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Mechanisms which help explain implementation of evidence-based practice in residential aged care facilities: a grounded theory study

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Abstract

BACKGROUND: The context for the study was a nation-wide programme in Australia to implement evidence-based practice in residential aged care, in nine areas of practice, using a wide range of implementation strategies and involving 108 facilities. The study drew on the experiences of those involved in the programme to answer the question: what mechanisms influence the implementation of evidence-based practice in residential aged care and how do those mechanisms interact?

METHODS: The methodology used grounded theory from a critical realist perspective, informed by a conceptual framework that differentiates between the context, process and content of change. People were purposively sampled and invited to participate in semi-structured interviews, resulting in 44 interviews involving 51 people during 2009 and 2010. Participants had direct experience of implementation in 87 facilities, across nine areas of practice, in diverse locations. Sampling continued until data saturation was reached. The quality of the research was assessed using four criteria for judging trustworthiness: credibility, transferability, dependability and confirmability.

RESULTS: Data analysis resulted in the identification of four mechanisms that accounted for what took place and participants' experiences. The core category that provided the greatest understanding of the data was the mechanism On Common Ground, comprising several constructs that formed a 'common ground' for change to occur. The mechanism Learning by Connecting recognised the ability to connect new knowledge with existing practice and knowledge, and make connections between actions and outcomes. Reconciling Competing Priorities was an ongoing mechanism whereby new practices had to compete with an existing set of constantly shifting priorities. Strategies for reconciling priorities ranged from structured approaches such as care planning to more informal arrangements such as conversations during daily work. The mechanism Exercising Agency bridged the gap between agency and action. It was the human dimension of change, both individually and collectively, that made things happen.

CONCLUSIONS: The findings are consistent with the findings of others, but fit together in a novel way and add to current knowledge about how to improve practices in residential aged care. Each of the four mechanisms is necessary but none are sufficient for implementation to occur.

Keywords

grounded, explain, study, help, facilities, which, mechanisms, care, aged, residential, practice, evidence, implementation, theory

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The findings are consistent with the findings of others, but fit together in a novel way and add to current knowledge about how to improve practices in residential aged care. Each of the four mechanisms is necessary but none are sufficient for implementation to occur.

Keywords

Aged care, evidence-based practice, grounded theory, implementation science, nursing homes, qualitative research.

What is already known about the topic?

- How to implement 'evidence' in residential aged care is a relatively under-research area of knowledge translation.
- There is no prescription for implementing evidence-based practice. No strategies to change practices work all the time.
- Previous research has tended to focus on how to change the practices of individuals rather than answer the question of how context influences implementation strategies.

What this paper adds

- The findings include a core category (mechanism) and three other mechanisms. The four mechanisms, and the relationships between the mechanisms, provide a means of understanding and explaining how implementation took place (or didn't).
- The findings represent a novel way of understanding implementation within residential aged care. Some elements of the findings are consistent with the results obtained by other researchers.
- Each of the four mechanisms is necessary for practice change to occur but none by itself is sufficient for change to occur.

1 Background

This study aims to make a contribution to knowledge about how to implement evidence in residential aged care facilities (nursing homes), an area that is relatively under-researched. Although the concept of evidence-based practice is well established in health care, what is not so well established is 'how to do it' – how to turn the concept into a reality by using the best available evidence to inform current practice. The evidence from the literature indicates that nothing works all the time. According to an oft-quoted phrase there are 'no magic bullets' that can be used in all circumstances (Oxman et al., 1995).

There are many reasons for this, including differing views about what constitutes evidence, the constantly evolving nature of evidence and the often-intractable nature of existing practice. What at first seems so obvious – to base what is done on what has been shown to work best – is surprisingly difficult to achieve. Previous research has tended to focus on how to change the practices of individuals rather than answer the question of how context influences implementation strategies.

Studies undertaken in Australia focusing on evidence-based practice in residential aged care have been limited, generally conducted over short time frames, in small numbers of facilities, in one area of practice. Factors identified in these studies that might influence the uptake of evidence include local leadership (Austin Health, 2006, Fallon et al., 2006, Lyon, 2007), management support (Grieve, 2006, Moore and Haralambous, 2007), organisational structures and systems (Cheek et al., 2004), skills and knowledge of carers (McConigley et al., 2008) and resources (Lindeman et al., 2003, Lyon, 2007, McConigley et al., 2008). Drawing on a broader literature, a review conducted prior to the commencement of this study identified eight factors that may influence

implementation, including context, the nature of the change in practice, the process of implementation and the systems and resources to support implementation (Masso and McCarthy, 2009). However, the factors overlap, little is known about the relationships between factors and much of the research was undertaken in health care rather than residential aged care.

Research on implementing evidence-based practice in residential aged care has been reported from other countries, including the USA (Capezuti et al., 2007, Jones et al., 2004, Resnick et al., 2004), Canada (Timmerman et al., 2007) and the UK (Hockley et al., 2010, O'Halloran et al., 2007). Large-scale research programs are currently underway in Canada (Estabrooks et al., 2009) and Europe (Seers et al., 2012).

Residential aged care in Australia provides care to approximately 185,000 people in 2,760 facilities, of which approximately 60% are not-for-profit and run by religious, community-based or charitable organisations (Australian Institute of Health and Welfare, 2012). The industry is primarily regulated and funded by the Australian Government, catering for older people who are unable to remain in their own homes by providing accommodation and related services such as laundry, meals and cleaning as well as personal care services, nursing care, medical care (by visiting general practitioners) and provision of equipment.

The context for the study was the Encouraging Best Practice in Residential Aged Care (EBPRAC) Program, which aimed to achieve evidence-based improvements in government-subsidised facilities. The program had two funding rounds, the first commencing in late 2007 and the second in late 2008, consisting of 13 two-year projects with an average funding of about \$AUS 1 million per project. One project focused on each of the following areas of practice: pain management, nutrition and hydration, falls

prevention, oral health, use of PRN medications, wound management and infection control. Three projects focused on palliative care and three on behaviour management. Each project consisted of a lead organisation working with a group of facilities, at a total of 108 locations across Australia. The most frequent strategies to implement evidence were payments to participating facilities, education and the use of local facilitators (variously described as champions, link nurses and resource nurses).

All projects adopted a multi-faceted approach to change, with some adopting a 'top down' approach by indicating what should be done, while others used more of a 'bottom up' approach, where staff decided what they would implement and how they implemented it. Residents had little influence on the design and implementation of each project. The best evidence that resident outcomes improved came from projects that focused on behaviour management and prevention (Masso et al., 2011).

The Centre for Health Service Development at the University of Wollongong was funded to conduct an evaluation of the EBPRAC program (Masso et al., 2011). The impetus for undertaking the study reported here arose from the personal interests of the principal researcher and his involvement in the evaluation of the program, and formed the basis of a doctoral thesis. The study and the evaluation proceeded in parallel, with each informing the other.

Conceptual frameworks have been developed to incorporate factors influencing implementation but frameworks specific to residential aged care are limited. For example, a 'contingency model of innovation adoption' developed in Canada (Berta et al., 2005) and a framework from hospitals in the USA adapted for a falls management program in nursing homes (Capezuti et al., 2007). There are some indications that the

Promoting Action on Research Implementation in Health Services (PARIHS) framework could be a useful framework in residential aged care (Perry et al., 2011).

Damschroder et al. (2009) reviewed existing theories and frameworks to develop an 'overarching typology' to guide theory development, incorporating five main constructs: outer setting, inner setting, characteristics of the intervention, characteristics of the people involved and the process of change. A review of the empirical literature derived similar constructs (Durlak and DuPre, 2008). There are many theories that are potentially useful in understanding the implementation of evidence-based practice. Theories should have the ability to explain individual or group behaviour in terms of factors that are modifiable (Eccles et al., 2005). However, there is a general lack of empirical evidence to support many of the theories and developing theory inductively from practice is scarce (Rycroft-Malone, 2007). The available evidence does not lend itself to identifying the relative merits of particular theories (Grol et al., 2007). It was this perspective which largely drove the decision to take an inductive approach to the research, focusing on the perspectives of key players in a major process of change, rather than testing an existing theory.

The ontological perspective of critical realism formed the basis for the research question: what mechanisms influence the implementation of evidence-based practice in residential aged care and what are the relationships between those mechanisms? A mechanism was defined as the structures, powers and relations that are not directly observable but that can be identified through their effects. Mechanisms explain how things work (McEvoy and Richards, 2003, Pawson and Tilley, 1997).

2 Methods

The methods used grounded theory, informed by a well-recognised conceptual framework which recognises the importance and interplay between the context, content and process of change (Pettigrew, 1985, Pettigrew et al., 2001). Theoretical sensitivity was enhanced by the previous experience of the principal researcher as a nurse and manager, together with involvement in the evaluation of the EBPRAC program, which resulted in access to documentation produced by each project and engagement with program stakeholders.

Despite the many variants of grounded theory there are some common elements, which were used in this study: simultaneous data collection and data analysis, constant comparison of data, memo writing, theoretical sampling and continuation of data collection until data saturation was reached. The aim was to identify a process that accounted for most of the data (Charmaz, 2003, Flick, 2009, Schwandt, 2007).

Combination or mixed purposive sampling was undertaken to identify potential participants likely to be 'information-rich' across a diverse range of content (using evidence in different areas of practice), contexts (different facilities and projects) and processes (different implementation strategies), including those with knowledge of extreme or deviant cases (facilities); good or poor performers (intensity sampling); and typical cases (Patton, 2002). Sampling involved communication (usually by phone, sometimes by email) with the lead organisation for each project to identify potential participants who were then approached by email. Two people declined to be interviewed. Fifty-one people participated in 44 interviews, including 35 facility-based staff and 16 people working as members of lead organisations. Of the facility-based staff, 16 were primarily working in a facilitator role and 19 were primarily working in a

managerial role. All except two of the facility staff were registered nurses. The number of participants from each project ranged from two to six.

On average, facility staff had about 12.5 years of experience in residential aged care (median 9 years, range 2 to 35 years) and almost eight years in their current position (median 5 years, range 1 to 35 years). Participants from lead organisations included people contracted to work specifically on the EBPRAC project and senior academics with research interests in aged care. Thirteen had nursing backgrounds and eight had a background in either synthesising the evidence being implemented or using evidence in aged care more broadly. All had experience that included working in residential aged care and/or the area of clinical practice that was the focus of implementation.

Interviews took place between September and December 2009 and between April and November 2010. Except for three interviews conducted by phone for logistical reasons, all interviews were conducted in person at locations determined by participants, primarily at their place of work.

Interviews were semi-structured, starting by asking participants to talk about their role in the project and concluding by asking whether there was anything they would like to add to help the researcher understand how to implement change within residential aged care. The remainder of the interview consisted of some general questions (Table 1), questions seeking clarification of what participants said and questions arising from theoretical sampling. The average time for each interview was 51 minutes, with an average of 43 questions per interview. Theoretical sampling involved re-focusing interview questions or introducing new questions to gain further information about a concept apparent from data analysis.

Table 1 Initial set of interview questions

Element(s) of Pettigrew's framework	Question
Context of change	How important was the project? (Follow up – in what way was the project important and who were the main intended beneficiaries?)
Context of change	How well was (insert) being done prior to the project starting?
Context of change	Was there anything else happening at the same time as the project that helped or hindered changes in (insert)?
Content / Process of change	How has (insert) changed since the project began?
Content of change	To what extent have the changes in practice that the project aimed to achieve been implemented?
Content of change	Do you think the project achieved any benefits (direct or indirect) for either residents or staff?
Content of change	Have the changes been sustained so far? (Follow up – if so, do you think the changes will be sustained into the future?)
Context / Content / Process of change	Why do you think those changes occurred in the way that they did?
	Based on your experience, what would you say were the strengths of the project?
	What would you say were the weaknesses of the project?
	If the project was starting over again, what would you like to see done differently?

Several strategies were used to reduce reactivity and enhance a more equal power-sharing arrangement between interviewer and participants. For example, scheduling interviews at a time and place of the participant's choosing; wording and ordering questions in accordance with replies previously given by respondents.

Forty-three interviews were recorded and transcribed, with notes taken of the remaining interview. Transcribing was done by a professional transcriptionist, using denaturalised transcription (Oliver et al., 2005). Each transcription was compared with the recording to ensure accuracy and generate initial thoughts regarding coding. Each transcript was assigned a code, which identified the role of participants (F for facilitator, L for lead organisation, M for facility manager). Each transcript was imported into NVivo (Version 8) to facilitate data analysis.

The coding structure for data analysis reflected the three levels typically found in grounded theory, influenced by a generic approach developed by Saldana (2009) that includes a combination of coding methods (Table 2).

Table 2 Summary of coding methods

Coding method	Description of method	Use of the method in this study
Initial coding		
Structural coding	Assigns a content-based or conceptual phrase to a piece of text that represents a topic of inquiry.	Used for coding all data in an initial overview.
Descriptive coding	Summarises in a word or short phrase the basic topic of a passage of text.	Used to code for an inventory of contents.
Process coding	Uses gerunds (“ing” words) to connote action in the data.	Used to code data related to processes.
In Vivo coding	Uses a word or short phrase from the actual language in the qualitative data.	Used to attune the researcher to participant language and perspectives.
Intermediate coding		
Axial coding	Use of the content of change, context of change and process of change conceptual framework to organise initial codes.	After transcription and coding of the first 16 interviews the initial codes were organised into a tree structure within NVivo.
Advanced coding		
Theoretical coding	Functions like an umbrella that covers and accounts of codes and categories formulated at earlier stages of coding.	Used to identify mechanisms, including the core or central category.

Memos were written during data analysis to capture thoughts, insights and ideas about the data and the process of analysis.

By the time 39 interviews had been conducted new codes were not being generated and the concepts appeared well developed, indicating that data saturation was close to being achieved. Five further interviews were conducted to confirm this assessment.

Participants continued to describe new events and their experiences of those events right up until the last interview, indicative of descriptive diversity. However, analysis of the transcripts of the five interviews did not add materially to the conceptualisation of the data, indicative of data saturation.

The method for ensuring the quality of the study is attributable to Lincoln and Guba (1985), who suggested trustworthiness as the main criterion of quality and four criteria for judging trustworthiness: credibility, transferability, dependability and confirmability. Strategies for ensuring study quality included use of the literature to enhance sensitivity to the data, constant comparison of data, recruitment of participants with in-depth knowledge of implementation, careful recording and transcription of interviews, prompts for clarification during interviews, data collection across a wide range of settings relevant to the research question and a consistent approach to interviewing.

The research was considered to be low-risk and approved by the University of Wollongong/South Eastern Sydney & Illawarra Area Health Service Human Research Ethics Committee. Oral consent to be interviewed was obtained from each participant.

3 Results

3.1 Core category / main mechanism

The core category that linked all other categories and provided the greatest understanding of the data is *On Common Ground*. A series of factors were identified by participants as important for achieving a common ground for change: conversation, language, how care was framed, how change was framed and whether colleagues were alike or not alike in some way. Participants spoke about the importance of being *On Common Ground* in various ways – ‘being on the same page’, ‘being on board’, ‘being on side’, ‘talking the same language’ – all implying being somewhere in company with others:

It's all the same thing, they're all on the same page, they're all doing the same thing, talking the same language. (51L)

I've had huge changes in approaches to pain management and assessment of pain. So it's interesting that this process, this communal process, staff take from it and use what they know at their own level and start the journey towards going back to school ... By working and talking and communicating as a team, the team members seem to see their roles more clearly and start to watch and learn from each other as well. (34L)

3.1.1 Conversations and a common language

Conversations were linked to *On Common Ground* in two ways: as a means of attaining common ground and as a form of communication between people sharing common ground. The conversations identified by participants as important were characterised by interaction and a focus on some element of practice such as the care of a particular

resident, how to conduct a particular task, the integration of something new into daily practice, some improvement that may have taken place or discussion about how something might work. Conversations could be quite informal and unplanned, but also occurred in more formal, planned situations; for example, as part of the handover between shifts or during small group education sessions. An important feature of conversing about practice was being ready to have conversations at a time when people were ready to talk, rather than necessarily when it was convenient to talk:

We don't do enough formal conferencing, but I'm sort of finding the casual, not the casual but the spontaneous ones, are sometimes better. (15M)

Some participants raised concerns about the ability of facility staff to communicate in spoken or written form, stressing the low level of education of some personal carers and the high number of staff in some facilities for whom English was a second language. The latter was largely an issue of geography, primarily occurring in city-based facilities. The importance of sharing a common language was raised by many participants, not just a common understanding of the English language but also the language of practice:

If you use all kind of current practice kind of language and incorporate that, I think that it all becomes meaningful and people start to use that language with a certain amount of fluency, and they understand what it means ... Language does amazing things for people ... I think it's really critical. (46F)

3.1.2 The framing of care

Participants identified several areas of practice where the same issue was framed in different ways. Behaviour management was framed as an issue of resident need and as an issue of staff and resident safety. Involving residents in domestic activities within a

facility could be framed as an infection control issue, in which case residents should not be engaging in such activities, or as an issue of person-centred care, in which case such activities should be encouraged. Mobilisation of residents was framed as a risk-management issue (residents might fall) or as an issue of promoting resident independence. It was evident from what participants said that framing influenced how staff perceived a change in practice and what they were prepared to do.

The care of residents was often described in terms of what was 'clinical' and what was 'non-clinical', although the boundaries between the two were unclear. For example, the application of moisturiser after showering residents, a key change in the wound management project, is important for maintaining skin integrity, but is not usually considered to be clinical. The main implication of the clinical/non-clinical dichotomy concerned the way staff framed the work they do, with this example referring to registered nurses (Div 1s):

Div 1s are very protective of their status and position and demarcation lines. So the idea of collecting a life story, 'we don't do that'. Is there any reason why it's not a good idea or it's not useful for your care to know more about a person? 'I don't need to'. Well I suggest that it would be useful and valuable if you did. Because it's not clinical, it's not important. Not all Div 1s, but they have been the major blockers.

(33L)

Personal carers were seen as providing non-clinical care, with clinical care the preserve of nursing staff.

The framing of care influenced priority-setting, with some aspects of care considered more important than others. Participants indicated that if there was a poor 'fit' between

a new practice and how care was framed, or if a particular practice was considered to be of lesser importance, it was difficult to achieve implementation.

3.1.3 The framing of change

Participants did not raise, unprompted, the influence of research-based evidence on implementation. Nobody said that research evidence was not important; it simply did not feature strongly in what participants had to say about their experience of the change process. Facility staff mentioned particular evidence and sources of evidence they were familiar with, but this was usually based on their personal interest in an area of practice rather than a systematic approach to using evidence.

Participants expressed the view that more important than the evidence *per se* were answers to questions such as ‘Does the change make sense?’ and ‘Will the change work?’:

I think people need to know what the benefit is to themselves and what the benefit is to the people they're looking after. So if you can reach into people's psyche to give them the reasoning for how and why that is being so much more helpful, because that's what their motivation is anyway, I think that's key in them thinking about being different. Maybe being different is about seeing the success of doing something differently. I think you really have to see, you have to know what the reasoning is behind the change and if that matches what you think makes sense to good care and help, that will make a difference. (3M)

Participants themselves used the term ‘making sense’, but also used terms such as ‘working things out’, ‘putting the pieces together’ or ‘making the connections’. When the term ‘evidence’ was used by facility staff it was more likely to be framed in terms of

locally generated evidence or evidence that could be linked in some way to the needs of residents, rather than evidence from research:

All they can see is how it's going to work for them in a practical sense, not the philosophical stuff. (31F)

Seeing the benefits of change and understanding how actions can have certain consequences influenced understanding of whether a change made sense and whether it would work.

3.1.4 Homophily

Homophily is the tendency of individuals to associate and form links with similar people; or, in more colloquial terms, 'birds of a feather flock together' (Lazarsfeld and Merton, 1954). Examples of lack of homophily were evident in the inability of some staff to engage with those who were different to them in some way. The main issue regarding homophily concerned occupational groups, with staff valuing input from someone they saw as their peer:

The staff took it on board and embraced it. It was coming from me and I was one of them. (14F)

Similarities between staff such as gender and background assisted the attainment of common ground. Likewise, when staff were different in some way, such as by age or by occupation, it could be more difficult to be *On Common Ground*.

3.2 Other mechanisms

Three other mechanisms were identified from data analysis:

- *Reconciling Competing Priorities*

- *Learning by Connecting*
- *Exercising Agency*

3.2.1 Reconciling Competing Priorities

Participants described facilities as busy places, where anything new had to compete with an existing set of priorities:

I think in a carer's busy world of needing to look after the hygiene of people, things like continence, nutrition, wound care, mobility were all an accepted priority. And mouth care could be skipped. So there were problems because of that. (3M)

The mechanism by which this took place is conceptualised as *Reconciling Competing Priorities*. Participants used terms such as 'tension', 'conflict' and 'competing' to describe any sense of competition between priorities. There was great consistency in the way they referred to an environment with not enough resources to do what, in their view, needed to be done.

Many of the changes to resident care were subtle and small in scale:

A lot of it is very subtle, subtle changes ... there were lots of little things ... it's sort of those little things that can make a difference. (36L)

A drink of water stops lots of things. It stops urinary tract infections, skin tears, constipation and falls and things, low blood pressure has stopped – it is such an important thing to do. (40F)

The changes largely occurred during one-to-one interactions between staff and residents across all shifts, and were not easily directed or controlled. Examples included use of food supplements, non-pharmacological interventions for pain management and

use of high-fluoride toothpaste for brushing teeth. Changes were also made to the structure of care, including new tools for assessing residents, use of behaviour charts and use of end-of-life care pathways. The changes to resident care were not conducive to measurement; hence participants could not quantify the extent to which changes had been implemented.

The issues of concern regarding implementation were not so much due to the change itself (because most changes were relatively simple) but the context within which change was taking place:

It is hard to keep things going, other things happen. Life gets busy. We went to electronic nursing care plans and progress notes and that took a lot of our time. Things keep happening all the time so you can't spread everywhere. (6F)

Change comes from two sources. One is the residents themselves because every time a new resident comes in the routine has to be changed ... there's also the changes brought by new members into the work team so there's that group dynamics, the testing of the group that's going on out there until that member's accepted so those changes are out there for them all the time. Then there's the changes enforced on us from above. (42M)

Considered in isolation, some new practices did not appear particularly time-consuming but the 'fitting in' to existing routines could be time-consuming.

Participants spoke about priorities based on rank (some things should be done first), importance (some things were more important) and time (some things were too time-consuming). Competing priorities were diverse:

- Different priorities between what was seen as clinical care and what was seen as non-clinical care.
- The need to follow a routine while at the same time being flexible in responding to resident needs.
- Priority for prevention versus priority for management (e.g. wounds).
- Local priorities versus corporate priorities, particularly regarding documentation, where the emphasis was on standardisation across facilities owned by the one organisation.

As one participant described it:

I can see the person-centeredness and talking about the person being the centre of it and then other times I see that it's much more the task that they've got to accomplish for the day. (13F).

Reconciling Competing Priorities took place in various ways, more than one of which could occur at the same time:

- Changing the way care was framed, which occurred primarily with attempts to improve behaviour management.
- Having conversations during the course of daily work to talk about competing priorities and how to reconcile them.
- Trying out a proposed new practice to see how it might work, including how it might fit in with existing practices.
- Making a decision to incorporate whatever was new at a particular milestone, at regular intervals or for all residents at set times.

Changes that could be incorporated into existing systems and structures became routine more quickly than those that could not.

3.2.2 Learning by Connecting

Participants described learning as a process of making connections, rather than the transmission of information from one person to another:

- Connecting new knowledge with existing knowledge.
- Connecting new knowledge with existing practice.
- Thinking 'outside the square' to connect with additional knowledge.
- Making a connection between actions and outcomes.

The process of connecting was described in various ways, such as having a pathway from theory to practice, 'relating' to something or someone (e.g. a particular resident), 'grasping' a link between action and outcome, 'worked it out in their heads', placing pieces of knowledge in a 'big picture' jigsaw puzzle, 'the connection of knowing', 'tying into', 'seeing the correlation between', 'linking actions to benefits', 'make those connections', 'putting the pieces together' and 'filling the gap'. This mechanism is conceptualised as *Learning by Connecting*.

Learning by Connecting could be separated in space and time: some connections were not always immediately obvious, while others could be made with a past event. It was a participatory process that occurred in the workplace:

It's finding out what knowledge and skills they have and what resources they've got and drawing all those together ... we actually approached it from not us telling them things, it was asking them to tell us what the problems were and then building upon that ... I think it's about demystifying evidence-based practice, it's about relating it to

what they do know in their settings. I think that's probably been one of the biggest lessons learnt. (23L)

It's when you got to the practicalities of how it could help them in their work ... If you ask me when did they get it, that's when I knew they got it, they went off and they talked to residents, residents' families, gathered information, they came back and sat in a room and explained behaviour and I could see that they understood what we were doing. And then they could develop strategies there. (26L)

Participants referred to various forums with the potential for learning – a small-group education session, a mentoring session, a formal case conference, an informal review of resident care, the handover between shifts or a conversation:

That morning chat. We try not to talk only about work but it's a really good time to brainstorm ... it's 10 minutes when everybody starts arriving, we just start talking and we've solved some problems at that time. (15M)

Nurses did what they were directed to do but didn't really have a full understanding of why. The case conferencing actually gave them insight into why. (42M)

It did not automatically follow that 'making connections' resulted in changes to staff behaviour or practice, but without *Learning by Connecting* there was no understanding of why and how change should take place. New knowledge was often about refinements to existing practice; hence, *Learning by Connecting* was also about connecting what may initially have been thought to be new, but was in fact partially in place already.

Although many of the changes were quite minor, there had to be recognition in the first place that something needed to be done, or that something could be done, to bring about an improvement. There were instances where *Learning by Connecting* was enabled by

someone, usually external to a facility, bringing a fresh perspective to a familiar situation or facilitating staff to reflect on their practice:

[because] when you're constantly seeing something day in and day out, you don't always see how things could be made better. It's just another set of eyes. (1M)

An important form of *Learning by Connecting* took place when staff connected their actions with the benefits of those actions, in one of three ways:

- Seeing the benefits in a tangible way, usually in the form of benefits to residents.
- Trying something out to see if it works.
- Using some form of auditing or data collection and then considering the implications of the results.

According to participants, the most influential was seeing the benefits for residents:

I think the staff on the ground, the evidence for them is what they see in front of them, so if you can get a win on the board early and show them quite clearly going through that needs-based problem-solving cycle is actually going to make their work a little bit easier. If you can do that once, they're more likely to try it again. So the evidence for them is that hands on - let me show you how this works. I think that's extremely important to them, and that's the clincher. They're more willing to try it and try even in a different way – like they'll try new things if they know that that thing worked. I think that's really, really, important. I have to admit, I don't think in everyday work routine in aged care, evidence really means much of anything to those who are actually doing the hands-on stuff. (29L)

Examples of ‘seeing the benefits’ included wounds healing after a long period of not healing, changed behaviour on the part of a resident who became pain-free and visible improvements in oral-health status:

Trying something out was indicative of the iterative nature of implementation: people learnt and were therefore willing to try things out, or were willing to try something and then learnt from what they had tried. Trying out was a practical means of connecting new knowledge with existing practice and knowledge.

3.2.3 Exercising Agency

The mechanism *Exercising Agency* encompassed willingness to act, beliefs, capability to act and decisions to act. In this context, the word ‘act’ refers not only to the provision of direct care, but also to other examples such as sharing knowledge, initiating conversations about resident care or reviewing resident care.

Willingness to act

Participants described the willingness of people to act using terms such as ‘willingness’, ‘motivation’, ‘commitment’, ‘enthusiasm’, ‘eagerness’, ‘being keen’, ‘being receptive’ and ‘passionate’. This willingness was largely inherent in the attitudes of staff, with the two main influencing factors identified by participants being an interest in a particular area of practice or a passion for the care of older people. Participants perceived that staff were willing to act for a variety of other reasons – because they believed in the benefits of a change (beliefs about consequences), because they had increased confidence in their own capabilities, they were influenced to act by their peers or the change ‘made sense’ to them. Participants did not describe many instances of overt resistance, but when

resistance did occur it was primarily due to unwillingness to act, rather than inability to act.

Beliefs about consequences and capabilities

Beliefs about consequences generally involved consequences – usually benefits – for residents and, less frequently, consequences for staff or systems of work. When participants referred to beliefs about consequences it was generally framed in terms of the positive influence of positive benefits:

I think the key thing was they started seeing results. They started seeing changes.

(2F)

Within a week or two they could see positive impact, so that then reinforced [that] what they were doing was right. (5L)

The importance of beliefs about consequences is illustrated by comments such as ‘it was like the light went on’ (23L) and ‘that’s the clincher’ (29L).

Beliefs about capabilities also exerted a positive influence, with the most frequent terms used by participants being increased confidence and empowerment:

I think it’s empowering the next level of staff, and I think that’s bringing about the change ... confidence has come out of the EBPRAC. And my confidence too, so go for it.

(30M)

Much of the data regarding beliefs about capabilities is indicative of self-efficacy:

‘efficacy beliefs are the foundation of human agency’ (Bandura, 2001, p 10).

Capability to act

Capability to act was a feature of *Exercising Agency*, both individually and collectively.

Participants identified some of the knowledge and skills required for *Exercising Agency*: skills in both English and the language of practice, the ability to use certain tools and the ability to interact with colleagues. The participatory nature of learning, daily work and the exercise of agency relied on good oral communication skills.

Facility-based participants spoke about the value of working with people from lead organisations who made them feel that they were not working in isolation:

We aren't doing it in isolation, which we were before. (30M)

So you're not standing alone ... It's everybody getting the same information. I think that's been about the best process. (37F)

Collective agency was usually expressed by talking about teamwork, with participants referring to using the skills of more than one person, cooperating together and involving people able to influence others:

It is definitely about getting enough people of influence in a team. (48M)

Organisational capability

The main issues regarding organisational capability were documentation systems, accreditation and the availability of resources. The capacity to change was quite limited, with participants referring to the need to implement change in small, incremental steps. There were considerable variations in organisational type, including variations in size, business model, ownership and corporate structure. There were no discernible patterns in terms of how these variables influenced organisational capability.

Distributed leadership

Leadership came from many sources, including facility managers, facilitators, quality managers, registered nurses, enrolled nurses, personal carers and allied health staff, some in formal positions, others with no formal role. Managers played a key role in providing support for implementation:

If they don't have supportive management at any level, it's a dead duck in the water.

(33L)

According to participants, what was important was that there was more than one leader, with the ability to influence events dispersed throughout a facility. Although participants did not use the term 'distributed leadership', the concept was apparent in the way they recounted the events and experiences of implementation, particularly that leadership is a social process involving more than one person (Bolden, 2011).

Deciding to act

Implementation relied on frequent, small-scale decisions, supported by interaction between staff – conversing, reviewing, reflecting, trying out – indicating that there needed to be a degree of common ground between those involved in decision-making. Participants described a situation where it was not usually possible to separate decisions about new practices from decisions about the overall care of residents. The people regarded as having the best decision-making skills were registered nurses but many participants indicated that there were insufficient numbers of them, with insufficient time, to apply those skills.

4 Discussion

The results include a core category, *On Common Ground*, which links with three other mechanisms and provides the greatest understanding of the data. Figure 1 provides a schematic representation of the four mechanisms, indicating how they fit together, with each 'in contact' with the other and *On Common Ground* providing the foundation.

Figure 1 Cumulative effect of the four mechanisms

The results indicate that implementation did not result from a simple set of causal links; the relationships between the mechanisms were more subtle than that, best described

as ‘patterns of association’ (Pettigrew et al., 1992). Table 3 summarises the main ways in which the core category influenced the other mechanisms, reading across the rows in the table. In addition, there were also links between all other combinations of mechanisms, summarised in Figure 2.

Social interaction was a feature of all four mechanisms, in the form of ‘common ground’, as a means of reconciling competing priorities, as a process of learning and in the form of distributed leadership and collective agency. *Learning by Connecting* was strengthened by a common ground for learning and as learning took place it helped to build common ground. The introduction of something new was easier if common ground had been established and learning had taken place. *On Common Ground* established the basis for collective agency: the use of a common language, with some commonalities around how care and changes to care were framed.

Table 3 Relationships between core category and other mechanisms

Aspect of core category: <i>On Common Ground</i>	Other mechanisms		
	<i>Learning by Connecting</i>	<i>Reconciling Competing Priorities</i>	<i>Exercising Agency</i>
Common ground ...	<ul style="list-style-type: none"> ▪ facilitated learning ▪ helped to develop a sense of identity 	<ul style="list-style-type: none"> ▪ underpinned the process by which people sought to incorporate new practices into facilities’ daily life 	<ul style="list-style-type: none"> ▪ established the basis for collective agency ▪ provided a basis for distributed leadership ▪ provided a basis for decision-making
Conversing about practice ...	<ul style="list-style-type: none"> ▪ was an important form of learning 	<ul style="list-style-type: none"> ▪ was an avenue for working out how to incorporate a new practice into daily work ▪ was a way of talking about competing priorities and how to reconcile priorities 	<ul style="list-style-type: none"> ▪ was a means of deciding what to do
A common language (English, language of practice, a set of tools) ...	<ul style="list-style-type: none"> ▪ promoted learning by connecting 	<ul style="list-style-type: none"> ▪ facilitated the reconciling of competing priorities 	<ul style="list-style-type: none"> ▪ influenced the exercise of agency, individually and collectively

Aspect of core category: <i>On Common Ground</i>	Other mechanisms		
	<i>Learning by Connecting</i>	<i>Reconciling Competing Priorities</i>	<i>Exercising Agency</i>
The framing of care ...	<ul style="list-style-type: none"> could inhibit learning 	<ul style="list-style-type: none"> influenced what was seen as important and not important 	<ul style="list-style-type: none"> influenced what staff were prepared to do influenced resistance to change
The framing of change (changes made sense and would work) ...	<ul style="list-style-type: none"> influenced learning 	<ul style="list-style-type: none"> influenced the priority given to the change in practice 	<ul style="list-style-type: none"> influenced willingness to act influenced beliefs about consequences

Figure 2 Relationships between mechanisms

4.1 Interpretation and context of the results

The four mechanisms identified in this study are novel, but each contains elements that are consistent with the findings from other research, although little of this research has taken place in residential aged care.

Other researchers have arrived at a conceptualisation of common ground, and identified its importance in other settings (Kuziemsky and Varpio, 2010, Reay et al., 2008).

Research in Canada into the use of knowledge about dementia-care practices by personal support workers developed a middle-range theory called 'Figuring it Out in the Moment', with four phases of decision-making and action: melding, contextualising, trialling and appraising (Janes et al., 2008). Contextualising is characterised by three questions: what is best for me, what is best for my resident and what is possible? 'Figuring it Out in the Moment' thus has some similarities with the way participants described the framing of change by staff.

Facilities exhibited features of complex adaptive systems, particularly that each facility had features that were unique to it, social relationships were crucial, new practices had to fit local conditions and implementation was very much a case of 'learn and adapt as you go' (Plsek, 2003), consistent with studies of nursing homes as complex adaptive systems (Anderson et al., 2003, Forbes-Thompson et al., 2007). The importance of social interaction is reflected in a recent review of the literature which suggests that relationships between managers and staff, participation in decision-making and relationships between staff can influence nursing home outcomes (Toles and Anderson, 2011).

The way participants spoke about competing priorities is consistent with a review of the literature on priority setting (Hendry and Walker, 2004). Trying out a new practice to find out if it ‘works’ has similarities to what has been referred to as the trialability of an innovation (Rogers, 2003). There are similarities between *Learning by Connecting* and the concept of communities of practice (Lave and Wenger, 1991, Wenger, 1998). Seeing the benefits and understanding how actions can have certain consequences are similar to what has been described as ‘observability’ (Berta et al., 2010, Rogers, 2003).

Conversing about practice, an important element of *On Common Ground*, reflects other findings about the importance of conversations (Jordan et al., 2009, McWilliam et al., 2008). Each mechanism has similarities with at least one of the 12 domains that explain behaviour change (Michie et al., 2005), with the greatest similarity occurring for the mechanism *Exercising Agency*.

Kitson (2009) draws on the results of some process studies of implementation to make observations that are akin to the findings, despite using different terminology to that used here. The process approach of the findings is also reflected in Normalization Process Theory which identifies the importance of ‘dynamic collective work’, ‘social shaping of practices’ and ‘ensembles of action that carry forward in time and space’ (May and Finch, 2009, p 540). It is interesting to compare the findings with those arising from health care research in the UK where it was concluded that the implementation of practices supported by evidence relies on social processes such professional networks, discussion, debate and joint decision-making (Ferlie, 2005).

4.2 Study strengths

This study was embedded within the largest program undertaken in Australia to implement evidence in residential aged care, providing a unique opportunity for

research involving participants with experience of implementation in a large and diverse range of facilities. Participants had a long period of involvement in implementation, in a diverse range of practice areas. Facility-based participants had extensive experience in residential aged care. All participants were well-placed to provide meaningful insights into the process of change and the context within which implementation was taking place, from three different perspectives: those of managers, facilitators and members of the lead organisations.

4.3 Study limitations

A limitation of the study is that the findings are based on the perceptions of the research participants, not the majority of facility staff. This situation is the inevitable consequence of the methods employed, which focused data collection on key individuals, rather than the broad body of people involved in implementation.

The study relied on one data source. As far as possible this was mitigated by a rigorous approach to data collection and analysis, with the use of multiple techniques to establish the trustworthiness of the study findings. This approach may have resulted in a greater focus on the perspectives of individuals rather than the organisational dimension of change, although this is difficult to judge. Organisational issues are present in the findings with concepts such as distributed leadership, collective agency and organisational capability which form part of the mechanism *Exercising Agency* and can be found to a lesser extent in the other mechanisms.

4.4 Implications

The four mechanisms, and the relationships between the mechanisms, provide a means of understanding and explaining how implementation took place (or didn't), fitting the definition of theory: a set of logical constructs that jointly offer answers to the questions

‘why’ and ‘how’ (Sales et al., 2006). Taken together, these findings represent the major contribution of this study to existing knowledge.

The findings represent a novel way of understanding implementation that fits within a broad and expanding stream of research that focuses on process, recognises the messy and unpredictable nature of implementation and highlights the importance of interaction between those involved in practice change.

The mechanism *On Common Ground* brings together a number of constructs in a way that is unique, particularly the inclusion of the framing of care and the framing of change. Some conceptualisations of common ground exist already, but with a focus on language and communication.

The importance of relationships between people involved in change is well recognised, often referred to in terms of staff ‘engaging’ in implementation; see for example, Damschroder et al. (2009). Jordan et al. (2009) emphasise the primacy of relationships in the context of organisations as complex adaptive systems. The concept of *On Common Ground* provides a practical way of thinking about what might otherwise be thought of as a need for engagement or a way of improving staff relationships.

To be useful to those seeking to implement change, a framework or theory should include a small number of constructs that are amenable to manipulation (Helfrich et al., 2007). The four mechanisms meet this requirement, with each providing clues as to how to intervene to influence implementation e.g. promoting conversations about practice, providing some direction about how to reconcile priorities, facilitating education that is likely to lead to *Learning by Connecting* and developing a system of distributed leadership by identifying and supporting formal and informal leaders.

It is reasonable to conclude that advocating for practice change within residential aged care on the basis that a proposed change is 'evidence-based' will not, in and of itself, be sufficient for change to occur. Evidence can inform practice change, but only as one of a broader mix of factors, including whether a change 'makes sense' and whether it is believed to result in benefits for residents or staff.

Each of the four mechanisms is necessary for practice change to occur, with relationships between the mechanisms indicating their inter-dependency; however, none by itself is sufficient for change to occur. Rather, the results show that it is necessary to have common ground (as defined in this study), a process of learning grounded in existing practice and knowledge, a way of reconciling what are often competing priorities in daily work, staff who are willing and able to change and leadership that is distributed rather than concentrated in one person.

Competing interests

The authors declare that they have no competing interests

Author's contributions

MM carried out the research during the process of completing a Doctor of Philosophy from the University of Wollongong. MM conceived the study, with assistance from GM and AK, conducted the interviews, coded the data and undertook the data analysis. MM drafted the manuscript. GM and AK supervised the conduct of the research and the writing of the thesis. All authors read and approved the final manuscript.

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References

- Anderson, R.A., Issel, L.M., McDaniel, R.R., 2003. Nursing homes as complex adaptive systems: relationship between management practice and resident outcomes. *Nursing Research* 52 (1), 12-21.
- Austin Health, 2006. Respecting patient choices: final evaluation of the community implementation of the Respecting Patient Choices Program. Heidelberg, Victoria.
- Australian Institute of Health and Welfare, 2012. Residential aged care in Australia 2010–11: A statistical overview. Australian Institute of Health and Welfare, Canberra.
- Bandura, A., 2001. Social cognitive theory: an agentic perspective. *Annual Review of Psychology* 52, 1-26.
- Berta, W., Teare, G.F., Gilbert, E., Ginsburg, L.S., Lemieux-Charles, L., Davis, D., Rappolt, S., 2005. The contingencies of organizational learning in long-term care: factors that affect innovation adoption. *Health Care Management Review* 30 (4), 282-292.
- Berta, W., Teare, G.F., Gilbert, E., Ginsburg, L.S., Lemieux-Charles, L., Davis, D., Rappolt, S., 2010. Spanning the know-do gap: understanding knowledge application and capacity in long-term care homes. *Social Science & Medicine* 70 (9), 1326–1334.
- Bolden, R., 2011. Distributed leadership in organizations: a review of theory and research. *International Journal of Management Reviews* 13 (3), 251-269.
- Capezuti, E., Taylor, J., Brown, H., Strothers, H.S., 3rd, Ouslander, J.G., 2007. Challenges to implementing an APN-facilitated falls management program in long-term care. *Applied Nursing Research* 20 (1), 2-9.
- Charmaz, K., 2003. Grounded theory: objectivist and constructivist methods. In: Denzin, N.K., Lincoln, Y.S. (Eds.), *Strategies of qualitative inquiry*. SAGE Publications, Thousand Oaks, California, pp. 249-291.
- Cheek, J., Gilbert, A., Ballantyne, A., Penhall, R., 2004. Factors influencing the implementation of quality use of medicines in residential aged care. *Drugs & Aging* 21 (12), 813-824.
- Damschroder, L., Aron, D., Keith, R., Kirsh, S., Alexander, J., Lowery, J., 2009. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science* 4 (1).
- Durlak, J.A., DuPre, E.P., 2008. Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology* 41 (3), 327-350.
- Eccles, M., Grimshaw, J., Walker, A., Johnston, M., Pitts, N., 2005. Changing the behavior of healthcare professionals: the use of theory in promoting the uptake of research findings. *Journal of Clinical Epidemiology* 58 (2), 107-112.
- Estabrooks, C.A., Hutchinson, A.M., Squires, J.E., Birdsell, J.M., Cummings, G.G., Degner, L., Morgan, D., Norton, P.G., 2009. Translating research in elder care: an introduction to a study protocol series. *Implementation Science* 4 (51).

- Fallon, T., Buikstra, E., Cameron, M., Hegney, D., Mackenzie, D., March, J., Moloney, C., Pitt, J., 2006. Implementation of oral health recommendations into two residential aged care facilities in a regional Australian city. *International Journal of Evidence-Based Healthcare* 4 (3), 162-179.
- Ferlie, E., 2005. Conclusion: from evidence to actionable knowledge? In: Dopson, S., Fitzgerald, L. (Eds.), *Knowledge to action? Evidence-based health care in context*. Oxford University Press, Oxford, pp. 182-197.
- Flick, U., 2009. *An introduction to qualitative research*. SAGE Publications, London.
- Forbes-Thompson, S., Leiker, T., Bleich, M.R., 2007. High-performing and low-performing nursing homes: a view from complexity science. *Health Care Management Review* 32 (4), 341-351.
- Grieve, J., 2006. The prevention and management of constipation in older adults in a residential aged care facility. *International Journal of Evidence-Based Healthcare* 4 (1), 46-53.
- Grol, R.P.T.M., Bosch, M.C., Hulscher, M.E.J.L., Eccles, M.P., Wensing, M., 2007. Planning and studying improvement in patient care: the use of theoretical perspectives. *Milbank Quarterly* 85 (1), 93-138.
- Helfrich, C.D., Weiner, B.J., McKinney, M.M., Minasian, L., 2007. Determinants of implementation effectiveness: adapting a framework for complex innovations. *Medical Care Research & Review* 64 (3), 279-303.
- Hendry, C., Walker, A., 2004. Priority setting in clinical nursing practice: literature review. *Journal of Advanced Nursing* 47 (4), 427-436.
- Hockley, J., Watson, J., Oxenham, D., Murray, S.A., 2010. The integrated implementation of two end-of-life care tools in nursing care homes in the UK: an in-depth evaluation. *Palliative Medicine* 24 (8), 828-838.
- Janes, N., Sidani, S., Cott, C., Rappolt, S., 2008. Figuring it Out in the Moment: a theory of unregulated care providers' knowledge utilization in dementia care settings. *Worldviews on Evidence-Based Nursing* 5 (1), 13-24.
- Jones, K.R., Fink, R., Vojir, C., Pepper, G., Hutt, E., Clark, L., Scott, J., Martinez, R., Vincent, D., Mellis, B.K., 2004. Translation research in long-term care: improving pain management in nursing homes. *Worldviews on Evidence-Based Nursing* 1 (S1), S13-S20.
- Jordan, M.E., Lanham, H.J., Crabtree, B.F., Nutting, P.A., Miller, W.L., Stange, K.C., McDaniel Jr, R.R., 2009. The role of conversation in health care interventions: enabling sensemaking and learning. *Implementation Science* 4 (15).
- Kitson, A., 2009. Knowledge translation and guidelines: a transfer, translation or transformation process? *International Journal of Evidence-Based Healthcare* 7 (2), 124-139.
- Kuziemsky, C.E., Varpio, L., 2010. Describing the clinical communication space through a model of common ground: 'you don't know what you don't know'. In: *American Medical Informatics Association Annual Symposium*. American Medical Informatics Association, Washington, D.C., pp. 407-411.
- Lave, J., Wenger, E., 1991. *Situated learning: legitimate peripheral participation*. Cambridge University Press, Cambridge.

- Lazarsfeld, P.F., Merton, R.K., 1954. Friendship as a social process. In: Berger, M., Abel, T., Page, C.H. (Eds.), *Freedom and control in modern society*. Octagon Books, New York, pp. pp 18-66.
- Lincoln, Y.S., Guba, E.G., 1985. *Naturalistic inquiry*. SAGE Publications, Beverly Hills.
- Lindeman, M.A., Black, K., Smith, R., Gough, J., Bryce, A., Gilsenan, B., Hill, K., Stewart, A., 2003. Changing practice in residential aged care using participatory methods. *Education for Health* 16 (1), 22-31.
- Lyon, C., 2007. Advance care planning for residents in aged care facilities: what is best practice and how can evidence-based guidelines be implemented? *International Journal of Evidence-Based Healthcare* 5 (4), 450-457.
- Masso, M., McCarthy, G., 2009. Literature review to identify factors that support implementation of evidence-based practice in residential aged care. *International Journal of Evidence-Based Healthcare* 7 (2), 145-156.
- Masso, M., Westera, A., Quinsey, K., Morris, D., Pearse, J., 2011. *Encouraging Best Practice in Residential Aged Care Program: final evaluation report*. Centre for Health Service Development, University of Wollongong, Wollongong.
- May, C., Finch, T., 2009. Implementing, embedding, and integrating practices: an outline of Normalization Process Theory. *Sociology* 43 (3), 535-554.
- McConigley, R., Toye, C., Goucke, R., Kristjanson, L., 2008. Developing recommendations for implementing the Australian Pain Society's pain management strategies in residential aged care. *Australasian Journal on Ageing* 27 (1), 45-49.
- McEvoy, P., Richards, D., 2003. Critical realism: a way forward for evaluation research in nursing? *Journal of Advanced Nursing* 43 (4), 411-420.
- McWilliam, C.L., Kothari, A., Leipert, B., Ward-Griffin, C., Forbes, D., King, M.L., Kloseck, M., Ferguson, K., Oudshoorn, A., 2008. Accelerating client-driven care: pilot study for a social interaction approach to knowledge translation. *Canadian Journal of Nursing Research* 40 (2), 58-74.
- Michie, S., Johnston, M., Abraham, C., Lawton, R., Parker, D., Walker, A., 2005. Making psychological theory useful for implementing evidence based practice: a consensus approach. *Quality and Safety in Health Care* 14 (1), 26-33.
- Moore, K., Haralambous, B., 2007. Barriers to reducing the use of restraints in residential elder care facilities. *Journal of Advanced Nursing* 58 (6), 532-540.
- O'Halloran, P.D., Cran, G.W., Beringer, T.R.O., Kernohan, G., Orr, J., Dunlop, L., Murray, L.J., 2007. Factors affecting adherence to use of hip protectors amongst residents of nursing homes - a correlation study. *International Journal of Nursing Studies* 44 (5), 672-686.
- Oliver, D.G., Serovich, J.M., Mason, T.L., 2005. Constraints and opportunities with interview transcription: towards reflection in qualitative research. *Social Forces* 84 (2), 1273-1289.
- Oxman, A.D., Thomson, M.A., Davis, D.A., Haynes, R.B., 1995. No magic bullets: a systematic review of 102 trials of interventions to improve professional practice. *Canadian Medical Association Journal* 153 (10), 1423-1431.

- Patton, M.Q., 2002. Qualitative research & evaluation methods. SAGE Publications, Thousand Oaks, California.
- Pawson, R., Tilley, N., 1997. Realistic evaluation. SAGE Publications, London.
- Perry, L., Bellchambers, H., Howie, A., Moxey, A., Parkinson, L., Capra, S., Byles, J., 2011. Examination of the utility of the Promoting Action on Research Implementation in Health Services framework for implementation of evidence based practice in residential aged care settings. *Journal of Advanced Nursing* 67 (10), 2139–2150.
- Pettigrew, A.M., 1985. Contextualist research: a natural way to link theory and practice. In: Lawler, E.E., Mohrman Jr, A.M., Mohrman, S.A., Ledford Jr, G.E., Cummings, T.G. (Eds.), *Doing research that is useful for theory and practice*. Jossey-Bass Publishers, San Francisco, pp. pp 222-248.
- Pettigrew, A.M., Ferlie, E., McKee, L., 1992. *Shaping strategic change*. SAGE Publications, London.
- Pettigrew, A.M., Woodman, R.W., Cameron, K.S., 2001. Studying organizational change and development: challenges for future research. *Academy of Management Journal* 44 (4), 697-713.
- Plsek, P., 2003. Complexity and the adoption of innovation in health care. In: *Accelerating Quality Improvement in Health Care Strategies to Speed the Diffusion of Evidence-Based Innovations*. National Institute for Health Care Management Foundation National Committee for Quality Health Care, Washington, DC.
- Reay, T., GermAnn, K., Golden-Biddle, K., Casebeer, A., Hinings, C.R., 2008. Building a foundation for organizational learning: innovation in primary health care. In: *Administrative Sciences Association of Canada Conference*. Halifax.
- Resnick, B., Quinn, C., Baxter, S., 2004. Testing the feasibility of implementation of clinical practice guidelines in long-term care facilities. *Journal of the American Medical Directors Association* 5 (1), 1-8.
- Rogers, E.M., 2003. *Diffusion of innovations*, 5th edition. Free Press, New York.
- Rycroft-Malone, J., 2007. Theory and knowledge translation: setting some coordinates. *Nursing Research* 56 (4S), S78-S85.
- Saldana, J., 2009. *The coding manual for qualitative researchers*. SAGE Publications, London.
- Sales, A., Smith, J., Curran, G., Kochevar, L., 2006. Models, strategies, and tools. Theory in implementing evidence-based findings into health care practice. *Journal of General Internal Medicine* 21 (Suppl 2), S43-S49.
- Schwandt, T.A., 2007. *The SAGE dictionary of qualitative inquiry*, 3rd edition. SAGE Publications, Thousand Oaks, California.
- Seers, K., Cox, K., Crichton, N.J., Edwards, R.T., Eldh, A.C., Estabrooks, C.A., Harvey, G., Hawkes, C., Kitson, A., Linck, P., McCarthy, G., McCormack, B., Mockford, C., Rycroft-Malone, J., Titchen, A., Wallin, L., 2012. FIRE (Facilitating Implementation of Research Evidence): a study protocol. *Implementation Science* 7 (25).

- Timmerman, T., Teare, G., Walling, E., Delaney, C., Gander, L., 2007. Evaluating the implementation and outcomes of the Saskatchewan pressure ulcer guidelines in long-term care facilities. *Ostomy/Wound Management* 53 (2), 28-32.
- Toles, M., Anderson, R.A., 2011. State of the science: relationship-oriented management practices in nursing homes. *Nursing Outlook* 59 (4), 221 - 227.
- Wenger, E., 1998. *Communities of practice: learning, meaning and identity*. Cambridge University Press, Cambridge.