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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 1:

Thesis Introduction and Outline

1.1 Introduction

Falls are a significant concern across the residential aged care (RAC) sector with half its older population falling annually (Burland, Martens, Brownell, Doupe, & Fuchs, 2013; Haralambous et al., 2010; Kerse, Butler, Robinson, & Todd, 2004; Nyman & Victor, 2011; Ray et al., 2005). Preventing falls by older people in RAC may enable them to maintain their independence, enhance their wellbeing and sustain their quality of life. This research partnered staff and residents of a RAC organisation with a university research team. The collaboration aligned with the Australian Government's national initiative of preventing falls among older people (Lord, Sherrington, Cameron, & Close, 2011; National Public Health Partnership, 2004) and international recommendations for embedding research in RAC settings (Verbeek, Zwakhalen, Schols & Hamers 2013).

For an older person the consequences of falling can result in an increased risk of mortality, physical injury, functional decline, depression and anxiety (Morley, 2007; Oliver et al., 2007; Rubenstein, 2006). For older people (residents) who live in RAC facilities the sequela of falling can be devastating with a loss of independence and reduction in their quality of life (Barker, Nitz, Low Choy, & Haines, 2012; Bonner, MacCulloch, Gardner, & Chase, 2007; Oliver et al., 2007). The characteristics of this population are complex and place them in a high falls risk category, as they present with combinations of multiple co-morbidities, age-related systems decline and cognitive impairment. Addressing this complexity is a challenge for care providers and researchers when implementing and evaluating falls prevention interventions (Craig et al., 2008).

Recommendations for effective evidence-based falls prevention interventions in RAC settings include the supplementation of vitamin D and medication review by a pharmacist (Cameron et al., 2012; Flicker et al., 2005; Nazir et al., 2013, Zermansky et

al., 2006). Multifactorial interventions delivered by a multidisciplinary team incorporating staff education, resident exercise programs and environmental modification show inconclusive outcomes in reducing falls rates indicating a problem exists (Cameron et al., 2012; Quigley et al., 2010). Despite this, adopting a multifactorial approach to falls prevention is still considered as industry best practice in the absence of further specific evidence (Australian Commission on Safety and Quality in Healthcare, 2009). The RAC population is known to have high levels of activities of daily living disability (83%) and cognitive impairment (68%) (Onder et al., 2012) suggesting that in terms of falls prevention, this population may have difficulty adopting falls prevention strategies independently. Therefore staff and health care systems providing care to this population may need to play a significant proxy role in providing falls prevention interventions for those at risk.

At a site or organisational level the occurrence of falls can also lead to complaints and in some cases litigation, thus careful guidance in the adoption of evidence-based falls prevention interventions is necessary (Oliver et al., 2007). This in turn requires access to evidence-based falls prevention knowledge, followed by systematic inquiry, synthesis and adaptation. This tailoring of evidence-based falls prevention knowledge underpins its translation into relevant practice (Graham et al., 2006; Haines & Waldron, 2011; Tetroe, Graham, & Scott, 2011). However undertaking this translation process in its entirety requires collaboration, research expertise and clinical and managerial skills, all of which may not be present within the RAC workforce expected to undertake this process (Haines & Waldron, 2011). This is confirmed by studies describing the RAC workforce as one of diminishing expertise due to lower levels of recruitment, retention of professional staff and limited workplace learning opportunities (Grealish, Bail, & Ranse, 2010; O'Connell, Ostaszkiwicz, Sukkar, & Plymat, 2008). Therefore finding ways that partner research expertise regarding falls prevention, with authentic expertise in RAC may be an effective way to approach the translation of research evidence into practice. This "translation to action change" process has been proposed to improve resident care outcomes (Fixsen, Scott, Blase, Naoom, & Wagar, 2011; Tolson, Lowndes, Booth, Schofield, & Wales, 2011).

An innovation that is yet to be applied to the problem of falls prevention in the RAC sector that may address these issues is the formation of a community of practice

(CoP). A CoP is a group of like-minded people with a mutual interest in a topic who get together to share their expertise, and then innovate and facilitate change in pursuit of a common goal (Conklin et al., 2011; Li et al., 2009; Ranmuthugala, Cunningham, et al., 2011; Wenger, 1998), in this case falls prevention. CoPs have emerged across the healthcare sector as a potential means of improving knowledge, learning, clinical practice and patient care, however, there is a lack of empirical evidence to support these claims (Li et al., 2009; Ranmuthugala, Plumb, et al., 2011; Tolson et al., 2011). Whilst a variety of descriptive guidelines for establishing and operating CoPs are documented in the literature, there has been limited robust research regarding their impact and whether they achieved improved outcomes for patients. Therefore more studies measuring CoP outcomes and impact are required (Li et al., 2009; Ranmuthugala, Plumb, et al., 2011).

The purpose of this research was to evaluate the impact of a falls prevention CoP on falls outcomes in a RAC setting. The research was, to our knowledge, unique. Firstly it evaluated whether a CoP, as an intervention at organisational level, could address falls prevention within a RAC setting. Secondly, it conducted a comprehensive evaluation of CoP impact at three levels: individual member level, site level and organisation level. A mixed methods design (Creswell & Plano Clark, 2007; Onwuegbuzie & Leech, 2005) framed by a realist approach (Hewitt, Sims & Harris, 2012; Pawson & Tilley, 1997; Schierhout et al., 2013) was undertaken to gain a better understanding of how CoP interventions were influenced by current conditions (contexts) in triggering (mechanisms) the observed outcomes. These “context-mechanism-outcome” (CMO) configurations served as a framework for identifying what worked, for whom, how and under what conditions.

1.2 Organisation of Chapters

Chapter 2

Chapter 2 reports a systematic review and meta-analysis of studies that investigated the effect of complex falls prevention interventions delivered at two or three levels in a RAC population on falls outcomes.

This chapter is based on two manuscripts; a published systematic review protocol and a systematic review and meta-analysis prepared for submission to a peer reviewed journal.

Francis-Coad, J., Etherton-Beer, C., Naseri, C., & Hill, A-M. (2017). The effect of complex falls prevention interventions on falls in residential aged care settings: A systematic review protocol. *JBI Database of Systematic Reviews and Implementation Reports*, 15(2), 236-244. doi: 10.11124/JBISRIR-2016-002938

Francis-Coad, J., Etherton-Beer, C., Burton, E., & Hill, A-M. The effect of complex falls prevention interventions on falls in residential aged care settings: A systematic review.

Chapter 3

Chapter 3 describes the methodology selected to address the research aims in the form of a study protocol. The mixed methods design of the research program is described in detail.

This chapter is based on a published manuscript:

Francis-Coad, J., Etherton-Beer, 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

Chapter 4

Chapter 4 describes and evaluates the establishment and operation of a falls prevention CoP across 13 geographically diverse sites of the RAC organisation.

This chapter is based on a published manuscript:

Francis-Coad, J., Etherton-Beer, C., Bulsara, C., Nobre, D., & Hill, A-M. (2016). Can a web-based community of practice be established and operated to lead falls prevention activity in residential care? *Geriatric Nursing*, Advance on line publication, <http://dx.doi.org/10.1016/j.gerinurse.2016.09.001>

Chapter 5

Chapter 5 describes the preparation and conduction of a falls prevention activity audit led by the CoP members across the 13 participating RAC sites. This audit benchmarked the organisation's current falls prevention practices against evidence-based guidelines, with the CoP identifying gaps in practice to be addressed at resident, site and organisational levels.

This chapter is based on a published manuscript:

Francis-Coad, J., Etherton-Ber, C., Bulsara, C., Nobre, D., & Hill, A-M. (2016).

Using a community of practice to evaluate falls prevention activity in a residential aged care organisation: A clinical audit. *Australian Health Review*, 41(1), 13-18. doi:10.1071/AH15189

Chapter 6

Chapter 6 describes the evaluation of CoP activities using a realist approach. Results are presented that explain how the CoP facilitated the translation of falls prevention evidence into practice, for whom, and under what conditions.

This chapter is based on a manuscript submitted for publication:

Francis-Coad, J., Etherton-Ber, C., Bulsara, C., Blackburn, N., Chivers, P., & Hill, A-M. What worked translating evidence into practice: A realist evaluation of the impact of a falls prevention community of practice. (*Ref. No: BHSR-D-16-00388*. Under peer review at journal)

A further co-authored published manuscript from a supervised student, awarded first class honours, contributes to this chapter:

Hang, J., Francis-Coad, J., Burro, B., Nobre, D., & Hill, A-M. (2016). Assessing knowledge, motivation and perceptions about falls prevention among care staff in a residential aged care setting. *Geriatric Nursing*, 37, 464-469. doi:10.1016/j.gerinurse.2016.06.019

Chapter 7

Chapter 7 describes the evaluation of the impact of operating a falls prevention CoP on falls outcomes across the RAC organisation.

This chapter is based on a manuscript accepted for publication:

Francis-Coad J., Haines T., Etherton-Ber C., Nobre D., & Hill A-M. (in press).

Evaluating the impact of operating a falls prevention community of practice on falls in a residential aged care setting. *Journal of Clinical Gerontology and Geriatrics*

Chapter 8

Chapter 8 synthesises the findings from this research and discusses these findings in relation to the research aims. The research findings are positioned in context of relevant studies. Strengths and limitations of the research and implications for practice and future research are also presented.

1.3 References

- Australian Commission on Safety and Quality in Healthcare. (2009). *Implementation guide for preventing falls and harm from falls in older people: Best practice guidelines for Australian hospitals and residential aged care facilities*. Retrieved from <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/>
- Barker, A. L., Nitz, J. C., Low Choy, N. L., & Haines, T. P. (2012). Mobility has a non-linear association with falls risk among people in residential aged care: An observational study. *Journal of Physiotherapy*, 58(2), 117-125. doi: 10.1016/s1836-9553(12)70092-9
- Bonner, A., MacCulloch, P., Gardner, T., & Chase, C. W. (2007). A student-led demonstration project on fall prevention in a long-term care facility. *Geriatric Nursing*, 28(5), 312-318. doi: 10.1016/j.gerinurse.2007.04.014
- Burland, E., Martens, P., Brownell, M., Doupe, M., & Fuchs, D. (2013). The evaluation of a fall management program in a nursing home population. *The Gerontologist*, 53(5), 828-838. doi: 10.1093/geront/gns197
- Cameron, I. D., Murray, G. R., Gillespie, L. D., Robertson, M. C., Hill, K. D., Cumming, R. G., & Kerse, N. (2012). Interventions for preventing falls in older people in nursing care facilities and hospitals. *The Cochrane Database of Systematic Reviews* 1(3). doi:10.1002/14651858.CD005465.pub3.
- Conklin, J., Kothari, A., Stolee, P., Chambers, L., Forbes, D., & Le Clair, K. (2011). Knowledge-to-action processes in SHRTN collaborative communities of practice: A study protocol. *Implementation Science*, 6, 12. doi: 10.1186/1748-5908-6-12
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: The new Medical Research Council guidance. *British Medical Journal*, 337, 979-983. doi:10.1136/bmj.a1655
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Los Angeles, CA: Sage.
- Fixsen, D., Scott, V., Blase, K., Naoom, S., & Wagar, L. (2011). When evidence is not enough: The challenge of implementing fall prevention strategies. *Journal of Safety Research*, 42(6), 419-422. doi: 10.1016/j.jsr.2011.10.002

- Flicker, L., MacInnis, R. J., Stein, M. S., Scherer, S. C., Mead, K. E., Nowson, C. A., Wark, J. D. (2005). Should older people in residential care receive vitamin D to prevent falls? Results of a randomized trial. *Journal of the American Geriatrics Society*, 53(11), 1881-1888. doi:10.1111/j.1532-5415.2005.00468.x
- Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions*, 26(1), 13-24. doi: 10.1002/chp.47
- Grealish, L., Bail, K., & Ranse, K. (2010). 'Investing in the future': Residential aged care staff experiences of working with nursing students in a 'community of practice'. *Journal of Clinical Nursing*, 19, 2291-2299. doi:10.1111/j.1365-2702.2009.03133.x
- Haines, T. P., & Waldron, N. G. (2011). Translation of falls prevention knowledge into action in hospitals: What should be translated and how should it be done? *Journal of Safety Research*, 42(6), 431-442. doi: 10.1016/j.jsr.2011.10.003
- Haralambous, B., Haines, T. P., Hill, K., Moore, K., Nitz, J., & Robinson, A. (2010). A protocol for an individualised, facilitated and sustainable approach to implementing current evidence in preventing falls in residential aged care facilities. *BMC Geriatrics*, 10(1), 8. doi:10.1186/1471-2318-10-8
- Hewitt, G., Sims, S., & Harris, R. (2012). The realist approach to evaluation research: An introduction. *International Journal of Therapy and Rehabilitation*, 19(5), 251. doi:10.12968/ijtr.2012.19.5.250
- Kerse, N., Butler, M., Robinson, E., & Todd, M. (2004). Fall prevention in residential care: A cluster, randomized, controlled trial. *Journal of the American Geriatrics Society*, 52(4), 524-531. doi: 10.1111/j.1532-5415.2004.52157.x
- Li, L. C., Grimshaw, J. M., Nielsen, C., Judd, M., Coyte, P. C., & Graham, I. D. (2009). Use of communities of practice in business and health care sectors: A systematic review. *Implementation Science*, 4, 27. doi: 10.1186/1748-5908-4-27
- Lord, S. R., Sherrington, C., Cameron, I. D., & Close, J. C. (2011). Implementing falls prevention research into policy and practice in Australia: Past, present and future. *Journal of Safety Research*, 42(6), 517-520. doi: 10.1016/j.jsr.2010.11.008
- Morley, J. E. (2007). Falls and fractures. *Journal of the American Medical Directors Association*, 8(5), 276-278. doi:10.1016/j.jamda.2007.04.008
- National Public Health Partnership (NPHP). (2004). *The national falls prevention for older people plan: 2004 onwards*. Retrieved from www.health.vic.gov.au/archive/archive2014/nphp/.../sipp/fallplan.pdf

- Nazir, A., Mueller, C., Perkins, A., & Arling, G. (2012). Falls and nursing home residents with cognitive impairment: New insights into quality measures and interventions. *Journal of the American Medical Directors Association, 13*(9), 819e1-819e6. doi:10.1016/j.jamda.2012.07.018
- Nyman, S. R., & Victor, C. R. (2011). Older people's recruitment, sustained participation, and adherence to falls prevention interventions in institutional settings: A supplement to the Cochrane systematic review. *Age and Ageing, 40*(4), 430-436. doi:10.1093/ageing/afr016
- O'Connell, B., Ostaszkiwicz, J., Sukkar, K., & Plymat, K. (2008). The tri-focal model of care: Advancing the teaching-nursing home concept. *International Journal of Nursing Practice, 14*(6), 411-417. doi:10.1111/j.1440-172X.2008.00714.x
- Oliver, D., Connelly, J. B., Victor, C. R., Shaw, F. E., Whitehead, A., Genc, Y., Gosney, M. A. (2007). Strategies to prevent falls and fractures in hospitals and care homes and effect of cognitive impairment: Systematic review and meta-analyses. *British Medical Journal, 334*(7584), 82-87. doi:10.1136/bmj.39049.706493.55
- Onder, G., Carpenter, I., Finne-Soveri, H., Gindin, J., Frijters, D., Henrard, J. C., project, S. (2012). Assessment of nursing home residents in Europe: The services and health for elderly in long term care (SHELTER) study. *BMC Health Services Research, 12*(5), 1-10. doi: 10.1186/1472-6963-12-5
- Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology, 8*(5), 375-387. doi: 10.1080/13645570500402447
- Pawson, R., & Tilley, N. (1997). *Realistic evaluation*. London: Sage.
- Quigley, P., Bulat, T., Kurtzman, E., Olney, R., Powell-Cope, G., & Rubenstein, L. (2010). Fall prevention and injury protection for nursing home residents. *Journal of the American Medical Directors Association, 11*(4), 284-293. doi:10.1016/j.jamda.2009.09.009
- Ranmuthugala, G., Cunningham, F. C., Plumb, J. J., Long, J., Georgiou, A., Westbrook, J. I., & Braithwaite, J. (2011). A realist evaluation of the role of communities of practice in changing healthcare practice. *Implementation Science, 6*, 49. doi: 10.1186/1748-5908-6-49
- Ranmuthugala, G., Plumb, J. J., Cunningham, F. C., Georgiou, A., Westbrook, J. I., & Braithwaite, J. (2011). How and why are communities of practice established in the healthcare sector? A systematic review of the literature. *BMC Health Services Research, 11*, 273. doi: 10.1186/1472-6963-11-273
- Ray, W. A., Taylor, J. A., Brown, A. K., Gideon, P., Hall, K., Arbogast, P., & Meredith, S. (2005). Prevention of fall-related injuries in long-term care: A randomized controlled trial of staff education. *Archives of Internal Medicine, 165*(19), 2293-2298. doi: 10.1001/archinte.165.19.2293

- Rubenstein, L. Z. (2006). Falls in older people: Epidemiology, risk factors and strategies for prevention. *Age and Ageing*, 35(2), ii37-ii41. doi: 10.1093/ageing/afl084
- Schierhout, G., Hains, J., Si, D., Kennedy, C., Cox, R., Kwedza, R., Lonergan, K. (2013). Evaluating the effectiveness of a multifaceted, multilevel continuous quality improvement program in primary health care: Developing a realist theory of change. *Implementation Science*, 8(1), 119. doi:10.1186/1748-5908-8-119
- Tetroe, J. M., Graham, I. D., & Scott, V. (2011). What does it mean to transform knowledge into action in falls prevention research? Perspectives from the Canadian Institutes of Health Research. *Journal of Safety Research*, 42(6), 423-426. doi: 10.1016/j.jsr.2011.08.005
- Tolson, D., Lowndes, A., Booth, J., Schofield, I., & Wales, A. (2011). The potential of communities of practice to promote evidence-informed practice within nursing homes. *Journal of the American Medical Directors Association*, 12(3), 169-173. doi: 10.1016/j.jamda.2010.08.010
- Verbeek, H., Zwakhalen, S. M., Schols, J. M., & Hamers, J. P. (2013). Keys to successfully embedding scientific research in nursing homes: A win-win perspective. *Journal of the American Medical Directors Association*, 14(12), 855-857. doi: 10.1016/j.jamda.2013.09.006
- Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems Thinker*, 9(5), 2-3.
- Zermansky, A. G., Alldred, D. P., Petty, D. R., Raynor, D. K., Freemantle, N., Eastaugh, J., & Bowie, P. (2006). Clinical medication review by a pharmacist of elderly people living in care homes - randomised controlled trial. *Age and Ageing*, 35(6), 586-591. doi:10.1093/ageing/afl075