

Title: Using a community of practice to evaluate falls prevention activity in a residential aged care organisation: a clinical audit

Abstract

Objective

This study evaluates if a community of practice (CoP) could conduct a falls prevention clinical audit and identify gaps in falls prevention practice requiring action.

Methods

Cross sectional falls prevention clinical audits in 13 residential aged care (RAC) sites of a not-for-profit organisation providing care to 779 residents. The audit was led by an operationalised CoP. Membership was self-nominated representing all RAC sites and comprised of multidisciplinary staff with a shared interest in falls prevention. CoP members were assisted in conduction of the audit by site clinical staff.

Results

All 13 (100%) sites completed the audit. CoP conduct of the audit met identified criteria for an effective clinical audit. Priorities for improvement were identified as increasing the number of residents receiving Vitamin D supplementation (mean 41.5% SD 23.7) and development of mandatory falls prevention education for staff and a falls prevention policy, as neither was in place at any site. CoP actions undertaken included a letter to visiting GPs requesting support for Vitamin D prescription, surveys of care staff and residents to inform falls education design, defining falls and writing a falls prevention policy.

Conclusion

A CoP was able to effectively conduct an evidence-based falls prevention activity audit and identify gaps in practice. CoP members were well positioned, as site staff, to overcome barriers and facilitate action in falls prevention practice.

What is known about the topic?

Audit and feedback is an effective way of measuring clinical quality and safety. CoPs have been established in healthcare using workplace staff to address clinical problems but little is known about their ability to audit and influence practice change.

What does this paper add?

This study contributes to the body of knowledge on CoPs in healthcare by evaluating its performance in the domain of falls prevention audit action.

What are the implications for practitioners?

A CoP is an effective model to engage staff in the clinical audit process. Clinical audits can raise staff awareness of gaps in practice and motivate staff to plan and action change as recommended in best practice guidelines.

Introduction

Older frail people who live in residential care are at very high risk of falls with falls rates across the residential aged care (RAC) sector ranging from 3-13 falls per 1000 bed days of care.^{1,2} These falls result in high rates of injury and consequently reduce independence and quality of life^{1,2} therefore reducing falls rates has been identified as an industry priority.

What works in falls prevention?

Large meta-analyses have found that successful single intervention strategies for reducing falls among RAC populations are providing supplementation of Vitamin D and medication review by a pharmacist whilst the effect of multifactorial interventions were inconclusive.³ Despite a multifactorial approach to falls prevention being recommended in best practice guidelines⁴ others have identified that there are substantial gaps between the research evidence and its translation into clinical practice, with numerous barriers being identified in the “evidence pipeline”.⁵ Evaluating current falls prevention activity allows identification of gaps in this pipeline to practice with the potential to change future falls outcomes in RAC settings.

Clinical audit

A common process used to measure and benchmark safety and quality in clinical care is audit and feedback (A&F), which is a process that enables clinical care staff or organisations to evaluate their current performance against evidence based guidelines and identify gaps in practice for improvement.⁶⁻⁸ Some beneficial outcomes have resulted from A&F processes with the Cochrane review⁹ reporting an overall 4.3% increase in compliance with requested practice in a variety of clinical fields. It has

also been shown that when A&F is combined with action planning there is a greater improvement in implementation of best practice guidelines and practice change.^{8, 10} Falls prevention is a worthwhile topic for clinical audit as the cost of falls per annum in Australia was recently estimated to be \$648.2 million AUD of which a disproportionate amount is attributable to treat falls which occur among older people in RAC.¹¹ Recommendations for conducting an effective clinical audit suggest the involvement of work place multidisciplinary staff to provide a broad range of authentic views.^{12, 13} However barriers to staff conducting audits have been identified as: having time due to competing priorities, lack of clinical leadership and interdisciplinary involvement.¹²⁻¹⁵

An operationalised community of practice (CoP) that led falls prevention action across the RAC organisation was identified as a group with characteristics conducive to conducting a clinical audit of falls prevention activity. Communities of practice have been emerging in the health care sector as a resource for bringing together expertise for problem solving and actioning new policy and practice.¹⁶ This CoP, which was established according to principles of successful CoPs in healthcare¹⁶ connected and utilised the knowledge and skills of multidisciplinary RAC staff with academic researchers in falls prevention through membership. If the CoP could successfully conduct the audit, this connection could create a powerful feedback loop for translation of falls prevention evidence into practice.

The aims of the study were:

- i) To evaluate if a CoP could conduct a falls prevention activity clinical audit
- ii) To determine if a CoP could identify gaps in falls prevention practice

- iii) To identify barriers to the adoption of CoP planned falls prevention activities and facilitated actions

Methods

Design

A cross-sectional survey using a validated audit tool¹⁷ adapted for RAC evaluated current falls prevention activity across 13 RAC sites of a not-for-profit organisation. The audit was planned by the falls prevention CoP based on the five stages of the audit cycle (see Fig.1) and audit performance was benchmarked using a matrix of predetermined elements for effective clinical audits.¹²

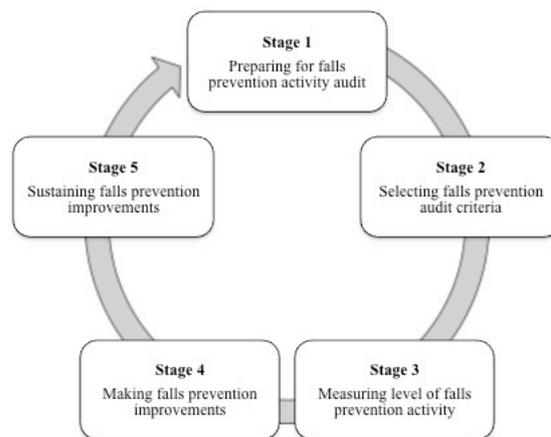


Figure 1. Study overview: adapted from Benjamin.¹²

Participants and Setting

This study formed part of a larger project investigating the impact of a falls prevention CoP in a RAC setting. The protocol for the larger project has been described elsewhere.¹⁸ The audit was co-ordinated by the CoP who were a group of

20 multidisciplinary staff that included 4 (20%) nurses, 4 (20%) care managers and 12 (60%) allied health professionals employed across a not-for-profit residential aged care (RAC) provider organisation representing 13 geographically diverse sites in metropolitan Western Australia. Eighteen (90%) were females and 2 (10%) males with 13 (65%) aged between 40-59 years of age. Sixteen (80%) CoP members had been employed at their RAC site for more than one year with 10 (50%) having more than six years' experience in their current job role. Eleven (55%) had completed a bachelor degree reflecting the professional disciplines participating. CoPs characteristically have a 'facilitator', a lead position, from within its membership and the RAC organisation nominated their Allied Health Consultant for this role. CoP members interacted frequently using the organisation's intranet supported by three annual face-to-face meetings. The RAC organisation provided care in a home-like environment for 779 older people staffed by approximately 1185 full and part time care staff.

Data Collection and Procedure

Stage 1

A face-to-face training session was organised for CoP members to familiarise them with the audit requirements and address any queries. In preparation for conducting the audit at their RAC site CoP members used a researcher-designed template that required the CoP members to identify site staff to assist them and perceived barriers to audit data collection at their RAC site. Any barriers identified by individual CoP members were shared and discussed with the entire CoP membership to allow a range of potential facilitators to be generated.

Stage 2

A previously validated falls prevention audit tool¹⁷ was selected that aligned with best practice recommendations.⁴ The audit tool comprehensively addressed nine falls prevention domains including risk factor assessment, monitoring, education for staff and residents, the environment, organisational support and a range of interventions including harm minimisation equipment and prescribed exercise programs. It contained both open and closed responses measuring items such as the proportion of residents supplemented with vitamin D, proportion prescribed low-low beds and the frequency of medication review (see online Appendix).

Stage 3

A web based CoP discussion on a secure organisational webpage determined the commencement date and time for the 13 site audits taking into account RAC site staff availability. CoP members co-ordinated the completion of the audit at their RAC site assisted by site staff namely care managers, nurses and allied health professionals. Multiple data sources were scrutinised including policy, process and care management documents in conjunction with observing clinical practices. Discussions with nursing and allied health assistants, cleaners, laundry and maintenance staff also contributed to establishing whether everyday practices reflected current policies.

Stage 4

Completed RAC site audits were collected by the CoP facilitator and delivered to the researchers for analysis. The CoP discussed feedback from the audit findings to determine the falls prevention areas for improvement in conjunction with barriers and facilitators to implementation. A plan of CoP actions for achieving falls prevention improvement at RAC sites was then developed e.g. increasing the proportion of residents supplemented with vitamin D at RAC sites could be facilitated by CoP

access to geriatricians to educate GPs on the benefits of prescription to reduce falls rates.

Stage 5

The CoP determined that the best time for repeating the site audits should be following implementation of all prioritised falls prevention activities.

Ethical considerations

Clearance for the study was obtained from the human research ethics committee of the university and board of the RAC organisation, all CoP members provided written consent to participate.

Data Analysis

Qualitative data that described the audit process were collected and transcribed from CoP training documents, CoP posts on an electronic discussion board, CoP emails and researcher journal observations into a Microsoft Excel (2013) spread sheet [Microsoft Corporation, Washington, USA]. Two independent researchers familiarised themselves with the data by reading the transcripts a number of times. These data were subsequently analysed using deductive content analysis.¹⁹ Data describing the CoP conduction of the audit process were mapped against elements (categories) of effective clinical audit¹² using a structured category matrix¹⁹ to address study aim one.

Quantitative data drawn from the audit were entered into the SPSS statistical software package version 22 IBM SPSS Statistics. Audit data were summarised using descriptive statistics.²⁰ Audit domain findings were mapped against evidence best practiced recommendations to address study aim two.

Qualitative data exploring any potential barriers and facilitators to engaging in falls prevention activity were mapped against audit domains using deductive content

analysis¹⁹ to address study aim three. Trustworthiness of the data was achieved through discussion and consensus amongst CoP members regarding categories. The CoP then used the mapping procedure to develop a falls prevention action plan.

Results

The CoP conducted the organisational falls prevention activity audit at all 13 RAC sites led by the site CoP member(s). The CoP audit and action plan met all five stage criteria for an effective clinical audit as shown in Table 1 (provided as online Appendix A). Our CoP provided a multidisciplinary local leadership in assessing the high cost problem of falls in RAC in tandem with falls prevention processes and outcomes. This was measured using a validated audit tool that aligned with best practice guidelines.¹⁷ CoP preparation for auditing at sites identified ‘lack of time’ due to demands from staff’s usual clinical duties as the main barrier to conducting the audit. The CoP met and discussed barriers and facilitators. This resulted in the identification of the best times to conduct audit tasks; before shift handover or during resident meal times as these aligned with periods of lower clinical activity demand. CoP members subsequently engaged site nurses to assist with the audit domains of medications and continence, occupational therapists regarding equipment and environment, physiotherapists regarding risk assessment and exercise programs and care managers to assist with audit of policy and monitoring. This resulted in the burden of the audit tasks being shared, which facilitated conduct of the audit. Three RAC sites completed the audit tool electronically and 10 in paper copy. CoP member feedback post audit determined the audit tool was user friendly in layout because it contained mostly tick boxes but also had spaces to add comments. CoP members (C) reported they felt empowered after undertaking the falls prevention activity audit

process as it had raised their awareness of gaps in clinical practice and motivated them to take action,

C1 "I thought we were already doing everything we could for falls prevention"

C4 "There's a lot more to it (falls prevention) than I thought"

At subsequent CoP discussions priority gaps in falls prevention practice were identified across each audit domain. This was achieved by comparing the audit findings against falls prevention evidence and best practice recommendations.^{3,4} The RAC organisation's level of compliance with falls prevention evidence and best practice recommendations for these priority areas are described in Table 2.

Audit findings that met or were close to complying with evidence and best practice recommendations included medication review by a pharmacist, which occurred annually at 10 (76.9%) sites. All 13 sites reported review of medications by visiting GPs and 10 (76.9%) sites also had a Nurse Practitioner review medications as requested. All 13 (100%) sites provided resident continence assessments with appropriate toileting programs. There was a 98% compliance rate for hip protector use in 13.9% of residents identified as suitable candidates for use. Resident's feet condition was reviewed every six weeks at all 13 (100%) sites by a podiatrist, footwear was checked annually at 4 (30.8%) sites by the physiotherapist and a process for assessing sensory deficits and aids (visual and auditory) was in place at 10 (76.9%) sites. Low-low beds were in use by 14% of residents across all sites identified as at risk of falls when attempting to get up from bed unassisted and surveillance measures were operational at 11 (84.6%) sites. Overall existing falls prevention processes were perceived by staff to be working well at eight (61.5%) sites.

The CoP planned falls prevention activities and discussed barriers and facilitators to adoption at sites as shown in Table 3 (provided as online Appendix B). Priority falls prevention activities that were planned included improving the proportion of residents supplemented with vitamin D, developing a mandatory falls prevention staff education program and defining falls and falls prevention policy.

Discussion

Meeting the criteria for effective clinical audit¹² was achievable by a CoP as members were able to share knowledge, discuss findings and action change in falls prevention activity. This aligns with the structure and purpose of CoPs described in the literature as models for collaboration and innovation.¹⁶ The CoP was able to overcome some of the barriers to audit reported in other studies through interaction.¹³⁻¹⁵ Lack of staff time, due to competing priorities, was enabled by the CoP sharing audit tasks amongst site staff to reduce the burden. Lack of clinical leadership and interdisciplinary involvement was addressed in that CoP members provided audit leadership at their respective sites and were themselves multidisciplinary clinicians. Our study involved RAC staff in the audit process unlike a similar project conducted in RAC facilities that used external project officers as auditors.²¹ Involving workplace staff in quality improvement initiatives, such as clinical auditing, has been shown to be more successful than using external experts^{10, 13} as they will be the ones responsible for translating evidence into practice. The CoP was instrumental in contributing to the success of the A&F process as CoP members were RAC site staff with existing peer relationships. A&F is reported as being more effective in changing clinical practice when delivered by a peer or supervisor in both verbal and written formats.^{6, 8, 9} The

establishment of the CoP across the RAC organisation to sustain clinical practice improvement fulfils an important recommended step in audit cycles.^{12, 13}

The results of the falls prevention activity audit demonstrated there were gaps in practice; including vitamin D supplementation and staff falls prevention training. Supplementing older people in RAC with vitamin D has been shown to reduce falls rates^{3, 22} as 89% of the population are reported as having deficient or very low levels,²² but our current proportion of residents supplemented was less than half this value. Staff education implemented as part of a multifactorial approach to falls prevention has delivered a 50% reduction in the number of resident falls.²³ However simply providing generic educational material in brochures or handouts, as identified at 6 (46.2%) RAC sites, is reported as having little effect on staff adopting falls prevention actions. Interactive, authentic education tailored to staff sub groups and accessible to all is recommended.^{24, 25} Both our results demonstrate that the process of evidence translation to practice was not complete.

Barriers to CoP planned actions centred on an unco-ordinated approach to falls prevention. This finding may have contributed to the variation in compliance with best practice recommendations seen across the RAC sites. Facilitators to CoP actions centred on access to external experts which suggests that research institutions should permanently align themselves with RAC organisations and take a more active role in the translation of evidence into practice.^{21, 26}

A key strength of this study was the inclusion of staff at all 13 sites, led by the CoP, in conducting the audit as opposed to an external agency. The characteristics of a CoP include membership through shared practice across organisational boundaries, with a common topic of focus. Members engage in sharing knowledge and innovate for

change through frequent interaction.¹⁶ Our CoP connected staff from all 13 RAC sites to address the topic of auditing falls prevention. CoP member access to frequent web-based communication enabled a co-ordinated, collaborative approach to clinical audit and the shared expertise of the membership fulfilled the multifactorial requirements of the falls prevention activity audit enabling a more efficient and effective completion. As the CoP was established by the RAC organisation as a sustainable approach to falls prevention it has the capacity to repeat this clinical audit process enabling continuous review of performance.^{4, 12} Whilst the audit was cross-sectional, spending time to identify gaps in practice and barriers to implementing falls prevention activities is advocated for enabling the adoption of practice change.^{12, 27}

Conclusions

A CoP was able to conduct an effective falls prevention activity audit at all 13 RAC sites. Audit findings and subsequent actions were informative for the RAC organisation in measuring falls prevention performance and planning improvement. Gaps in falls prevention practice highlighted that falls prevention evidence required more consistent translation across the RAC organisation. Similar RAC organisations may also benefit from undertaking this A&F process and action planning. We recommend the use of a workplace group of multidisciplinary staff with access to quality evidence, such as a CoP, to translate evidence into practice.

References

1. Oliver D, Connelly JB, Victor CR, Shaw FE, Whitehead A, Genc Y, Vanoli A, Martin FC, Gosney MA. Strategies to prevent falls and fractures in hospitals and care homes and effect of cognitive impairment: systematic review and meta-analyses. *BMJ* 2007; 334(7584): 82. doi:10.1136/bmj.39049.706493.55
2. Rapp K, Becker C, Cameron ID, König H-H, Büchele G. Epidemiology of falls in residential aged care: analysis of more than 70,000 falls from residents of Bavarian nursing homes. *J Am Med Dir Assoc* 2012; 13(2): 187. doi:10.1016/j.jamda.2011.06.011
3. Cameron ID, Murray GR, Gillespie LD, Robertson MC, Hill KD, Cumming RG, Kerse N. Interventions for preventing falls in older people in nursing care facilities and hospitals. *Cochrane Database Sys Rev* 2012; 1(3). doi:10.1002/14651858.CD005465.pub3
4. Australian Commission on Safety and Quality in Healthcare. Implementation guide for preventing falls and harm from falls in older people: best practice guidelines for Australian hospitals and residential aged care facilities 2009. Available at: <http://www.safetyandquality.gov.au/publications/implementation-guide-for-preventing-falls-and-harm-from-falls-in-older-people-best-practice-guidelines-for-australian-hospitals-and-residential-aged-care-facilities-2009/>
5. Glasziou P, Ogrinc G, Goodman S. Can evidence-based medicine and clinical quality improvement learn from each other? *BMJ Qual Saf* 2011; 20(1): i13-i17. doi:10.1136/bmjqs.2010.046524
6. Gould NJ, Lorencatto F, Stanworth SJ, Michie S, Prior ME, Glidewell L, Grimshaw JM, Francis JJ. Application of theory to enhance audit and feedback interventions to increase the uptake of evidence-based transfusion practice: an

intervention development protocol. *Implement Sci* 2014; 9(1): 92.

doi:10.1186/s13012-014-0092-1

7. Moore KJ, Hill KD, Robinson AL, Haines TP, Haralambous B, Nitz JC. The state of physical environments in Australian residential aged care facilities. *Aust Health Rev* 2011; 35(4): 412-7. doi:10.1071/AH10932
8. Jones S, Sloan D, Evans HE, Williams S. Improving the implementation of NICE public health workplace guidance: an evaluation of the effectiveness of action-planning workshops in NHS trusts in England. *J Eval Clin Pract* 2015; 21(567-71). doi:10.1111/jep.12331
9. Ivers N, Jamtvedt G, Flottorp S, Young JM, Odgaard-Jensen J, French SD, O'Brien MA, Johansen M, Grimshaw J, Oxman AD. Audit and feedback: effects on professional practice and healthcare outcomes (Review). *Cochrane Database Sys Rev* 2012; (6). doi:10.1002/14651858.CD000259.pub3
10. Berk M, Callaly T, Hyland M. The evolution of clinical audit as a tool for quality improvement. *J Eval Clin Pract* 2003; 9(2): 251-7.
11. Bradley C. Hospitalisations due to falls by older people, Australia, 2009-10. Injury Research and Statistics Series, no. 70. Canberra: Australian Institute of Health and Welfare; 2013. Available at: <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129542822>
12. Benjamin A. The competent novice. Audit: how to do it in practice. *BMJ* 2008; 336(7655): 1241. doi:10.1136/bmj.39527.628322.AD
13. Gibson RS, Heaney A, Hull K. Can a multi-factorial assessment and interventional programme decrease inpatient falls in an elderly care ward? *BMJ Qual Improve Rep* 2013; 2(1): 1-3. doi:10.1136/bmjquality.u200500.w332

14. Bowie P, Bradley NA, Rushmer R. Clinical audit and quality improvement—time for a rethink? *J Eval Clin Pract* 2012; 18(1): 42-8. doi:10.1111/j.1365-2753.2010.01523.x
15. Kitson A. The identification and management of patients at high risk of falls in the acute care setting: a best practice implementation project. *JBI Database System Rev Implement Rep* 2014; 12(10): 282-95. doi:10.11124/jbisrir-2014-1888
16. Ranmuthugala G, Cunningham FC, Plumb JJ, Long J, Georgiou A, Westbrook JI, Braithwaite J. A realist evaluation of the role of communities of practice in changing healthcare practice. *Implement Sci* 2011; 6(49). doi:10.1186/1748-5908-6-49
17. National Ageing Research Institute. Falls and falls injury prevention activity audit for residential aged care facilities. Melbourne: Victorian Government Department of Human Services; 2009. Available at:
http://www.nari.net.au/files/files/documents/nari_falls_scoping_audit_survey.pdf
18. Francis-Coad J, Etherton-Beer C, Bulsara C, Nobre D, Hill AM. Investigating the impact of a falls prevention community of practice in a residential aged-care setting: a mixed methods study protocol. *J Adv Nurs* 2015. doi:10.1111/jan.12725
19. Elo S, Kyngäs H. The qualitative content analysis process. *J Adv Nurs* 2008; 62(1): 107-15. doi:10.1111/j.1365-2648.2007.04569.x
20. Portney L, Watkins M. *Foundations of Clinical Research: Applications to Practice*. Connecticut: Appleton & Lange, 1993.
21. Nitz J, Cyarto E, Andrews S, Fearn M, Fu S, Haines T, Haralambous B, Hill K, Hunt S, Lea E, Moore K, Renehan E, Robinson A. Outcomes from the implementation of a facility-specific evidence-based falls prevention intervention

program in residential aged care. *Geri Nurs* 2012; 33(1): 41-50.

doi:10.1016/j.gerinurse.2011.11.002

22. Department of Health. Falls Prevention Model of Care. Perth: Health Strategy and Networks Department of Health Western Australian; 2014. Available at:

http://www.healthnetworks.health.wa.gov.au/modelsofcare/docs/Falls_Model_of_Care.pdf

23. Bouwen A, De Lepeleire J, Buntinx F. Rate of accidental falls in institutionalised older people with and without cognitive impairment halved as a result of a staff-oriented intervention. *Age Ageing* 2008; 37(3): 306-10.

doi:10.1093/ageing/afn053

24. Anderson RA, Corazzini K, Porter K, Daily K, McDaniel Jr RR, Colón-Emeric C. CONNECT for quality: protocol of a cluster randomized controlled trial to improve fall prevention in nursing homes. *Implement Sci* 2012; 7(11): 11.

doi:10.1186/1748-5908-7-11

25. Mitchell E, Lawes H. Improving education in falls prevention. *Nurs Res Care* 2007; 9(9): 407-9.

26. Verbeek H, Zwakhalen SM, Schols JM, Hamers JP. Keys to successfully embedding scientific research in nursing homes: a win-win perspective. *J Am Med Dir Assoc* 2013; 14(12): 855-7. doi:10.1016/j.jamda.2013.09.006

doi:10.1016/j.jamda.2013.09.006

27. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M.

Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ* 2008; 337: 979-83. doi:10.1136/bmj.a1655

Table 1 Evaluation of the falls prevention CoP in meeting criteria for an effective clinical audit

Stages of	Summary of elements of effective clinical audit	Audit by falls prevention community of practice (CoP)
Audit Cycle	(Benjamin, 2008)	
1	<p>Clinical audit should assess structure, process, or outcomes of care</p> <p>The audit should be part of a structured programme and should have a local lead</p> <p>Audit should ideally be multidisciplinary</p>	<p>This audit measured falls and falls injury prevention activity across all 13 sites of a RAC organisation (n=779 beds)</p> <p>Audit formed part of a project investigating the impact of a falls prevention CoP on falls outcomes across 13 RAC sites.</p> <p>Audit training was provided.</p> <p>Researcher-designed planning template used to identify barriers and facilitators to conducting site audits.</p> <p>Falls prevention action led by 1 or 2 CoP members at each site.</p> <p>CoP members led audit assisted by site Nurses, Care Managers and Allied Health Professionals.</p>

	Patients should ideally be part of the audit	Residents were surveyed in a separate study
2	Choose audit topics based on high risk, high volume , or high cost problems or on national clinical audits, national service frameworks, or NICE guidelines	One in two older people in RAC fall annually ; preventing falls for older people is a national priority. Cost of falls annually \$648.2 million AUD A ‘Falls and falls injury prevention activity audit for residential aged care facilities’ developed by the National Ageing Research Institute and modified for the RAC setting was selected.
3	Derive standards of measurement from good quality guidelines	Audit tool aligns with: Australian Commission on Safety and Quality in Healthcare . Preventing falls and harm from falls in older people. Best Practice Guidelines for Australian Residential Care Facilities 2009.
4	Use action plans to overcome the local barriers to change, and identify those responsible for service improvement	Falls prevention CoP formulated action plan post audit (Table 3) CoP members used a researcher-designed template to identify staff on site

who may assist with audit improvements.

CoP members leading practice change at sites.

5 **Repeat audit** to find out whether improvements in care have been implemented as a result of clinical audit

CoP planning **repeat audit** following implementation of action plans

Develop **specific mechanisms** and **systems** to monitor and **sustain** service **improvements** once the audit cycle has been completed

Falls prevention CoP established with intention of being a sustainable model for falls prevention action and evaluation across the RAC organisation.

Note. CoP= Community of Practice, RAC=Residential Aged Care

Table 2 Priority findings from the falls and falls injury prevention activity audit conducted by the CoP

Audit domain	Compliance measure	Recommendation/standard	Findings
Vitamin D supplementation	Mean (SD) proportion residents supplemented vitamin D 41.5% (23.7)	Improve provision of adequate Vitamin D supplementation (>800units/day) for all RAC sites	No CoP members (n=20) were aware of the Level I evidence regarding effectiveness of Vitamin D supplementation in reducing falls rates
Staff Education	6 (46.2%) sites	Falls prevention training provided for all RAC staff. Training should be interactive, experiential, risk factor focussed and explanatory of staff role.	No mandatory falls prevention training. Sites providing annual tutorial at staff meeting had non- standardised content, less than 50% of staff attended
Fall definition documented	2 (15.4%) sites	RAC facilities should adopt a consistent fall definition and process to ensure consistent uptake by all staff	Site definitions not standardised or clinically explained therefore subject to interpretation; impacts reliability of falls reporting
Falls prevention policy	0 (0%) sites	Multifactorial approach using standard falls prevention interventions should be routine care for all residents	Falls management policy (post fall) in place across all sites but multifactorial falls prevention not addressed

Falls Risk Assessment: 12 (92.3%) sites
On admission

All older persons admitted to RAC receive falls risk Ax, on admission, post fall, after change in health condition and after change in built environment. Identified risk factors addressed with appropriate intervention

Falls risk assessment tool previously implemented by organisation covered 4/14 recognised falls risk factors with no clear alignment process to falls prevention strategies in resident care plan

Post fall 4 (30.8%) sites

After change in health condition 9 (69.2%) sites

After change in environment 2 (15.4%) sites

Annually 7 (53.8%) sites

Individualised balance exercise programs provided 11 (84.6%) sites

Supervised individual balance exercises, two hours per week cumulatively for improvement

Cumulative balance exercise duration range 5 – 60mins weekly. Duration dose delivered was sub-optimal

Included exercises in standing position (ability dependent)	9 (69.2%) sites	Challenge resident limit of stability	No current psychometric measure of balance intensity. Difficult to determine if individual resident's limits of stability were challenged.
Resident Education	6 (46.2%) sites	Engaging older people integral to preventing falls. Continuous prompts and reminders required to execute falls prevention strategies.	Sites delivered ad hoc non-standardised resident falls prevention information. Methods for prompting resident engagement in falls prevention action not reflected in policy.

Note: CoP=Community of Practice, RAC=Residential Aged Care

Table 3 CoP identified barriers, facilitators and actions to adoption of falls prevention activities at sites.

CoP plan	Barriers	Facilitators	CoP Actions
Increase number of residents supplemented with Vitamin D	Not universally prescribed. Individual residents have different GPs with varied opinions on prescribing	Engaging support from Geriatricians in targeting GPs	Engaged geriatricians to assist with preparation of a letter to GPs incorporating evidence based information and benefits of vitamin D supplementation. Letter e-mailed to all RAC site visiting GPs Two Nurse Practitioners who visit 10 RAC sites and have prescribing rights for Vitamin D are providing additional support. Raising staff awareness at sites through CoP newsletter
	Cost to resident (not on PBS)	Investigate bulk buying of supplements to reduce cost	Provide information on vitamin D supplementation, including cost versus benefit in the RAC admission package

	Residents with swallowing difficulties may not manage supplement table	Investigate alternate delivery formats through pharmacist	Information provided to all site care managers that supplements are available in liquid drops and by injection
Design mandatory staff falls prevention education	Lack of relevant educational resources	Develop CoP newsletter to disseminate falls prevention information	CoP newsletter “CoPTales” produced providing feedback and information on CoP falls prevention activities. Three issues published.
	Electronic training media cannot be used on staff computers at some sites due to lack of infrastructure.	Engage IT support.	Discussed with IT, audio accessibility has been enabled on site computers.
	Some staff will not attend training out of their rostered shifts.	Use multimedia so staff across all shifts can access training.	Exploring multimedia training options. Reviewing current freely available resources versus producing RAC organisation’s own tailored resources.

	<p>Cost of providing education across multiple days / shifts.</p>	<p>Survey care staff to find out what they know and think about falls and falls prevention. Break down falls prevention training into modules that could be presented on site at the end of staff meetings or handovers.</p>	<p>Developing interactive and experiential training focussing on intrinsic (resident) and extrinsic (environmental) risk factors and staffs role regarding both.</p> <p>Pilot study of Care staff indicates staff would like falls prevention reminders such as checklist.</p> <p>Survey of care staff has been extended across eight RAC sites to further inform education design.</p> <p>Mandatory falls prevention training is being incorporated into the two day new RAC staff orientation package.</p>
<p>Adopt standardised fall definition</p>	<p>Many definitions in existence Clinical interpretation can impact reliability of reporting</p>	<p>Engaging support from research academics to assist with interpretation</p>	<p>Implemented fall definition by Lamb et al 2005.</p> <p>Writing clinical explanations for falls reporting.</p>

Write falls prevention policy for implementation	Unco-ordinated approach to falls prevention due to lack of clear guidelines.	Engaging support from research academics for policy writing. Updated RAC software will allow easier review of falls incidents	Developing written processes for falls prevention activities including regular standardised falls monitoring feedback to site staff. Using new software at four RAC sites to display monthly falls incident trends in a graph displayed in staff handover room
	Policy has to incorporate the organisations other care provision domains for community dwelling elderly and younger people with disabilities.	Engaging assistance from Document Controller (recently employed by the RAC organisation to assist with policy writing)	Writing new falls management policy that focusses on prevention in conjunction with all stakeholder groups
Improve falls risk Ax process	Many falls risk assessment tools exist resulting in	Engaging support from research academics via CoP in finding	5 falls risk assessment tools designed for RAC settings were reviewed. The Queensland falls assessment and management

confusion as to selection of most appropriate.

suitable tools for consideration.

plan (FAMP) has been selected and tailored for adoption based on their RAC site requirements.

Staff confusion regarding responsibility for completing the Ax tool.

Discussing at RAC site staff meetings

Discipline specific responsibilities for completing items within the Ax tool have been negotiated so tasks are shared.

Review of residents post fall is challenging for allied health staff employed part time

Process guidelines for falls risk Ax tool item completion are being written. All residents will receive a falls risk Ax on admission.

The times for repeating the falls risk Ax tool is being negotiated.

<p>Improve delivery of balance exercise programs provided</p>	<p>Low contact hours by professional staff to supervise therapy assistants implementing exercises.</p> <p>Time demands by other tasks limit ability to provide optimal therapeutic dosage.</p>	<p>Discuss with physiotherapists at all RAC sites re-review of balance exercise programs for residents with capability of completing balance exercises of sufficient challenge.</p>	<p>Met with RAC site physiotherapists regarding use of supervised individual or group balance exercises to challenge the resident's limit of stability aiming for two hours per week cumulatively. RAC site physiotherapists are educating therapy assistants regarding how to challenge a resident's limits of stability when assisting with balance exercises.</p> <p>Alert government agencies to therapy staffing levels as they do not have the opportunity to provide balance exercises to eligible individuals at the therapeutic dosage for improvement.</p>
<p>Design resident falls prevention education</p>	<p>Many residents are cognitively impaired which is a challenge to educating and adopting falls prevention actions independently.</p>	<p>Engage staff to assist residents to prevent falls through reminders and setting up a safe environment.</p>	<p>Addressed through staff education actions above.</p>

Lack of resident compliance with falls prevention activities.	Survey residents with better levels of cognition to find out what they know and think about falls and falls prevention to further inform resource design.	Surveying residents across six participating RAC sites.
---	---	---

Lack of educational resources.	Make resources available through site CoP members Information should be pictorial and written not just verbal.	Developing educational resources in appropriate formats for older learners. Therapy assistants to assist with delivery.
--------------------------------	---	---

Note: CoP=Community of Practice, RAC=Residential Aged Care, Ax=Assessment, NP=Nursing Practitioner, PBS=Pharmaceutical Benefits Scheme