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Evaluating the impact of a falls prevention community of practice in a residential aged care organisation

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Chapter 3:

**Investigating the Impact of a Falls
Prevention Community of Practice in a
Residential Aged Care Setting:
A Mixed Methods Study Protocol**

Preface

This chapter describes the methods for the research conducted as part of this thesis. Health service research is increasingly utilising both quantitative and qualitative methods in research designs when seeking answers to complex problems, such as preventing falls among older people who live RAC settings.

The chapter is based on a published manuscript (see Appendix F):

Francis-Coad, J., Etherton-Ber, C., Bulsara, C., Nobre, D., & Hill, A-M. (2015). Investigating the impact of a falls prevention community of practice in a residential aged-care setting: A mixed methods study protocol. *Journal of Advanced Nursing*, 71(12), 2977-2986. doi:10.1111/jan.12725

The author's version of the manuscript is presented with modifications to suit the style and format of this thesis.

3.1 Abstract

Background

Falls are a substantial concern across the RAC sector with half its older population falling annually. Preventing falls requires tailoring of current evidence for reducing falls and adoption into daily activity, which is challenging for diversely skilled staff caring for a frailer population. Forming a CoP could provide staff with the opportunity to share and develop their expertise in falls prevention and innovate change. The aim of this study is to facilitate implementation and operation of a falls prevention CoP in a RAC organisation and evaluate its effect on falls outcomes.

Methods

A mixed methods design based on a realist approach was conducted across 13 RAC sites (N = 779 beds). Staff will be invited to become CoP members with all sites represented. The CoP will be supported to audit falls prevention activity and identify gaps in practice for intervention. The impact of the CoP will be evaluated at three levels: individual member level, site level and organisational level. A pre/post design using a range of standardised measures supported by audits, surveys, focus groups and interviews will determine its effect on falls prevention practice. Falls outcomes will be compared at five time intervals using negative binomial regression and logistic regression. The research is funded to operate from 2013-2016.

Conclusion

Findings from this research will assist RAC providers to understand how to effectively translate evidence about falls prevention into clinical practice.

3.2 Introduction

Falls are a substantial concern across the residential and long term aged care sector with half its population falling annually (Burland, Martens, Brownell, Doupe, & Fuchs, 2013; Haralambous et al., 2010; Nyman & Victor, 2011). Between 25-30% of falls among older people in RAC result in physical injury (Burland et al., 2013; Oliver et al., 2007) and are associated with an increased risk of mortality functional decline, depression and anxiety (Morley, 2007; Oliver et al., 2007; Rubenstein, 2006). Frail, older people who require nursing home care are at high risk of falls as they present with combinations of; multiple co-morbidities, age-related systems decline and cognitive impairment (Onder et al., 2012; Rubenstein, 2006). Meta-analyses of studies investigating falls prevention in RAC settings have found that the two strongest evidence-based interventions are, the supplementation of vitamin D and medication review by a pharmacist (Bischoff-Ferrari et al., 2004; Cameron et al., 2012; Nazir et al., 2013). Multifactorial interventions incorporating staff education, resident exercise programs and environmental modification show inconclusive outcomes in reducing falls rates indicating a problem exists (Cameron et al., 2012; National Institute for Health and Care Excellence, 2013). Despite this, adopting a multifactorial approach to falls prevention is still considered as industry best practice in the absence of further specific evidence. It is also recognised that effective interventions for this population differ from community interventions (Cameron et al., 2012; Gillespie et al., 2012) because older people in RAC may have difficulty adopting falls prevention strategies independently (Oliver et al., 2007; Oliver & Masud, 2004; Rubenstein, 2006). This suggests that staff and health care systems providing care to this population need to play a significant proxy role in providing falls prevention intervention for those at risk.

Policy, processes and practices reflecting evidence-based falls prevention are required for implementation and adoption within the context of a RAC organisation. This requires systematic inquiry, synthesis and adaptation to tailor relevant falls prevention knowledge for translation into practice (Graham et al., 2006; Haines & Waldron, 2011; Tetroe, Graham, & Scott, 2011). However undertaking this translation process in its entirety requires collaboration, research expertise, clinical and management skills all of which may not be present within the RAC workforce expected to undertake this process (Haines & Waldron, 2011). The use of external falls prevention

experts to implement change independently has been shown to reduce falls rates in the short term but following withdrawal the effect has not been sustained (Capezuti, Taylor, Brown, Strothers, & Ouslander, 2007; Ray et al., 2005). There is a need for designing falls prevention research that can evaluate how to facilitate the sustainable delivery of evidence-based falls prevention interventions using existing resources. Therefore enabling workplace staff to connect with research experts could be a viable means of translating current falls prevention evidence into effective practice (Fixsen, Scott, Blase, Naoom, & Wagar, 2011; Tolson, Irene, Booth, Kelly, & James, 2006; Tolson, Lowndes, Booth, Schofield, & Wales, 2011).

An innovation that is yet to be applied to the problem of falls prevention in the RAC sector is the formation of a CoP. A CoP is a group of like-minded people with a mutual interest in a topic who get together to share and develop their expertise, and then innovate and facilitate change in pursuit of a common goal (Conklin et al., 2011; Li et al., 2009; Ranmuthugala, Plumb, et al., 2011; Wenger, 1998), in this case falls prevention. A CoP applied to a RAC setting could provide an opportunity to connect nurses, allied health staff, managers, residents and researchers in collaboration to action evidence-based best practice (Ranmuthugala, Plumb, et al., 2011; Tolson et al., 2006).

The purpose of this research is to evaluate the impact of the falls prevention CoP on falls outcomes in a RAC setting by measuring:

1. Changes in individual CoP member knowledge, motivation and confidence to champion falls prevention activities.
2. Changes in implementation and adoption of falls prevention strategies at each participating RAC site measured simultaneously with falls rates, injurious falls rates and the proportion of residents falling.
3. Changes in RAC organisational policy or systems supporting falls prevention.

3.3 Methods

3.3.1 Ethical Considerations

Researchers from the university have formed a partnership with the RAC organisation to ensure that research priorities and study design are in keeping with the philosophy of the RAC organisation. Approval has been granted from the RAC

organisation for the research to be conducted as part of their continuous quality improvement priorities. Ethical approval from the university human research ethics committee has been granted for all phases of the research (Reference numbers 013145F, 014084F, 015033F & 014179F). All individual participation was voluntarily sought following the presentation of verbal and written information to participants. Written consent to participate was obtained from all who volunteered, with participants being free to withdraw from the research at any time.

3.3.2 Design

This research will use a convergent, parallel mixed methods design across three phases (Creswell & Plano Clark, 2007) based on a realist approach (Pawson & Tilley, 1997).

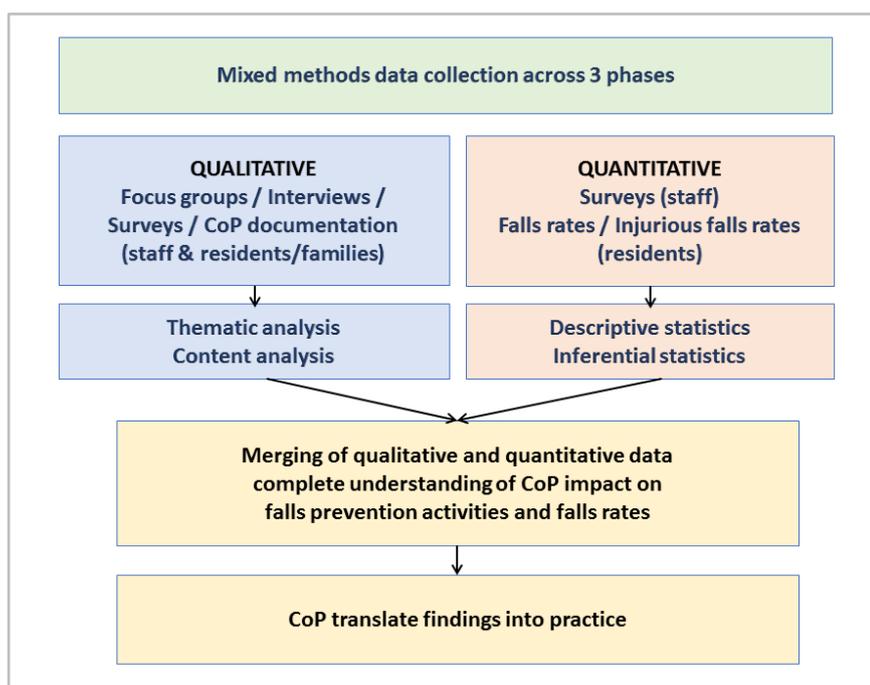


Figure 3.1 Mixed Methods Data Collection Overview
(Guided by Creswell & Plano Clark, 2007).

The realist approach to evaluation has been used previously in health services research where a comprehensive understanding of complex interventions is required (Greenhalgh et al., 2009; Rycroft-Malone, Fontenla, Bick, & Seers, 2010; Williams, Burton, & Rycroft-Malone, 2013). Realist evaluators seek to provide not just a descriptive profile of an intervention's outcomes, but also to identify more comprehensively, ways in which these interventions are influenced by current conditions

(**contexts**) in triggering (**mechanisms**) the observed **outcomes** (Hewitt, Sims, & Harris, 2012; Pawson & Tilley, 1997; Ranmuthugala, Cunningham, et al., 2011; Schierhout et al., 2013). This is based on the realist assumption that interventions will only work in the presence of particular conditions, referred to as generative or conditional causality. Therefore the purpose of a realist evaluation is to identify those conditions to produce robust findings (Greenhalgh et al., 2009; Pawson & Tilley, 1997). The context-mechanism-outcome (CMO) configurations serve as a framework for identifying what works (or not) for whom, how and under what conditions. Early stakeholder participation, in our case the RAC organisation staff and researcher team steering committee, via meetings, emails and telephone contact assisted the development of potential CMO configurations (see Table 3.1). The potential CMOs have been scoped broadly to guide qualitative and quantitative data collection but can be readily adapted to construct emergent CMO configurations from research findings (Ranmuthugala, Cunningham, et al., 2011; Williams et al., 2013).

Table 3.1 Potential Context-Mechanism-Outcome Configurations as Applied to the Falls Prevention CoP.

CMO	Configurations
Contexts	RAC organisational culture RAC site leadership RAC site environmental infrastructure Resident care level (dependence/independence) CoP characteristics Staff Characteristics
Possible mechanisms	CoP actions CoP activities CoP member behaviours
Outcomes proposed	Changes in resident falls rates and injurious falls rates Changes in adoption of falls prevention strategies Changes in staff confidence and motivation to address falls prevention strategies Changes in the environment (that affect resident falls risk) CoP can achieve maturity through member participation and collaboration

Note. RAC = Residential aged care, CoP = Community of practice

3.3.3 Participants, Setting and Recruitment

This research will partner university researchers with staff across a not-for-profit RAC provider organisation with 13 geographically diverse sites in metropolitan Western Australia. The RAC organisation provides care for approximately 780 older people at any one time. There is approximately 1185 full and part time care staff across each of the 13 RAC sites; a care manager leads sites and staff includes nursing (practitioners, clinical specialists, registered, enrolled and assistants) and allied health professionals. A separate corporate office provides centralised support for all sites such as human resources, clinical and quality control departments and ICT. Commitment to this partnership is endorsed by the organisation's Chief Executive Officer (CEO) and General Managers.

3.3.4 Outcome Measures and Evaluation

The impact of the falls prevention CoP will be evaluated at three levels:

1. At an individual member level we will measure changes in their knowledge, confidence and motivation to lead falls prevention activities and confidence in using ICT for communication.
2. At the site level we will measure changes in implementation and adoption of falls prevention interventions in conjunction with falls rates and injurious fall rates.
3. At the organisational level we will describe changes in policy or systems supporting falls prevention.

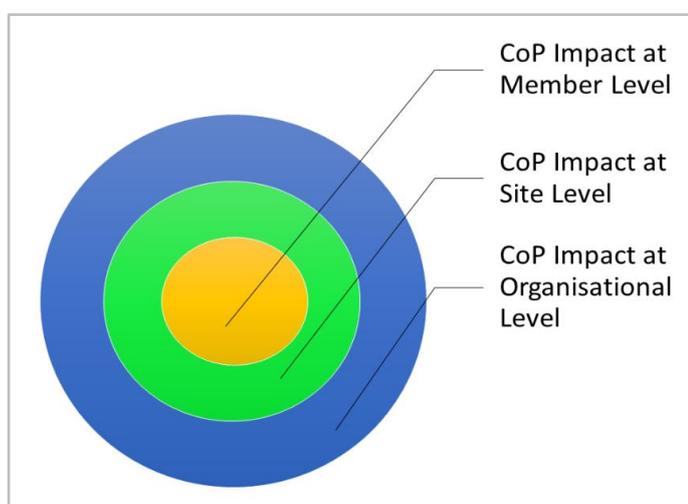


Figure 3.2 Levels of Evaluation of CoP Impact on Falls Prevention and Falls Outcomes (Guided by Ranmuthugala, Cunningham et al., 2011).

3.3.5 Data Collection and Procedure

Phase 1

A steering committee comprising research and service provider representatives from nursing and allied health will be formed to discuss CoP development, operation and study logistics. A CoP is defined as a group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis (Li et al., 2009; Wenger, 1998). This is an attractive concept for health workers as it has been reported that on-going learning is facilitated in the workplace through interaction with peers (Li et al., 2009; Tolson et al., 2011).

The proposed structure of the CoP is shown in Figure 3.3. Three of the 13 sites are used as representative examples in the figure for clarity.

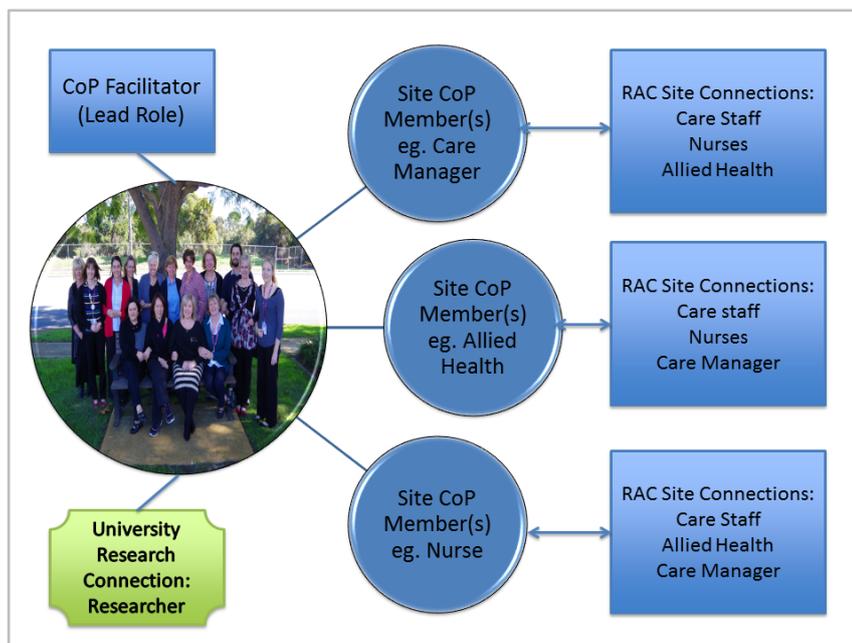


Figure 3.3 The Structure of the RAC Organisation's Falls Prevention CoP.

Conceptually CoPs have the potential to be models for knowledge translation. Lave and Wenger (1991), who are credited with conceptualising CoPs, viewed knowledge as being social in nature. They declared it should be explored within its social context, in a process of 'situated learning', then actioned to generate new shared knowledge. This new shared knowledge can be created through a process of conversion and tailoring by its membership and includes different ways to problem solve and apply skills to work place practices (Li et al., 2009; Tolson et al., 2011). It is envisaged that CoP member social interaction will take place asynchronously during their working

hours via an electronic discussion board forum accessed through their RAC site intranet web page. Open discussions, involving topic related knowledge sharing and problem solving, by asking questions and reading other CoP member posts will be enabled by password protected access to the CoP web page. Newly created knowledge, in this case negotiated falls prevention activities to influence practice change, will be disseminated by the CoP membership at their RAC sites. Actioning falls prevention activities at RAC sites will involve the CoP members disseminating new knowledge to their care manager and multidisciplinary staff groups at shift handovers, staff meetings or intra-organisational media. If new workplace practices actioned by a CoP result in successful outcomes, a CoP could become a value-adding capacity of the organisation (Li et al., 2009; Ranmuthugala, Cunningham et al., 2011, Tolson et al., 2011).

The CoP member(s) at each site irrespective of their discipline will engage with their multidisciplinary colleagues in falls prevention activities, enabling contributions from a range of perspectives facilitating 'situated learning' across the organisation (see Figure 3.3). CoPs require a leadership or facilitator role to steer discussion and keep the focus on the topic of choice (Kimball & Ladd, 2004). A RAC organisational member of staff will be assigned part of their managerial role as the CoP facilitator and study liaison person connecting the RAC organisation with the tertiary research team. All staff expressing an interest in falls prevention currently part of the organisation's workforce will be invited to volunteer as CoP members, with a minimum of one representative from each of the organisation's sites. The organisation's staff and residents (including aspects of the built environment) will be the recipients of the falls prevention activities implemented by the CoP. To overcome geographic separation CoP members will pilot the use of the organisation's intranet to communicate on a regular basis, supported by approximately three face to face meetings annually. All staff nominating as CoP members will complete a baseline questionnaire (see Appendix G) to gather demographic information and to explore their knowledge, confidence and motivation regarding falls prevention practice and confidence in using ICT for communication. Researcher and CoP facilitator documented observations will inform evaluation and modify CoP operation as required across the duration of the study. CoP members will repeat these measures at the end of the study period. Additional documents will be used to describe CoP development and operation including stakeholder steering committee meeting minutes, CoP discussion transcripts, emails and the researcher and CoP facilitator observation journals.

Phase 2

Evaluating current falls prevention activity and comparing it with evidence-based guidelines (Australian Commission on Safety and Quality in Healthcare, 2009; Cameron et al., 2012; National Institute for Health and Care Excellence, 2013) will identify gaps in practice for targeted intervention. The CoP will therefore be supported to conduct a scoping audit across all RAC sites using a validated tool. CoP members will co-ordinate audit completion at their RAC site assisted by site staff, including those with an awareness of policies and practices within each site, such as care managers, nurses and allied health professionals. Discussions with other RAC staff such as nursing and allied health assistants, cleaners, laundry and maintenance staff may also contribute to establishing whether everyday practices reflect current policies. The selected audit tool will address domains such as falls risk assessment, falls and falls injury prevention interventions, the environment, falls and falls injury prevention staff training and information for residents. After analysis of all audits, The CoP will then discuss the prepared report of the audit findings, reflecting current falls prevention activity, to determine the areas for development and intervention. Repeating this audit at the conclusion of this study will enable the comparison of changes in falls prevention activity across the RAC sites following CoP determined interventions.

Findings from the scoping falls prevention audit will be discussed and prioritised for action by the CoP membership taking into account their available resources. Subsequently the CoP membership's facilitation of falls prevention activities at RAC sites and across the organisation will be measured using an appropriate series of methods such as questionnaires, focus groups and interviews reflecting the diversity of practice in providing clinical care.

A quasi-experimental pre/post design will be adopted for determining the quantitative outcomes of interventions addressed by the CoP at each site and across all sites. Appropriate standardised tools will be selected to measure changes in falls outcomes dependent on the area of need defined by the CoP. This will be guided by the findings of the scoping audit and therefore cannot be pre-determined. However possible CoP falls prevention activities are likely to take a multifactorial approach that includes the staff, the residents and the environment. Examples may include: Staff intervention through the development of a mandatory falls prevention education and training package

informed by a survey of care staff. Resident intervention through the administration of vitamin D supplementation via nurse practitioner, doctor and pharmacist liaison and the environment may be modified to minimise hazards and maximise resident safety. All CoP falls prevention activity is likely to involve RAC policy and practice development or modification and resource creation to facilitate the adoption of falls prevention activities.

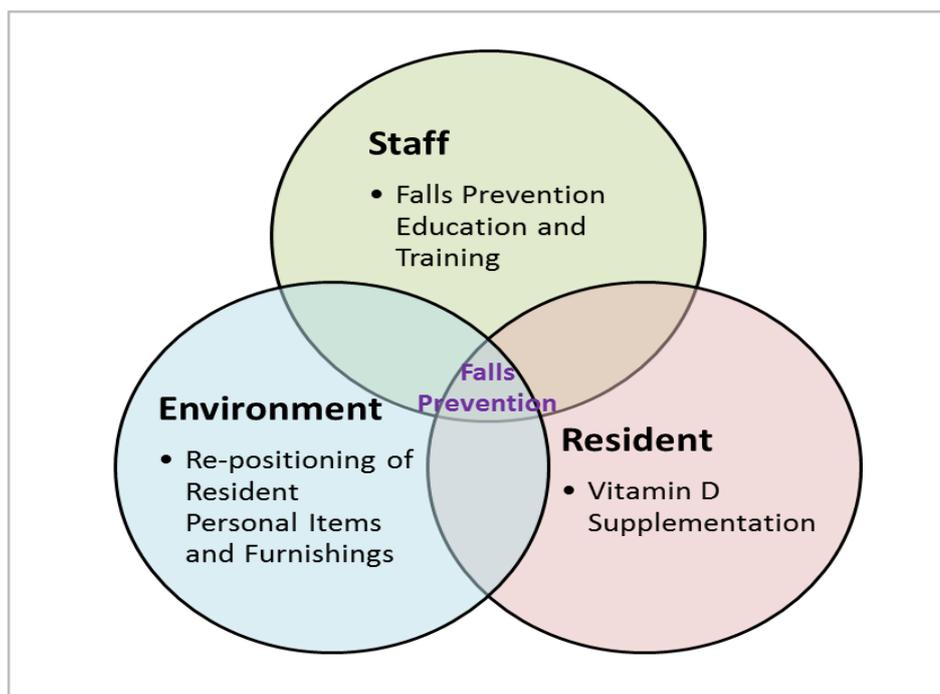


Figure 3.4 An Example of a Possible CoP Intervention in Each Interactive Domain Contributing to Falls Prevention.

Specifying the intervention context, measuring the proposed outcomes and identifying trigger mechanisms will determine what CoP facilitated falls prevention activities worked, for whom, how and under what conditions within the RAC organisation.

The establishment of a community through connections between its members and knowledge flow through the community will be recorded by the organisation's intranet platform. Frequent communication, interaction and knowledge exchange between members are characteristics associated with CoPs. A social network analysis (SNA) will be undertaken to examine the relationships, connections and flow of knowledge within the CoP, as the behaviour of the CoP is likely to be influenced by its structure as well as the characteristics of its members. The exchange between members on the CoP intranet discussion board and CoP facilitator emails will provide frequency counts representing CoP member activity and connectivity. The presence and strength

of these connections may assist in comprehending which features of the CoP relate to improvement in falls prevention activity and tacit knowledge exchange (Gainforth, Latimer-Cheung, Athanasopoulos, Moore, & Ginis, 2014; Ranmuthugala, Cunningham, et al., 2011; Yousefi-Nooraie, Dobbins, & Marin, 2014).

Falls outcomes

A prospective quasi-experimental pre/post design will measure falls rates, falls related hospitalisation rates and the proportion of older people sustaining one or more falls. Falls rates across two years will be compared with rates at baseline and at six monthly intervals. As this is a quasi-experimental design the CoP is considered an intervention at organisational level. In line with international recommendations for a common outcome data set for falls injury prevention trials, the definition of falls by Lamb, Jørstad-Stein, Hauer, and Becker (2005) will be adopted by this study:

“an unexpected event in which an individual comes to rest on the ground, floor or lower level”. Falls data will be collected from the organisation’s electronic clinical record system that records all reported falls by staff at RAC sites. The organisation also records all falls that require a transfer to hospital due to an injury sustained from a fall. The organisation subsequently records all injuries diagnosed as a fracture. These data will also be collected from the organisation’s electronic clinical record system for the duration of the study. Falls rates and injurious falls related (fracture) rates will be reported as falls/1000 resident bed days. Bed days of care (calculated using the site census i.e. number of beds occupied across 30 days) will represent the denominator and number of falls the numerator multiplied by 1000. As residents of the participating aged care sites may remain in the study for varying lengths of time due to death, hospital admission or discharge, the probability of falling will be calculated relative to the duration they were exposed to the risk of falling.

Falls prevention activities and falls outcomes will be measured by CoP members in conjunction with the RAC organisation’s staff. The researcher will provide falls prevention expertise and links to external falls prevention experts as required through participation in the CoP and will be responsible for evaluating the CoP on the three levels previously described.

Phase 3

Organisational falls prevention management such as policies or quality improvement systems will be reviewed as part of the audit process described in Phase 2. Different types of organisational documents will be scrutinised including policy documents, practice manuals and meeting minutes by bench marking against current evidence and clinical guidelines (Australian Commission on Safety and Quality in Healthcare, 2009; Cameron et al., 2012; National Institute for Health and Care Excellence, 2013).

3.3.6 Data Analysis

Quantitative

Data drawn from surveys and audits throughout Phases 1-3 will be allocated a value representing a category such as gender, first language and type of exercise offered. A 5-point Likert scale will be used to measure subjective variables such as attitudes, beliefs, confidence and motivation through extent of agreement to the responses generated. Categorical response items used to measure engagement in falls prevention activities will be analysed using non-parametric methods where required. Both nominal and ordinal data from surveys and audits will be entered into the SPSS statistical software package version 22 IBM SPSS Statistics. Parametric data will be described as means, frequencies and percentages and non-parametric data will be described as medians, interquartile ranges and displayed in tables. Frequency analyses cross comparisons between sites will be undertaken. Relationships between variables will be examined between two or more sets of responses and cross tabulations and contingency tables used where appropriate (Portney & Watkins, 1993; Punch, 2003). Survey results will be presented in reports using bar graphs and tables.

Falls incident data will be collected at five time points in six monthly intervals over two years (see Table 3.2) and analyses completed using recommended methods for falls data (Lamb et al., 2005; Robertson, Campbell, & Herbison, 2005).

Falls outcomes (falls and injurious fall rates per 1000 resident days, proportion of residents falling) will be compared between baseline and at two years after the introduction of the CoP. Mixed-effects, multilevel, linear regression using site as a

random effect and pre vs post intervention periods as a fixed effect will be used to compare the falls outcomes between these periods. Adjustment will be made for age, presence of dementia and aged care funding instrument care rating. P values of less than .05 will be considered significant.

Table 3.2 Proposed Evaluation of CoP Impact to be Measured During The Three Phases of Research.

Timeline	Phase 1. CoP Member Level	Phase 2. RAC Level	Phase 3. Organisational Level
Aug 2013			CoP formation stakeholder meetings
Nov 2013	Member baseline survey CoP feasibility study	Falls outcome data 1 RACF site meetings	ICT liaison meetings/email
May 2014		Falls outcome data 2 CoP Falls prevention activity audit	Management meetings
Nov 2014	Member activity reports	Falls outcome data 3 CoP Falls prevention activities targeting resident/staff/environment	Present Policy/System changes
May 2015		Falls outcome data 4 CoP Falls prevention activities targeting resident/staff/environment	
Nov 2015	Member final survey Semi-structured interviews	Falls outcome data 5 CoP Falls prevention activity audit	Evaluate uptake of recommended Policy/System changes

Note. Falls outcome data 1-5 includes falls rates, injurious falls rates and proportion of residents falling.

The SNA will use software such as UCI-Net; this allows visual examination of each of the relationships in question, in our study these will be CoP member interactions and knowledge flow through frequency counts (Ranmuthugala, Cunningham, et al., 2011; Yousefi-Nooraie et al., 2014). Results will be presented as matrices or graphs.

Qualitative

Interview or focus group digital recordings will be transcribed verbatim. Open-ended qualitative responses from questionnaires, researcher observation journal and all CoP documentation will be scrutinised by the primary researcher (JFC) and second researcher (AMH). Responses seeking further categorical information, such as other types of exercise programs provided, will be subjected to content analysis. Data will be extracted on the number and frequency of categories identified within each document. All other responses will be coded and thematically analysed by two researchers and arbitrated by a third researcher based on the realist framework of context, mechanisms and outcome configurations (Pawson & Tilley, 1997; Williams et al., 2013). The analysis of the qualitative data will be assisted by the data management software package QSR NVivo 10 for windows. A reflective, iterative process to determine common repeated patterns of meaning or themes across responses will be undertaken (Miles, Huberman, & Saldana, 2014) and interpreted within the realist framework (Pawson & Tilley, 1997). CoP communication transcripts and observations from researcher and CoP facilitator study journals will be used to inform the survey and interview data. Questionnaires will be administered as previously described in Phase 1.

Data Integration

The reduced qualitative data will be integrated with the quantitative data across Phases 1-3 to aid explanation and to holistically present the results of the study (Creswell & Plano Clark, 2007).

3.3.7 Validity, Reliability and Rigour

Health service research is increasingly utilising both quantitative and qualitative methods in research designs seeking answers to complex problems, such as preventing falls in older people. This integration of complementary methodologies has many advantages in that it can enhance confirmation or corroboration of varying methodologies via triangulation; elaborate or develop analysis, provide richer detail; and initiate new lines of thinking through attention to convergent and divergent findings (Onwuegbuzie & Leech, 2005; Rossman & Wilson, 1985). Credibility will be demonstrated through the participation of two independent researchers in the thematic analysis of all qualitative data. Any disagreement will be resolved by discussion with a

third researcher. Member checking, a process in which participants are provided with opportunity to verify or change the researcher interpretations of collected data (e.g. interview and CoP discussion transcripts) to ensure they have been truly represented, will be undertaken (Creswell & Plano Clark, 2007; Thomas & Magilvy, 2011). The primary researcher and CoP facilitator will keep a journal to record their observations and reflections regarding CoP member participation and evaluation ensuring the identification of any bias and actions to contain it. Confirmability will be established through the use of verbatim quotations to represent the voices of participants (Polit & Beck, 2013). Dependability will be demonstrated through the provision of an audit trail enabling an external researcher to follow the decisions made and mapped by the study researchers. In our study this will be established by describing the purpose of the study, detailing the context, mechanism and outcome configurations of the complex intervention, describing how the data will be collected and analysed, presenting the evaluation findings in a coherent and logical style and reporting both processes and outcomes (Thomas & Magilvy, 2011). The primary researcher will be positioned on the fringe of the CoP providing support as required and connecting the CoP members to falls prevention research evidence and other research experts.

3.4 Discussion

The problem of intervening to prevent falls in a RAC organisation is complex. The recipient population is older, frailer and more cognitively impaired compared with community dwelling older people. The staff are diverse in skill-level and experience and may lack the expertise to translate falls prevention strategies into clinical practice. Individual organisational sites are geographically diverse so there is potential for them to operate as silos and not benefit from each other's workplace knowledge and expertise when dealing with similar complex problems. The culture within RAC organisations may also be lacking in terms of optimal communication, leadership and teamwork as perceived by their own staff (Etherton-Ber, Venturato, & Horner, 2013). The representation of RAC staff members as part of a falls prevention CoP has the potential to enable communication, leadership, idea sharing and collaboration. In harnessing a community of individuals, as opposed to reliance on a single individual, the CoP may have a better chance to become the change agent for falls prevention activity through diverse perspectives and collaboration. The use of a CoP with links to a research team

with relevant expertise may enable the translation of falls prevention evidence into clinical practice through tailoring for the local context. Measuring the impact of a CoP will also augment the current CoP literature. Study strengths include the use of the realist approach to enable the research findings to be robustly evaluated and determine what worked or didn't work in the context of a RAC organisation.

3.4.1 Limitations

Limitations include: the quasi-experimental pre/post design but this will be strengthened by the mixed method data collection from a number of sources. Falls data are known to be underreported in hospital systems when only using incident reporting systems which could mean that falls rates obtained may not reflect the total falls (Hill et al., 2010). However we will also be measuring injurious fall related (fracture) rates for falls that are mandatory to report at RAC sites.

3.5 Conclusion

To our knowledge there is no previous literature that clearly identifies and measures how the actions by members of a CoP could affect falls prevention and falls rates in a RAC organisation and how participation affects its membership. If successful, the actions implemented by a CoP have the potential to improve outcomes for residents in terms of independence and quality of life and empower organisational staff through improved policy and practice. The CoP could then become a value-adding aspect of the organisation.

3.6 References

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