAL CARE

ACCURACY prefilled data
GENERATION OF REPORTS
PROGRESS creation of reports
NOTES TRANSFER OF DATA

RESIDENTIAL CARE TO COMMUNITY CARE

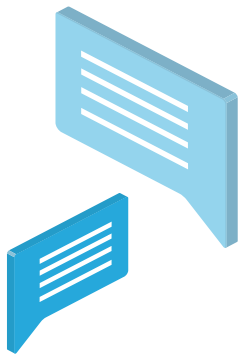
Easy to print care and medication plan
NEEDS TO BE **MANUALLY** SET UP IN SYSTEM
ELECTRONIC TRANSMISSION
Detailed Care Plan summary reports

RESIDENTIAL CARE TO AMBULANCE

PRINT HOSPITAL PACK
information extracted and printed *PRINT & HANDOVER* **access to clinical notes**
HARD COPY ONLY

RESIDENTIAL CARE TO REHABILITATION

creation of reports IN-HOUSE REHABILITATION
provide information for manual input **print copy**
CARE PLAN SUMMARY



RESIDENTIAL CARE TO HOSPITAL

PRINT HARD COPY ***create reports***
same as ambulance transfer
Electronic transfer forms
SCAN DOCUMENTS AND UPLOAD

RESIDENTIAL CARE TO HEALTH AND EMERGENCY SERVICE STATE OR TERRITORY RECORDS

FORM GENERATION
DOES NOT ASSIST
PRINT HARD COPY
manual transfer
PRE-FILLED DATA REPORT

Figure 29: Feedback on clinical software assistance with transition of care (N=221)

06.

GENERAL PRACTITIONERS: INTERACTION WITH RESIDENTIAL AGED CARE FACILITIES

6. GENERAL PRACTITIONERS: INTERACTION WITH RESIDENTIAL AGED CARE FACILITIES

To further understand how GPs interact with residential aged care facilities, ACIITC undertook a survey that targeted GPs who have patients who have residents of residential aged care facilities.

ACIITC notes the GP survey uptake was low (24), which reflects comments on residential aged care facility focus group comments, in particular, that GPs willingness to participate without payment is low. The survey was completed by most State and Territories in Australia, including Queensland (21%), Victoria (25%), New South Wales (21%), South Australia (8%), Tasmania (13%), Western Australia (8%), and Northern Territory (4%). When asked if responding GPs interface with the residential aged care facility clinical software, a majority indicated they do (88%). 13% of GPs indicated that they did not interface with residential aged care facility clinical software.

When asked what tasks are undertaken by GPs in residential ged care facilities clinical software, responses varied from extracting data (25%), inputting data (67%), reviewing data (87%). See Figure 31. It is important to note residential aged care facilities reported that when prescribing medication for residents, visiting GPs interface with residential aged care facility clinical software varies from the full interface (39%), a partial interface (27%) and of interest no interface (30%).

Figure 30: GPs interface with residential aged care facilities clinical software (N=24)

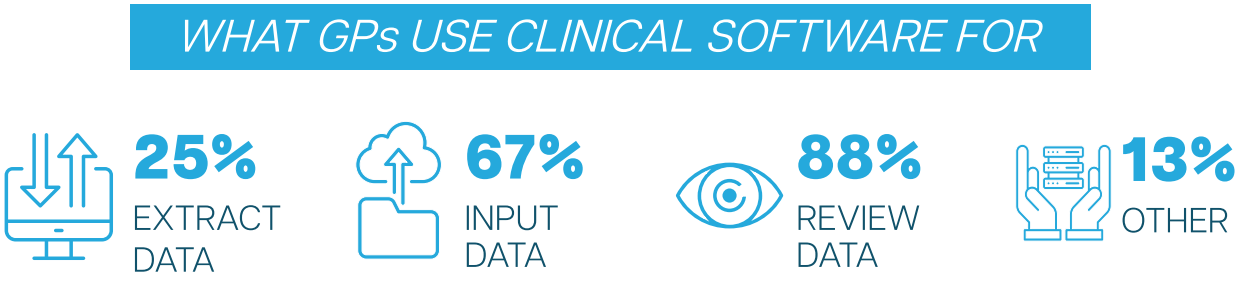


Figure 31: Tasks undertaken by GPs in residential aged care facility clinical software (N=24)

When asked how GPs would rate the experience of interfacing with residential aged care facility clinical software, out of a five-star rating, on average rating the experience 2.5 out of 5.

GPs were asked to identify the benefits of interfacing with residential aged care facility clinical software, a range of reasons were provided including:

- Minimise interruption to workflow
- Usefulness
- Information is easily recorded and data reviewed when relevant
- Information about patient
- Printing notes to scan into GP system
- Can access information off site
- Nurses perspective
- Better quality care
- Improve safety
- Faster than paperwork
- Paper-based would be more efficient than the current mode.

6.1 BARRIERS FOR GP INTERFACING WITH RESIDENTIAL AGED CARE FACILITY CLINICAL SOFTWARE

The barriers encountered by GPs when interfacing with residential aged care facility clinical software are outlined including:

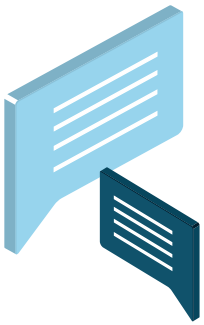
- Each facility uses different software
- Limited access to data
- Learning each system is time consuming
- Password change
- Mobility is not supported
- Does not integrate with practice software
- Software not designed or structured for medical notes
- Drug charts not electronic or accessed remotely
- No interoperability with GP software
- My Health Record is holding things back
- No training provided by residential aged care facility
- Lack of remote access
- Hard to navigate
- Not intuitive

6.2 CLINICAL SOFTWARE USED BY GPS

GPs were asked to identify which clinical software is used in their practice. Responding GPs identified nine (9) unique software vendors. A majority of GPs indicated the clinical software used in their practice is Best Practice, and LeeCare. Others included Clinic to Cloud, Genie, Helix, MD4, Medical Director, and Medical Objects. When asked if the GPs clinical software integrates with residential aged care facilities, a majority of responses indicated it did not integrate (96%). Other responders indicated they did not know if there was integration (4%).

MY HEALTH RECORD: VIEWS FROM GENERAL PRACTICE RESPONSES

Throughout the project, a range of views were expressed from GPs in respect to clinical software and My Health Record. These were recorded in various parts of the survey responses.



The GPs views can be characterised in the following themes:

Requirement for GPs to access residential aged care facility clinical software remotely.
GPs suggest a web-based application, digital signing capabilities and procedures in place to provide virtual care.

Call for standardisation across all residential aged care facility & medication administration.
GPs reported many of the residential aged care facilities have different software, requiring interfacing with multiple systems on multiple sites. This results in clinical systems not being used as it is difficult to gain an understanding and use all of the clinical systems.

Lack of trust between residential aged care facilities and GPs.
GPs reported there is a lack of trust in storing clinical notes on residential aged care facility clinical systems. There is a fear clinical notes will be misused and lost. Residential aged care facility security protocols create barriers. GPs have reported residential aged care facility cybersecurity protocols result in frequently changed passwords on residential aged care facility clinical software. This makes it difficult to access the residential aged care facility clinical system and difficult to manage all residential aged care facility credentials.

Integration requirement.
GPs have called for integration between prescribing software, clinical notes, and documents. Paper-based reports still in use. GPs reported that even when being provided access to residential aged care facility clinical software to record clinical notes that they will print and provide paper copies of clinical notes to residential aged care facility, instead of entering into residential aged care facility clinical software.

Lack of training from residential aged care facilities.
GPs have reported they experienced poor access to residential aged care facility clinical software. They reported resistance from residential aged care facility staff to provide assistance to them and no clinical software training being provided.

Resistance to use My Health Record within a residential aged care facility environment.
GPs reported My Health Record has no role within residential aged care. Its use does negatively impact on good data practices. They have also highlighted a safety risk in the respect of this describing My Health Record as dangerous, distracting, cumbersome and pointless.

07.

WORKFLOW:
USE OF CLINICAL SYSTEMS IN RESIDENTIAL AGED CARE FACILITIES

7. WORKFLOW: USE OF CLINICAL SYSTEMS IN RESIDENTIAL AGED CARE FACILITIES

ACIITC investigated clinical workflows involving the use of software used by registered nurses, GPs, allied health practitioners and other residential aged care facility staff. During the investigation, one uniform standard workflow model could not be found across the residential aged care sector.

The following steps outline a detailed clinical workflow, roles and responsibilities and the use of clinical software.

STEP ONE: CLIENT IDENTIFIED

- There are two ways prospective clients requiring residential aged care facilities are identified.
- Residential aged care providers find prospective clients on My Aged Care either by direct referrals (directed to organisation) or blank referral (no direct organisation listed only need for services).
- Referral made via the residential aged care provider customer service centre.

STEP TWO: ENQUIRY

- Residential aged care service provider administration role follows up enquiries and referrals of prospective clients.
- The first question asked by a prospective client is their consent to collect and store data. This becomes the initial data capture point where baseline data is entered into the clinical software system. All communication and discussions are to be progressed into notes in the clinical software system. It is important to note, there is no integration between clinical software and My Aged Care. All reports downloaded from My Aged Care must be manually entered into the clinical software. An administrative role undertakes this process and, on average, takes 20 minutes per prospective clients.
- From this point, the administration role prepares application information and service marketing materials to be sent to prospective clients electronically, paper-based in the mail, or downloaded from the service provider's website. Once a client profile is created in the clinical software, an automatic event is created in the clients Medicare records.

STEP THREE: APPLICATION

The residential aged care service provider receives an application from a prospective client electronically or paper-based, noting all paper-based applications are scanned into clinical software system. The Expert Focus Group comprised of residential aged care providers identified the application process is 50% paper-based and 50% electronic.

The application pack includes a number of forms, including:

- Application for Admission
- Consent to Collect Information
- Consent for Public Relations
- Quality Indicator Consent
- Department of Health Schedule of Fees and Charges
- Department of Human Services Aged Care Entry Process
- Client Agreement
- Aged Care Quality Standards
- Charter of Aged Care Rights
- Price List
- Facility Flyer
- Serious Incident Response
- Client Fact Sheet.

At the point of application, prospective clients are asked to inform and liaise with their GP regarding if they will be willing to continue to treat them and visit them in their chosen residential aged care facility. If the GP is unable to continue caring for a client, the prospective client will be provided with a list of visiting GPs by the residential aged care facility to choose from.

STEP FOUR: PRE-ADMISSION

ASSESSMENT OF CLIENT

The facility manager undertakes a pre-admission interview to assess if the prospective client is suitable for the residential aged care facility environment. The pre-admission interview can be undertaken in three environments: residential aged care facility, prospective client home or hospital. All information collected during the pre-admission interview is entered into the client's clinical record, including scanning paper documents.

This allows the opportunity to show prospective clients and their representatives the facility and discuss the admission process and all potential fees. The discussion at this point includes:

- Accommodation charges
- Standard client contributions (Daily Care Fees)
- Means tested care fees
- Interim care fees
- Pre-entry level and associated charges
- Charter of Aged Care Rights
- Expectations of residential aged care facilities.

Prior to offering a prospective client a place, a Facility Manager is responsible for undertaking a pre-admission assessment of the client to determine their suitability for the residential aged care facility and estimate Aged Care Funding Instrument (ACFI) income.

OFFER RESIDENTIAL AGED CARE PLACE

It's important to note, if a client is not suitable for residential aged care, they can be referred to community care, noting this may be the organisation's own services or external organisations triggering a new clinical software pathway.

On acceptance of a client, the residential aged care facility will commence the admission process by offering a place and a tentative date for admission. Part of the pre-admission process is providing a document pack to ensure a risk-free admission and the Approved Provider pre-disclosure requirements are met. The pre-admission process includes relevant documents to be completed prior to admission day to allow the residential aged care facility to prepare for admission.

The pre-admission pack may consist of:

- Direct Debit Request Form
- Aged Care Agreement Client Fund Account Form
- New Client Pharmacy Notification Form
- Key to Me Form
- Choice of Accommodation Payment Method Form
- Client Agreement Residential Care
- Statement of Choices
- Clothing Label Form
- Charter of Aged Care Rights.

Any information collected by paper at this point is scanned manually into the clinical software.
Once a client has accepted an offer, the Clinical Care Manager is responsible for organising prior to admission day, receipt of medical summary, medication charts and any other information required for safe and informed admission of a client.

STEP FIVE: APPLICATION

Admissions are managed by the residential aged care Facility Manager. Once the client is admitted to the residential facility, an event is automatically created within Medicare from the clinical software system. The following tasks can be completed in clinical software:

PRIOR TO ADMISSION DAY:

- The Clinical Care Manager receives the client record from the administrative employee no later than two days for admission
- Clinical Care Manager receives GP medical summary and the completes Electronic Medication requirements chart and files on the client record.

DAY ONE

- Baseline Assessment is completed by nurse
- Key to Me Assessment is completed by the client/representative or clinical employee
- Intimacy and Privacy Assessment
- Diet Preferences
- Mobility Assessment and Mobility Care Plan
- Client medical issues (including diagnosis and allergies)
- Client photograph is taken and uploaded to client file/diet preference assessment/medication chart
- Client orientation, including allocated client a buddy
- Introduction to all management employee, care employees and support service employees within their area.
- Develop an initial person-centred care plan from the baseline assessments identified
- Client to be added to evacuation list.

DAY TWO TO SEVEN

- Complete all focused assessments within seven days
- Continue to develop Care Plans
- GP Consultation.

DAY THREE TO FIVE

- Meet with family / next of kin to discuss settling issues, early concerns, and review care plan
- Refer identified clients to allied health professionals.

DAY FOURTEEN TO TWENTY – EIGHT

- Follow up accommodation payment choice
- Review comprehensive person-centred Care Plan
- Check Clinical System has all information listed on the admission checklist.

STEP SIX: CLIENT IN RESIDENTIAL AGED CARE

If a client is admitted to the hospital from residential aged care facilities, a paper-based transfer form and care plan are provided. If the clinical software integrates with Medicare, events will be automatically created within Medicare for entry into residential facility, leave or exit.

KEY FINDINGS IDENTIFIED FROM THE SUCCESSFUL IMPLEMENTATIONS

IT TAKES **2-3 YEARS** TO FIND A SUITABLE SOLUTION

- Identifying a suitable solution that works for an aged care provider can take between 2 to 3 years.
- The software development process can take on average six months.
- The technology implementation process into residential aged care facilities could take up to eight months, depending on the number of facilities.
- Investment in workforce training has proven to reduce staff turnover (depending on roles, orientation training can be two weeks and two days focused on clinical software).
- Acknowledgement was given to the difficulty of facilitating change from paper-based to electronic, but that this is essential, and benefits realisation should be promoted.
- Integration between clinical software and Medicare is essential.
- Important to undertake comprehensive business analysis to configure any technology solution.
- The development of clinical software guides is critical.
- Too much customisation to a technology solution can be detrimental to usability.
- Where possible, use the whole system and not just part of the system, adjust business process where possible and customise fields within clinical software rather than configure the system.
- **There is no integration between systems. This is a significant concern.**

CASE STUDY: CLINICAL WORKFLOW

The national survey identified an aged care provider that had implemented business policies and procedures to enter data into clinical software from the point of enquiry to admission. This case study shows a prospective client enquiry, and the use of clinical software, through each stage of the process. Entries are made in the clinical software to record all activities and communications that serve as a status tracker for the application and relevant documents. All residential aged care facility employees involved throughout this process are responsible for recording their respective activities in relation to the application.

START

01. Customer Service identify Client through My Aged Care.

02. Administration Team follow up client enquiry and gain consent to collect data in clinical software system to create an account.

03. Administration Team provide paper application documentation to client which is completed and scanned into clinical software system. Client receives consent from GP to provide care at chosen residential aged care facility.

04. The Facility Manager undertakes a Pre-Assessment of the client at home or hospital on a technology device connected to residential aged care facility Clinical Software to determine suitability to the residential aged care facility.

05. The Clinical Care Manager is responsible for organising prior to admission day receipt of all information and ensure entered into Clinical Software. They also ensure all documents are scanned into Clinical & Financial software. This requires interaction with GP and Pharmacist Clincial Software.

06. At the point of pre-admission, the Facility Manager sets up direct debit with External Pharmacy Software and clinical care plans are created (including managing pharmacy and allied health requirements). All data must be manually inputted as there is no integration between clinical software, pharmacy and allied health software.

END

07. The Facility Manager manages the clients admission and the required 28 day protocol including ensuring Clinical Management, Financial and Pharmacy System has all information required. On admission, the Facility manager needs to sign and send the event via clinical software to Medicare.

Figure 32: Clinical workflow of use of clinical systems in residential aged care facilities

08.

INTEGRATION:
MY HEALTH RECORD

8. INTEGRATION: MY HEALTH RECORD

ACIITC CARE-IT report (2020) found most of the 109 aged care organisations that provided feedback about their consumer's interaction with My Health Record do not know the extent to which this is occurring, reporting 73% did not know if their consumers had My Health Record (Barnett et al. 2020).

This study has identified organisations may not know if their residents use My Health Record (71%). Of important note organisations that are aware of their residents My Health Record, report 1 to 10 per cent of residents have My Health Record (24%), 11 to 20 per cent of residents have My Health Record (2%) and others report 21 to 30 per cent of residents have My Health Record (1%). A majority of the 230 aged care organisations providing feedback reported their organisation's clinical software does not record data with resident's My Health Record (77%).

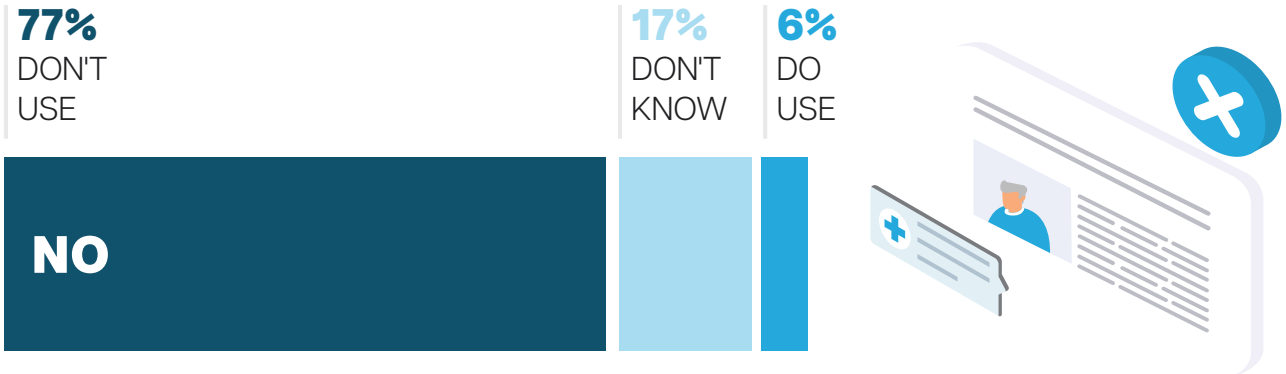


Figure 33: Recording residents data to My Health Record (N=230)

8%

INTERFACE WITH MY HEALTH RECORD

Further to this, aged care providers reported their clinical software does not interface with My Health Record (71%). A percentage of aged care providers indicated their organisation clinical software interfaces with My Health Record (8%).

The 40 organisations who responded to this question identified a range of suggestions on how their clinical software interfaces with My Health Record, including consistent themes of:

- Download and upload information
- Access to see record within the clinical system and add data to record through the clinical system
- Capability is available, but the organisation Shared Health Summary when the My Health Record is uploaded.

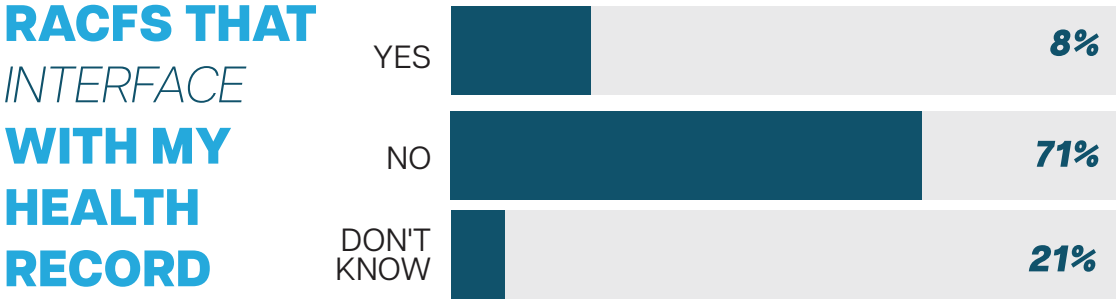


Figure 34: Residential aged care facilities clinical software interface with My Health Record (N=231)

The CARE-IT Report (2020) discovered that My Health Record is not well understood, and this reflects the need for all elements of the health ecosystem to embrace using it before aged care providers can do the same.

> **The CARE-IT Report highlighted the difficulties experienced by some in navigating My Health Record and frustrations associated with poor Business to Government (B2G) interfaces and lack of Application Programming Interface (API).**

The findings from the 2020 study also align with the main concerns for members of the national focus groups (Barnett et al. 2020).

CASE STUDY 03:
UPTAKE AND SUSTAINING MY HEALTH RECORD, THE VIEWS OF A NATIONAL PROVIDER

CASE STUDY

As a national provider our organisation considered early the importance of having a common record for each of our residential care residents. In 2012 when health professionals were first encouraged to assist clients with their uptake of My Health Record our organisation embraced this and strategically went about enrolling our residents in this record.

Within a short period of time, we identified that there was little or no incentive to keep this going. Firstly, we identified that others in the health ecosystem were not using this and individual records had little information on them except the records we were uploading. Further to this our visiting GPs showed little or no interest in uploading any of their records to My Health Record. In fact many provided us with the feedback that our own internal resident record technology systems were easy for them to access and provided comprehensive information to inform resident care. On top of this some States and Territory health departments have put in place different systems which almost compete with My Health Record.

In one state we are currently undertaking a program where our registered nurses are logging directly into the health department's records for care such as Palliative, Transition and Step Down Care. This effectively introduces another record so why would we then use My Health Record? We believe that the current My Health Record needs redesigning and that this should be through a series of codesign activities with aged and community care providers.

CASE STUDY 04:
INTEGRATION WITH MY HEALTH RECORD

CASE STUDY

The national survey identified a residential aged care provider who reported to be one of the first providers to uptake My Health Record and had 97% of residents established in My Health Record.

The provider reports the uptake has not been successful as GPs do not use My Health Record and Hospitals load data into their own viewing platform which resulted in a waste of resources uploading data into a system that is not used. This case study has identified a key area of concern with the adoption of My Health Record being the lack of use in the health ecosystem as a whole and the pressure to use resources efficiently.

09.

THE FUTURE:
INNOVATION AND TECHNOLOGY

9. THE FUTURE: INNOVATION AND TECHNOLOGY

ACIITC believes aged care providers need to consider the role innovation and technology can play in delivering a better quality of care for older Australians.

The Royal Commission into Aged Care Quality and Safety has provided the sector with an opportunity to reflect and transform business processes. It is of obvious importance for aged care providers to have strategic visions and plans regarding technology and associated innovation. The survey indicated that organisations are developing and using a strategy (46%), and some are not using any strategy (34%) or did not know if their organisation has a strategy (20%).

HOW MANY RACFS ARE USING AN ***INNOVATION STRATEGY?***

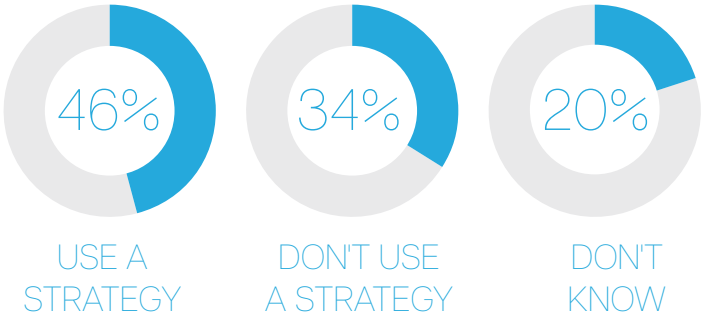


Figure 35: Technology investment strategy (N=228)

Interestingly, the CARE-IT Report found a majority of aged care organisations have a clearly defined (57%) digital strategic plan that aligns with their organisation's strategic plan.

IMPROVING THE USE OF CLINICAL SOFTWARE

Aross 225 organisations providing feedback in relation to technology strategy or roadmap specially focused on clinical software, organisations were mixed, reporting they were using a strategy (45%), not using a clinical software strategy (36%) or did not know if there was such a strategy in place (19%).

Figure 36: Clinical software technology strategy (N= 225)

RESEARCH AND DEVELOPMENT ACTIVITIES INVESTMENT

ACIITC believes it is important for aged care providers to invest in research and development activities to improve clinical care delivery. Over half of 226 organisations that responded did not invest in research and development activities with respect to clinical software (56%) and 15% did not know if their organisation invests in such activities. Only 29% of respondents indicated that they invest in these important activities.

RACFS THAT ENGAGE IN ***RESEARCH AND DEVELOPMENT***

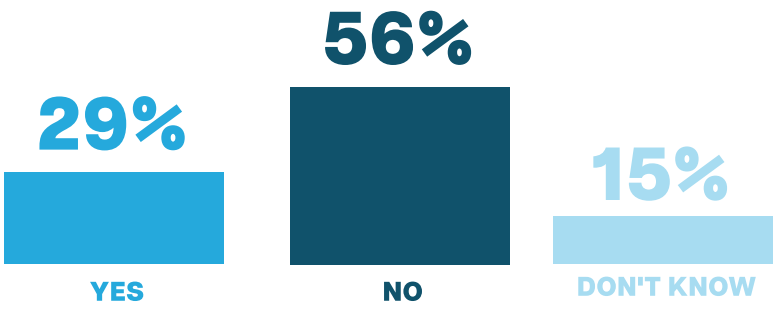


Figure 37: Research and development activities for clinical care (N= 226)

KEY LESSONS FROM PREVIOUS SUCCESSFULLY IMPLEMENTED CLINICAL CARE SYSTEMS

- The process to identify a solution that works for an organisation will take between two to three years.
- The development process will take up to six months.
- The roll out process will take up to eight-months depending on the number of facilities.
- If you invest in workforce training, staff turnover will reduce (depending on roles, orientation training can be two weeks and two days of which are focused on clinical software).
- Really hard to change from paper base to electronic but will see the benefit.
- Important to undertake a business analysis of business to configure technology solution.
- Development of clinical software guides.
- Too much customisation can be detrimental, if possible, use the whole system and not just part of the system, adjust business process where possible and customise field to configure system.
- There is no integration within the sector.

10. CONCLUSION

This report provides an overview of the research and survey work carried out by ACIITC from March 2021 to June 2022 which focused on the clinical care systems and their usage in residential aged care.

The report provides extensive insights into the current positioning of the sector in respect to usage of these systems along with highlighting various views of residential care staff and external stakeholders.

REFERENCES AND APPENDIX

REFERENCE LIST

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APPENDIX ONE: CLIENT JOURNEY

Meet Jim, he is 86 and lives alone and has a supportive family.

Jim registered for My Aged Care in January 2020 and selected his preferred Residential Aged Care Providers. In July 2020 he was assessed for an ACAT where it was found he was eligible for a level 2 Home Car Package (HCP), but due to HCP waitlist was issued Commonwealth Home Support Program (CHSP) support. In November 2020, Jim had a fall which saw him admitted to hospital. On the advice of the Hospital, Jim and his family decided he could not live alone.

LEGEND

Medicare | Clinical Software | Pharmacy Software | GP Software | Allied Health Software | Financial Software | My Aged Care

Family | Customer Service | Admin Team | GP | Facility Manager | Clinical Care Manager | Pharmacist

START

01. Jim is identified through My Aged Care.

02. Customer Service follow up Jim's enquiry and gain consent to collect Jim's data in the clinical software system to create an account.

03. Administration team provide electronic application documentation and Jim and his family complete the documentation electronically. Jim has received consent from his GP of over 20 years to provide care at his chosen facility.

04. Facility Manager undertook a Pre-Assessment of Jim at the hospital on his iPad to determine suitability to the residential aged care facility.

05. Jim has been offered a place in residential aged care facility. All documents have been provided to Jim and his family electronically. Jim returned paper copies of the forms. The Clinical Care Manager scans all documentation into Clinical and Financial Software. At the point of pre-admission, the Facility Manager sets up direct debit with the External Pharmacy Software, clinical care plans are created (including managing pharmacy and allied health requirements).

END

06. Facility Manager manages Jim's admission and the required twenty-eight day protocol ensuring Clinical Management, Financial and Pharmacy systems have all the information required. The Facility Manage needs to sign and send the event via Clinical Software to Medicare.

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