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REVIEW ARTICLE

PREPAREDNESS OF HEALTH AND SOCIAL CARE WORKFORCES IN USING DIGITAL TECHNOLOGIES IN RESIDENTIAL AGED CARE: A SCOPING REVIEW

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ABSTRACT

OBJECTIVES

Residential aged care (RAC) facilities globally lag in implementing digital health systems due to factors like non-profit status, workforce challenges, and limited solutions. Successful adoption of digital health solutions necessitates workforce support and ongoing training. This scoping review examines the current state of research regarding workforce readiness for digital technology adoption in RAC.

METHODS

The review employed scoping methodology following PRISMA-ScR guidelines. Databases including Web of Science, Medline Ovid, Ovid Emcare, JBI EBP Database, CINAHL, and reference lists were searched using relevant keywords and MeSH terms.

RESULTS

Out of 458 screened articles, 21 were included for analysis. Three key themes emerged as influences on RAC workforce preparedness and technology adoption: Capability, Digital Governance, and Collaboration.

CONCLUSION

Effective RAC workforce preparation in technology adoption requires a holistic approach, involving strong leadership, adequate resources, and continuous support. The literature on workforce development in RAC with digital technologies remains limited, necessitating further research.

KEYWORDS

Digital, information, technology (IT), residential aged care (RAC), workforce

INTRODUCTION

The proportion of older people is increasing globally, and it is estimated the number of people aged 60 years and older will grow from 1 in 8 people in 2017 to 1 in 6 by 2030 and 1 in 5 by 2050 [1]. In Australia, the number of people aged 65 years and over is projected to increase from 17% in 2022 to between 25% and 27% in 2071 [1]. Population ageing will increase the proportion of people requiring aged care in countries at all levels of development [2].

Aged care is one of the largest service industries in Australia, providing a range of programs and services [3]. There are many challenges facing the aged care sector in Australia such as improving access to health services, safety and quality, and continuity of care [4]. Digital health can play a significant role, however, aged care, globally, has not implemented digital health systems as quickly as other sectors for reasons, including their not-for-profit status, workforce and solution availability [3]. Australia's Royal Commission into Aged Care Safety and Quality in 2021 revealed only 14% of Residential Aged Care (RAC) and home care providers were registered for My Health Record, Australia's national personally controlled electronic health record [3]. The Royal Commission examined the quality of aged care services in Australia to determine if services were meeting the needs of communities [3]. Areas for improvement were strengthening safety and quality of care delivery through adoption of digital technology including My Health Record (recommendation 68) [3]. In 2025, twenty two percent of RAC providers are registered to use My Health Record however only four percent are using the system [5]. Aged care is complex, with difficulties attracting, retaining, and developing a sustainable workforce. Low wages, poor employment conditions, lack of funding and investment in staff and training are known barriers [3]. RAC provide long-term care to older people, hereafter known as residents [6]. A requirement of introducing digital health solutions is support and ongoing training for the workforce [7]. This study will adopt the approach of the World Health Organization (WHO) [8] where digital technology is used to support the needs of health systems and achieve health sector objectives and includes clients, healthcare providers, managers and data services.

Previous studies, focusing on health and social care workforces and use of information technology (IT) have concentrated on specific countries [9] or general issues with adoption of technology in aged care [10]. A recent scoping review focused on workforce development in integrated care with no emphasis on specific health sectors [11]. Insufficient evidence of how health and social care workforces have been prepared and trained to work with digital technologies in RAC settings was identified. To address this gap, the scoping review aimed to

- evaluate literature on workforce development, including its characteristics, models, barriers, challenges, opportunities and recommendations
- identify factors that can be applied in RAC to prepare for the implementation of digital technology.

STUDY OBJECTIVES

The study systematically collected and synthesised information to

- ascertain the current state of research on organisational preparedness for adoption of digital technologies in RAC
- understand factors that can be applied in RAC to prepare for implementation.

METHODS

Scoping reviews, in contrast to systematic reviews that address specific inquiries, generally encompass broader research questions. They serve the purpose of identifying knowledge gaps, establishing research focal points, and discussing implications for decision-making. Given the extensive nature of the subject matter: workforce utilisation of digital technologies within RAC, it was determined a scoping review was the most appropriate methodology. The review was conducted in accordance with the scoping review framework developed by Arksey and O'Malley. This framework comprises six stages 1) Identifying a research question, 2) Identifying relevant studies, 3) Study selection, 4) Charting the data, 5) Collating, summarising, and reporting the results, 6) Conducting an optional consultation exercise. Recommendations developed by Levac et al. [14] were incorporated into the review process. Reporting was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) checklist, ensuring methodological transparency and compliance. This review was registered in the Open Science Framework (osf.io/bck3n).

STAGE 1: IDENTIFYING RESEARCH QUESTION

The research team discussed and agreed on research questions, target audience and intended outcomes appropriate to achieve the scoping review objectives.

The research questions

RQ1 What is known from existing global literature about health workforce development in digital technologies in RAC?
RQ2 How has the Australian health and social care workforce been prepared to work with digital technologies in RAC?

The study team applied Levac et al. [14] recommendations and articulated the scope of the inquiry to include concepts, target audience and outcomes, and this guided the search strategy.

The scoping review focused on two main concepts: (1) digital technology (2) health workforce development. The target setting was RAC, and its workforce.

Intended outcomes

- Complete a scoping review of relevant literature
- Offer recommendations for preparation, and training of RAC workforces to work with digital technologies, that can be applied globally and in Australia.

STAGE 2: IDENTIFYING RELEVANT STUDIES

An initial search was performed to identify keywords and MeSH terms. A list of terms was iteratively developed, and two databases searched. Titles and abstracts of relevant articles and MESH terms were used to develop a full search strategy in consultation with a research librarian. The full search strategy was adapted for each database. Databases searched were JBI, CINAHL, Web of Science, Ovid Emcare, and Medline. Further scanning of reference lists of articles for relevant studies and hand-searching of key relevant journals was undertaken. A search of grey literature from Sax Institute Evidence Checks, Grattan Institute, Australian Institute of Digital Health (AIDH), and peak bodies for aged care were undertaken. Table 1 provides eligibility criteria used to select articles. A sample of the full search strategy is provided (Supplementary file Appendix 1.

TABLE 1 INCLUSION AND EXCLUSION CRITERIA

Area	Inclusion	Exclusion criteria
Language	• English language	• Non- English language articles
Study designs	• All study designs	
Study type	• Peer-reviewed articles	• Abstract only • Theses • Non-peer reviewed professional journal articles • Newsletter, newspaper reports • Conference abstracts • Conference posters • Health insurance reports • Letters to the editor • Study protocols
Year of Publication	• In the period (2012 - 2022) • Repeated searches to identify papers 2023 – Oct 2025	• Articles published before 2012 (publication date < 2012)
Country	• All countries	
Concept	• Articles describe an educational model or framework and key elements or competencies in health workforce training, and education related to digital technologies in RAC	• Articles with no reference to RAC • Articles with no mention of digital technologies in RAC • Studies conducted in acute tertiary care organisations

STAGE 3: STUDY SELECTION

All studies that met inclusion criteria were imported into Endnote™ software to enable tracking and storage. Total number of studies from five databases were recorded. Studies were transferred to Covidence™ software for removal of duplicates and screening. Five reviewers ('Author 1', 'Author 2', 'Author 3', 'Author 4', 'Author 5') screened titles and abstracts, and full text articles. Any discrepancies were discussed, and consensus obtained. Reasons for excluding articles at full-text screening stage were reported. The included studies were not assessed for quality or risk of bias, as this is not a primary requirement for scoping reviews. As Peters et al. [15] explain, the main objective of a scoping review is to map the breadth and nature of available evidence, and critical appraisal is considered optional depending on the review's purpose.

STAGE 4: CHARTING THE DATA

From included studies, data was extracted using Covidence™. Informed by the research questions, items for extraction were discussed and agreed by the research team. Data items included authors, year of publication, aim, study design, target population, country where the study was conducted, type of IT used, challenges and facilitators. Disagreement between reviewers were resolved through consensus.

STAGE 5: COLLATING, SUMMARISING AND REPORTING THE RESULT

Quantitative data was collated and presented using descriptive statistics. Qualitative data were analysed, and themes identified and interpreted.

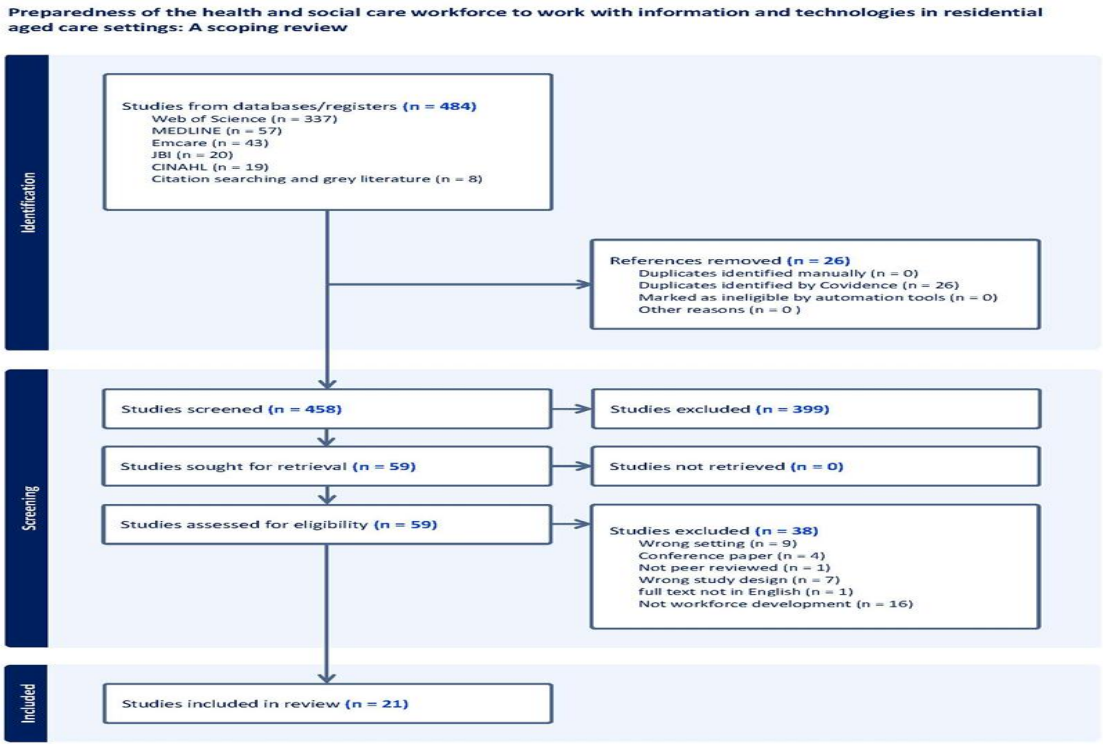
STAGE 6: CONSULTATION EXERCISE (OPTIONAL STEP)

Stage 6 was not relevant to the review objectives and research questions.

RESULTS

Searches of five databases identified 476 items for review. Six (6) additional sources from grey literature and two (2) snowball papers were imported in COVIDENCE ™ for review, totally 484. After screening and removal of duplicates, 21 articles remained in the review. Search results by database are reported (Figure 1) in line with PRISMA-ScR [13]. Results are reported in three sections 1. Characteristics of included studies, 2. Uses of technology in RAC from included studies, 3. Themes identified relevant to RAC workforce development in digital technology.

FIGURE 1 SYSTEMATIC REVIEWS AND META-ANALYSES EXTENSION FOR SCOPING REVIEW (PRISMA- SCR) FLOW



CHARACTERISTICS OF STUDIES

Years of publication ranged from 2012 – 2025. Types of studies represented were cross-sectional (n=5/21, 24%), qualitative, (n = 5/21, 24%) and quantitative studies, (n = 3/21, 14%), systematic review (n = 3/21, 14%), case-series/case study (n = 2/21, 10%), and other (n = 3/21, 14%). The majority of the studies were from Australia (n = 10/21, 48%), with remaining from the United States of America (n = 2/21, 10%), United Kingdom (n = 2/21, 10%), Canada (n = 2/21, 10%) Norway (n = 2/21, 10%), Finland (n = 1/21, 5%), Germany (n=1/21, 5%) and Singapore (n=1/21, 5%). Full details on authors, aim, and study data collection methods can be found in supplementary file Appendix 2.

USES OF TECHNOLOGY IN RAC

The review identified a variety of technologies used in residential aged care settings, including iPads, digital games, telehealth platforms, sensors, and other assistive devices. Technology was most commonly used for record keeping (n=5) telehealth (n=3) and monitoring (n=4). Less frequently reported uses included in-service training and resident management. A number of studies did not specify the purpose of technology use or spoke broadly to a variety of technologies and/or the issues of technology application. Reporting on the staff using these technologies varied, with some studies referring broadly to "healthcare workers" and others including multiple staff groups without disaggregating findings by cadre.

THEMES IDENTIFIED FROM THE LITERATURE

Themes identified from the literature across all studies were Capability, Digital Governance, and Collaboration. Capability is described as encompassing knowledge, skills and attitudes required for individuals and organisations to thrive in a digital society [16]. Digital capability involves equipping individuals with necessary knowledge and skills to live, learn, and work in this digital environment [16]. Digital Governance refers to the framework outlining responsibilities, decision-making power, and change management authority for an organisation's digital presence [17]. Collaboration considers cooperation between professionals, residents, and carers as critical to successful delivery of care services [18]. The three themes and sub-themes were derived from the literature. Barriers, opportunities and recommendations were also extracted from each paper.

Tables 2, 3 and 4 summarise each theme and sub-theme, for workforce development and are reported under the themes of capability, digital governance and collaboration.

TABLE 2 THEMES AND SUB THEMES ALIGNED WITH CAPABILITY

Theme	Barriers	Opportunities	Recommendations
Subthemes			
Capability	Computer literacy and technology fear [19-22] Limited English [23] Knowledge barriers [19-21, 24, 25] Difficulty in learning new systems [19-22, 24] Lack of training and resources [24]. Time constraints [26] Potential threats to resident safety [24]. Resistance to change [24].	Competence building [19-21, 27, 30] Supervision Access to training [19-21, 27, 29] Fit for purpose training [19-21, 25, 27] Empowerment of leaders and managers [25, 33]	Digital literacy [20, 27, 29, 30] Cyber awareness and data sensitivity for workforce and consumers [20] Ongoing capability building [31] Technology advocates/ambassadors/champions [19-22, 24, 26, 32-34]

Theme	Barriers	Opportunities	Recommendations
	Lack of digital literacy assessment during recruitment [19-21, 27-29] Perceived negative impact on staff [19-21, 27] Complexity of vendor instructions [28]		

TABLE 3 THEMES AND SUB THEMES ALIGNED WITH DIGITAL GOVERNANCE

Theme	Barriers	Opportunities	Recommendations
Subthemes			
Digital governance	IT infrastructure instability [23] Investment Time for staff training [19-21, 27, 32] Resource concerns [23, 30] Duplication of work [35] Poor technology maintenance [35]	Interoperability [36] Organisational champions [19-21, 24, 26, 32-34]	Strengthen IT infrastructure [23] Allocate sufficient investment Time for staff training [19-21, 27, 32] Address resource concerns [23, 29] Minimise duplication of work [35] Improve technology maintenance [37]

TABLE 4 THEMES AND SUB THEMES ALIGNED WITH COLLABORATION

Theme	Barriers	Opportunities	Recommendations
Subthemes			
Collaboration	IT support services [24] Leadership support [25, 26, 38]. User engagement [33] Role and involvement of vendors [19-21, 26, 30]	Co-creation with consumers [26, 39] Vendor support and partnership [19-21, 26] User engagement [33]	Co-creation of knowledge with consumers [26, 39] Co-creation with workforce [26, 30, 39]

CAPABILITY

Barriers

Administrators reported challenges in technology adoption among staff, including issues related to computer literacy, fear, and uncertainty [19-21, 29, 30]. Language barriers were also identified hindering effective technology utilisation, impacting communication and training [23]. Level of knowledge and familiarity with technology plays a role in successful adoption [19-22, 24, 25]. Inadequate training and limited access to resources can result in frustration and resistance among employees [24]. Learning complex systems such as wireless nurse call systems (WNCS) can pose challenges, leading to reluctance among some employees to embrace new technologies [19-21, 24]. Implementing new systems and technologies requires dedicated time for training, and vendor instructions on system use were identified as challenges

[24]. Complexity of vendor instructions exacerbates difficulties faced by staff during implementation [24, 32]. There are risks to healthcare user safety when new workflows and systems are introduced, particularly if staff members are not familiar with the technology [24]. Resistance to technology adoption can stem from fear, stress, and negative perceptions of the impact on work processes [19-21, 27]. Organisations often overlook assessment of digital literacy during recruitment, resulting in staff with inadequate technology skills [19-21, 27, 28]. Introduction of computerised care systems can lead to stress among staff, particularly those overwhelmed by system use and decision-making challenges [28].

Opportunities

To promote RAC workforce capability, various strategies and practices can be implemented. Skill acquisition and problem-solving capabilities can be enhanced through the availability of support and interaction with vendors. Access to ongoing training, supervision, practical experience, and collective reflections are proven methods for fostering a positive implementation culture and empowering staff to use technology effectively in RAC [26, 35]. RAC can focus on preparation of the workforce and digital skills training to facilitate adoption of new technology [19-21, 23-25, 27, 29, 30, 32-34, 37]. Preparation and oversight of ongoing training programs in workplaces are essential to ensure workforces are fit for purpose [19-21, 27]. Smart technology, for example, requires support to equip users to use devices effectively [19-21]. Terminologies such as Technology Advocates, Ambassadors and Champions are referred to in the literature [19-21, 24, 26, 32-34]. While papers used terminologies in nuanced ways, these roles provided training and support at site level and proved successful in building technology capabilities among RAC workforces [23]. These roles worked with all employees to promote benefits of new technologies and supported workers to incorporate technologies into practice [33, 34, 37]. Technology Advocates, Ambassadors and Champion roles are critical to reinforce new practice and the use of tools to deliver improved RAC [19-21, 24, 26]. Leaders play a role in workforce development through the provision of resources, supportive organisational cultures, acknowledgment of staff input and innovation, and evaluation of outcomes [24, 25, 28, 39]. Empowering leaders advances staff confidence and capability with technology adoption [24, 28].

To enhance workforce development, stakeholder involvement is essential. Including RAC staff, system users, residents, carers and care managers in training sessions outlining the benefits of technology can upskill care staff and promote person-centred care approaches [19-21, 23, 26, 28, 33, 34, 36, 37]. Vocational and undergraduate education needs to address gaps in digital health capabilities and provide embedded opportunities for students to engage with systems such as electronic health records during their education [31].

DIGITAL GOVERNANCE

Barriers

Barriers are reinforced by absence of digital and clinical governance standards and training policies, creating obstacles to safe and appropriate use of telehealth and hindering adoption of technology [20]. Governance-related barriers are exacerbated by variations in capability, workforce shortages, limited government funding, and insufficient demand from both providers and consumers [20, 30]. Persistent and multifaceted barriers to the effective integration of technology in healthcare services is a combination of unstable information technology (IT) infrastructure and inadequate support from IT services, impeding collaborative efforts to co-create value [23, 26]. This instability has been shown to have detrimental effects on implementation and utilisation of technology, delaying potential benefits in productivity and the quality of care [23]. Problems are exacerbated by insufficient investments in technology infrastructure, support personnel, and training opportunities for staff. This manifests as insufficient time allocations for training, lack of tailored training sessions to meet staff needs, and inconsistency in training related to system updates [23]. Issues with technology maintenance and inadequate management practices contribute to instability [35]. In RAC, recurring issues include a lack of processes for IT implementation, limited technology support and infrastructure, and underinvestment in staff training [23, 29]. Further, paper and electronic data capture often coexist, and difficulty accessing and integrating data from various sources, hampers efficient utilisation of technology and data and duplication of work [35]. Attitudes and beliefs of staff members, coupled with cultural resistance to IT adoption, as well as the complexity of decision-making involving multiple stakeholders in RAC settings, present additional barriers to successful implementation of technology [37].

Opportunities

Interoperability frameworks and inclusion in digital governance structures are critical. Effective governance practices support seamless exchange of information and data among different systems and care providers [19-21, 36]. Confirming systems are interoperable, RAC can access comprehensive and up-to-date resident information, leading to informed decision-making and enhanced care coordination [36]. Governance plays a role in fostering a culture of innovation and technology adoption within RAC. Strong leadership and organisational support are essential for workforce development initiatives centred around technology. Leaders must demonstrate commitment to digital transformation and invest in training programs to upskill the workforce to use technology effectively [19-21, 23, 24, 38]. RAC digital governance strategies should recognise Technology Advocates, Ambassadors and Champions; these roles are responsible for promoting health information systems during implementation and providing ongoing support [19-21, 24, 26, 32-34]. Acting as change agents they drive workforce development to align with RAC goals for technology adoption [35].

Digital governance within RAC settings extends beyond facility boundaries, necessitating collaboration with external stakeholders such as vendors and healthcare providers to ensure interoperability. Benefits of shared data standards and protocols offer exchange of information for residents and staff [33]. Digital governance strategies should prioritise design and implementation of training programs, focusing on enhancing digital literacy and technological preparedness of the workforce [19-21, 23, 27]. Equipping staff with essential skills to proficiently navigate systems enhances their capacity for utilising technology in care delivery [20]. Digital governance approaches should incorporate mechanisms for ongoing evaluation and improvement of interoperability initiatives [19-21, 36]. Fostering cultures of continuous improvement, workforces can become adept at leveraging technology and adaptable to evolving requirements [28]. Effective digital governance in RAC includes the use of industry agreed standards for IT and information exchange to address privacy and security concerns [19-21]. Staff training should emphasise the importance of safeguarding resident information and complying with data protection regulations.

Digital governance practices establish trust in technology and reduce concerns about data breaches [33]. Digital governance includes development and implementation of policies that guide IT use and practice and p should align with agreed standards, ensuring compliance and consistency to support data exchange. Clear policies provide frameworks for workforces to operate within, supporting effective and secure technology usage [36].

COLLABORATION

Barriers

Effective collaboration is crucial for successful implementation of technology in RAC. Barriers relating to collaboration hinder adoption of systems and technology. Dugstad, Eide, Nilsen and Eide [26] suggest a combination of IT infrastructure instability, lack of support to address weaknesses impacts implementation and hamper's ability to co-create value between technology providers and healthcare stakeholders. Collaboration plays a significant role in engaging frontline staff with new technology. Collaborative efforts are essential for creating and implementing processes for health IT adoption. Absence of collaborative planning and support for health IT implementation in RAC limits the potential to realise gains in productivity and quality of care [23, 25]. Collaboration to build capability across rostered hours of work and frontline roles, involving stakeholders, and maintaining leadership involvement are vital [26, 38]. Empowering technology champions at the frontline and involving them in implementation fosters a collaborative culture, leading to better user engagement and more effective technology utilisation [30, 33]. Partnership with technology vendors can overcome barriers related to the complexity of implementation [19-21, 26, 30]. Effective training, provision of equipment and resources, and clear instructions from vendors are components for successful collaboration in technology adoption [26].

Opportunities

Collaboration is key to successful adoption of technology in RAC, it involves multiple stakeholders working together to co-create value and improve practices. Implementing novel digital monitoring technology requires a comprehensive approach, considering needs of care providers, residents, carers and relatives [26, 33].

Collaboration is required to integrate IT capability directly into provision of care and co-creation with residents, carers and relatives. This shift towards an integrated and sustainable healthcare ecosystem will facilitate digital transformation [26,

30]. Ongoing support and training are essential and co-designing workflows and operational processes with workforces fosters ownership and engagement in technology implementation. Additionally, integrating technology-specific changes as part of a wider organisational improvement program enhances effectiveness and sustainability of adoption [20]. Financial investment in IT, implementation readiness, and learning capabilities of RAC workforces are necessary for successful technology adoption. Deliberate design, practices, and work arrangements that promote learning-oriented cultures can enhance workforce preparedness and acceptance of new technologies [33].

Collaborative practices of RAC workforces and residents include leading residents and carers to relevant and credible health information websites, information systems and technology tools. Interactions between technology, staff and residents enhances routine care delivery and human contact for residents [37]. These interactions provide access to valuable health information and other resources [37]. Quantifying costs and return on investment, especially related to telehealth services, provides insights into benefits for older people, families, aged care and primary healthcare staff, and overall health and social care systems [19-21, 23, 24, 31, 33, 34, 37, 38]. Alignment of funding and reimbursement, for example in Australia, retaining Medicare telehealth schedule items and highlighting its reach and return on investment can encourage adoption and expansion [19-21, 23].

DISCUSSION

Previous studies of health and social care workforces use of IT have been limited in scope, focusing on specific countries or general issues with technology adoption. For example, Long et al. [9] explored technology use in low- and middle-income countries; Kapaida et al. [10] addressed broader technology adoption challenges in RAC; similarly, Barraclough et al. [11] investigated workforce development in integrated care without emphasising any particular health sectors. A gap in the literature was identified, regarding preparedness of the RAC workforce to effectively use IT. This scoping review identified capability, digital governance, and collaboration are key to workforce preparedness and use of IT. The review offers recommendations to enhance adoption, implementation, and effective use of technology to drive improvement in RAC.

RECOMMENDATIONS

Designing effective digital governance structures for RAC facilities that recognise, embed, and promote workforce capability and collaboration in the context of digital health is essential for improving quality of care and operational efficiency. This scoping review offers the following recommendations.

1. Digital Health Leadership/Champions/Advocates/Ambassador

Appoint digital health leaders within governance structures, comprising team members with expertise in practice, digital health and information and communication technologies. Embedding this into routine practice to lead integration of digital health solutions is imperative [19-22, 24, 26, 32-34, 38].

2. Governance Structures

Recognition of strategic contributions of digital health and information and communication technologies. Governance structures should include representation from clinicians, IT and professional staff, vendors and caregivers. These stakeholders can work collaboratively to evaluate, implement, and optimise digital tools and technologies. A mechanism to involve residents and carers should also be included [23, 26, 33, 37].

3. Capability Assessment and Training

Regularly assess digital competencies of the RAC workforce and identify areas for improvement. Invest and implement ongoing training programs to ensure RAC staff members are proficient in using digital health tools effectively. Ongoing education and training are necessary to adapt for new staff and the introduction of innovative information, communication and digital technology solutions for all [19-21, 23, 24, 26-28, 30-34, 36, 37].

4. Interoperability and Integration

Ensure digital health systems are interoperable, integrated and aligned to support workflows. Collaboration between IT teams, professional and clinical staff is crucial to achieving optimal technology solution use and data exchange [19-21, 23, 27, 28, 33, 36].

5. User-Centred Design

Prioritise user-centred design and usability when selecting and implementing digital health solutions. Involve workforces in decision-making processes to ensure tools meet their needs and are user-friendly. Resident and carer involvement is key to solutions that can promote a healthy lifestyle, connect with families, and support social engagement and entertainment [19-21, 24, 26-28, 32, 35-37].

6. Evaluation of Digital Health Impact

Develop and embed performance metrics for digital health initiatives. Measures should be broader than traditional return on investment/cost benefit and include socio-cultural dimensions. Recognise and reward staff who contribute to successful implementation and utilisation of digital solutions [26, 28, 32, 33, 35]. Implement regular evaluations to assess impact on resident care and operational efficiency. Encourage staff to provide feedback on the usability and effectiveness of digital tools [19-21, 28, 36].

7. Information Governance and Privacy

Establish robust data and information governance policies and privacy protocols to safeguard resident information. Compliance with relevant data protection regulations, such as Health Insurance Portability Accountability Act (HIPAA) (United States of America), General Data Protection Regulation (GDPR) (Europe) and Australia's Commonwealth My Health Record and Privacy Acts and State Government Privacy Acts [19-21, 33, 36].

8. Collaborative Research and Innovation

Foster collaboration with academic institutions, research organisations, and technology partners to engage with digital health innovation. Participate in research projects that explore the use of emerging technologies in RAC [30].

9. Continuous Improvement Culture

Foster a culture of continuous improvement where staff members are encouraged to identify opportunities for introducing and enhancing use of digital health tools. Celebrate successes and learn from challenges to drive ongoing improvement [19-21, 23, 24, 28, 30, 36].

10. Digital Literacy for Residents

Recognise residents and carers can benefit from digital literacy programs to engage with solutions and stay connected with relatives and communities. Offer support and training to residents as needed [19-21, 23, 26, 28, 31, 34, 36, 37].

11. Investment in People, Process and Technology

Financial investment in IT, implementation readiness, and the learning capabilities of RAC workforces is necessary for successful technology adoption [19, 23, 29].

Implementation of these recommendations can establish mechanisms that effectively leverage digital health technology to enhance workforce capability and collaboration, ultimately improving the quality of care and RAC outcomes.

LIMITATIONS

This review was limited to English-language publications, which may exclude relevant studies from non-English-speaking regions, particularly Nordic and European countries with strong RAC research. The search strategy did not include the term eLearning and could have excluded relevant articles on eLearning tools for workforce development in RAC. Utilisation of technology for education and resident management was the least reported among the studies, however this was not the focus of our study and key words to capture this term were not included. This scoping review concentrated on workforce in-service education, not education or training prior to entry to RAC. A further limitation is the non-distinction

between types of digital technology used in RAC by the health and social care by workforces as different educational preparation, training or support is required depending on the setting and technology need.

Included articles may reflect selection bias as processes may be considered subjective. To control for bias at each stage, multiple researchers' opinions were applied, and consensus sought when differences occurred.

CONCLUSION

This scoping review identifies Capability, Collaboration, and Digital Governance as key themes in literature on workforce preparedness and technology adoption in RAC. It emphasises integrating IT capabilities into care provision to derive value from digital health applications. Overcoming challenges in IT partnerships and expertise integration can lead to successful technology adoption. Training and support for RAC workforces can maximise benefits in delivering quality care to residents. This integration promises sustainability and fosters innovation in RAC, requiring policy makers to incentivise training and invest in technology infrastructure for digital transformation. Success requires collaborative environments involving stakeholders, residents, and families in co-creating value through digital technology and strong digital governance. This enables RAC to leverage technology for better care outcomes and residents' well-being. Future research should focus on workforce readiness and IT integration to facilitate a technology enabled, person-centred future in aged care, benefiting both care providers and recipients.

DISCLOSURE STATEMENT

The authors report there are no competing interest to declare.

ETHICS AND DISSEMINATION

Ethics approval was not required for this review, secondary data of previously published data was used.

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SUPPLEMENTARY MATERIALS

Detailed information on the search strategies and characteristics of included studies for this research is available by contacting the correspondence author for this publication.

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