How does care coordination provided by registered nurses ‘‘fit’’ within the organisational processes and professional relationships in the general practice context?

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How does care coordination provided by registered nurses- “fit” within the organisational processes and professional relationships in the general practice context?

Abstract

Aim:

The aim of this study was to develop understanding about how a registered nurse-provided care coordination model can “fit” within organisational processes and professional relationships in general practice.

Background:

In this project, registered nurses were involved in implementation of registered nurse-provided care coordination, which aimed to improve quality of care and support patients with chronic conditions to maintain their care and manage their lifestyle.

Method:

Focus group interviews were conducted with nurses using a semi-structured interview protocol. Interpretive analysis of interview data was conducted using Normalization Process Theory to structure data analysis and interpretation.

Results:

Three core themes emerged: (1) pre-requisites for care coordination, (2) the intervention in context, and (3) achieving outcomes. Pre-requisites were adequate funding mechanisms, engaging organisational power-brokers, leadership roles, and utilising and valuing registered
nurses’ broad skill base. To ensure registered nurse-provided care coordination processes were sustainable and embedded, mentoring and support as well as allocated time were required. Finally, when registered nurse-provided care coordination was supported, positive client outcomes were achievable, and transformation of professional practice and development of advanced nursing roles was possible.

Conclusion:

Registered nurse-provided care coordination could “fit” within the context of general practice if it was adequately resourced. However, the heterogeneity of general practice can create an impasse that could be addressed through close attention to shared and agreed understandings. Successful development and implementation of registered nurse roles in care coordination requires attention to educational preparation, support of the individual nurse, and attention to organisational structures, financial implications and team member relationships.
Introduction

Increasingly, interventions to improve population health and wellbeing need to be sustainable beyond the implementation period. Thus, it is important to develop evidence about the sustainability of complex interventions within established contexts and ways of working (Campbell et al., 2000). In this study, we explored how registered nurse (RN)-provided care coordination could move beyond implementation to become embedded and integrated within the organisational processes and professional relationships of the general practice context.

Background

The health care system in Australia, like other industrialised countries, is confronting an ageing population with an increasing incidence of chronic conditions, combined with workforce shortages and cost escalation (Dunbar & Reddy, 2009). Furthermore, health care is provided within constantly changing complex and multi-layered systems. Unsurprisingly, service users frequently experience health care systems as cumbersome, unwieldy, unfriendly and opaque (Barach & Johnson, 2006). Care coordination is often promoted as an appropriate mechanism for supporting and maintaining strong partnerships within complex and seemingly fragmented systems (Chen, Brown, Archibald, Aliotta, & Fox, 2000; Powell Davies et al., 2006). In Australia, general practice is considered the vanguard of the health care system (Department of Health and Ageing, 2008). Consequently, general practice is increasingly being identified as a context that can provide continuous, comprehensive and coordinated care (Kidd et al. 2006, Rothman & Wagner, 2003). However, the mechanisms for embedding care coordination within this context are not clear and require further study.
Some authors believe that it is inevitable that RNs will have an increasingly important role in chronic condition care provision in general practice (Halcomb, Patterson, & Davidson, 2006). Moreover, general practice RNs themselves believe they have an important role in coordinating care, and that they are eminently capable of contributing in a meaningful way by connecting key people and facilitating information sharing processes and management (Patterson, Muenchberger & Kendall, 2007). Indeed, RNs are appropriately skilled to assess the health, social and emotional well-being of older people and are well positioned to develop care relationships with patients (Siegloff, St John, Keleher & Patterson, 2007), which are all essential components of care coordination (Ehrlich, Kendall, Muenchberger, & Armstrong, 2009). Therefore, one method of decreasing care fragmentation and improving system navigation is to involve RNs in care coordination.

Despite the appropriateness of involving RNs in care coordination, new initiatives will not become embedded unless an intervention ‘fits’ within the existing environment (May, 2006; May & Finch, 2009). In response to a perceived need for improved understanding and explanatory capability in situations where new ways of organising health care were not routinely embedded in clinical practice, May and his colleagues developed the Normalization Process Theory (NPT) (May, 2006, May & Finch, 2009). According to NPT, the extent to which any new practice or innovation becomes embedded depends on the extent to which its components are workable in actual contexts and are capable of being integrated into existing contexts, that is fit.

To better understand the ‘fit’ of RN-provided care coordination within existing general practice settings, we undertook a series of five studies, which used NPT as an overarching framework to guide data interpretations, discussion of the findings and implications of the
research (May et al., 2010). The first four studies sought to better understand care coordination in existing general practice settings prior to piloting a structured and supported care coordination role for RNs. The studies included: (a) a literature review (for further detail, see Ehrlich, et al., 2009), (b) mapping usual chronic condition care, (c) a qualitative study of established care coordination practices, and (d) a qualitative study to investigate how RN-provided care coordination would be implemented (for further detail, see Ehrlich, Kendall & Muenchberger, 2011). At the completion of these studies, a pilot project was conducted that involved general practice RNs and Divisions of General Practice (currently being restructured as Medicare Locals in Australia) support staff known as General Practice Liaison Officers (GPLOs) in implementing a structured care coordination process within optimal locally-responsive and supportive networks. This paper presents the final study, which investigated the ‘fit’ of RN-provided care coordination within the general practice context by exploring the experiences of general practice RNs and GPLOs. This project was approved by the University Human Ethics Committee and all participating organisations.

**Methodology**

A qualitative interpretive research design, which used focus groups to collect data, was used in this study. NPT, particularly the earlier Normalisation Process Model (NPM) (May, 2006) which is one component of NPT, was used as a theoretical framework to structure data collection and interpretations (May et al., 2010) because of its explanatory capability in

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1 General Practice Liaison Officers (GPLOs) are employed by Divisions of General Practices to work with individual general practices. They focus on education and implementation of new initiatives within general practices. Divisions of General Practice are organisations who represent their General Practice membership at both State and National levels within Australia.
situations when the desired outcome was to embed new ways of organizing health care in clinical practice (May & Finch, 2009).

NPT is a mid-range theory that was developed by expanding the NPM (May, 2006; May & Finch, 2009; May, et al., 2009). NPM is concerned with the connections between four domains. They are:

(i) the interactional work that professionals and patients do within the clinical encounter and its temporal order, \( \text{(interactional workability)} \); (ii) the embeddedness of trust in professional knowledge and practice, \( \text{(relational integration)} \); (iii) the organizational distribution of work, knowledge and practice across divisions of labor \( \text{(skill set workability)} \); and, (iv) its contexts of institutional location and organizational capacity, \( \text{(contextual integration)} \). (May, 2006, p.9)

The broader NPT is concerned with the macro environment within which complex interventions are implemented, whereas the original model focused on the micro conditions of everyday practice and considers how people make complex interventions workable (May, Mair, Dowrick, & Finch, 2007; May, et al., 2009). In this study, we were focused on understanding the micro conditions of everyday practice. Although NPT was the overarching theoretical framework used for the broader series of studies in this project, NPM was used specifically to aid data interpretation and the discussion in this study. **Methods**

**Participants**

Participants were recruited specifically to implement the pilot project. Eleven general practices, who were members of a single division of general practice in South-East Queensland, Australia, expressed interest and were invited to participate. Six general practices met the selection criteria (that is, an experienced RN was involved, general practice
managers supported the intervention, general practice management systems were organised and maintained, RNs had access to necessary resources, and the general practice could demonstrate capacity to meet the demands of the project). One general practice withdrew prior to commencement of the intervention. A total of nine RNs from five general practices participated in the study. Six participants were general practice RNs (one general practice was represented by two RNs), and three were RN GPLOs who provided pivotal support to general practice RNs.

Data collection

Focus group interview methods encouraged depth rather than breadth of responses from participants (Morgan, 1996), and were used to examine collective opinions developed through shared language (Kitzinger 1994, Sim, 1998). Two separate focus groups were conducted, one with RNs and one with GPLOs. All study participants contributed. Questions included in the semi-structured interview protocol were (a) “What does a general practice need to have in place to implement the care program?”, (b) “What would (your general practice/the general practices you support) need to have in place to continue the program?”, (c) “What type of resources would (your general practice/the general practices you support) need to have in place to be able to continue the program?”, (d) “What were the greatest challenges in implementing the program?”, (e) “What were the greatest rewards in implementing the program?”, (f) “What would you keep the same about the program?”, and (g) “What would you change about the program?”. The focus groups lasted 2 hours 12 minutes, and 2 hours 10 minutes respectively.

Data analysis
The focus group discussions, which were digitally recorded and transcribed verbatim, yielded rich data. The transcriptions were checked for accuracy and a thematic analysis of data was undertaken. The following steps were taken to review interaction between organisational processes, professional relationships and implementation of RN-provided care coordination within general practice:

1. Familiarization with the data by openly reading the interview transcripts.
2. Data exploration on a paragraph-by-paragraph basis. Responses that seemed important were highlighted and labelled (first-level coding).
3. One researcher (first author) re-examined each statement that had initially seemed important by asking the question “What is this specifically?” (i.e., second level coding) (Glaser & Strauss, 1967). Then, using Microsoft Word™, tables were construct in which selected pieces of data were placed into groups that seemed to conceptually belong together (Lincoln & Guba, 1985, Ryan & Bernard, 2003).
4. Higher order themes were developed by the research team by asking the question “What is this an example of?” until all data could be accounted for within themes (DeSantis & Ugarriza, 2000, Ryan & Bernard, 2003). Emerging themes were discussed by the team to determine the most salient, and their relationship to each other (Ryan & Bernard, 2003) until the most important and stable categories were able to be identified (DeSantis & Ugarriza, 2000).
5. The results of the study were presented to research participants in a process of member checking to reduce the likelihood of analysis bias (Tuckett, 2005) and to gain comment regarding the findings. Any discrepancies were discussed and consensus was obtained to ensure that emergent findings were consistent with individual experience.
Results

Three core themes emerged that explained the integration, fit and sustainability of RN-provided care coordination. The first theme focused on pre-requisites for care coordination and included four sub-themes, namely: funding, engaging key power-brokers, leadership based on a shared vision, and a broad skills base among RNs. The second theme focused on matching the intervention with the context and included time allocation and management, and taking “baby steps”. The final theme reflected outcomes that could be achieved and included improved health outcomes for patients, improved relationships between RNs and patients, and transformation of RN work practices.

**Theme one: pre-requisites of RN-provided care coordination**

**Funding**

Although guidelines existed to guide care, they were often used to ensure that general practices would not fail a Medicare audit\(^2\) (that is, an audit to determine if care provision is consistent with the parameters of Medicare funding claimed) rather than to guide care quality:

\(^2\) If auditors determine that GPs have defrauded the Medical Benefits Scheme, GPs’ Medicare provider numbers can be revoked for a period of time. Without a provider number, patients are unable to claim remuneration from Medicare and are required to pay for the entire cost of their visit to a GP. Because patients do not have to enrol with a single GP or general practice in Australia, they are able to change GPs to avoid paying the entire cost. Thus, failing an audit can have significant financial consequences for GPs.
One of the big things ... was to look at the health and ageing standard for chronic disease management. ... If you read that, there is a set standard for chronic disease management ... To give a person half an hour to do everything that is involved in a 60-page document, it really is impossible...” (RN FG)

RNs believed that although existing Medicare guidelines would be useful to apply to care coordination, the tasks associated with following the guidelines were too onerous and inadequately remunerated. Ironically, therefore, the existing funding system was thought to contribute to care fragmentation rather than care coordination:

And again it gets back to our health system, Medicare, it’s done through silly item numbers for and on behalf of the GP ... So until you change the system that supports this ... you’re just going to get all of this ad hoc fragmented care ... patch here, patch there. (GPLO FG)

Participants frequently referred to funding as a barrier to RN-provided care coordination and remuneration for RNs was particularly contentious. Thus, a model of care that sought to improve quality outcomes for patients by including RNs in care coordination was believed to be incompatible with financial viability within the current Medicare-funded system.

Engaging power-brokers

Allocation of care coordination tasks between RNs and GPs frequently depended on individual values and interpretation of remuneration mechanisms. Implementation of RN-provided care coordination, although important, did not appear to be a priority in some general practices. Participants believed that GPs held a powerful role and could either financially support RNs, or view RN-provided care coordination as a financial burden. RNs
acknowledged that introducing and sustaining RN-provided care coordination was dependent on “... educating the doctors about your successes in a non-threatening way” (RN FG). Occasionally, the practice manager, rather than the GP, was identified as the key power-broker. Practice managers were often described as the team members with financial responsibility for the business of general practice, whereas participants believed that RNs were responsible for quality patient outcomes. Change occurred when RNs were able to negotiate and use established relationships.

Leadership based on a shared vision

Sustainable RN-provided care coordination required leadership, “You’ve got to have a visionary leader” (GPLO FG). Teams worked collaboratively and established routines when a vision for care was clear and roles were agreed on and shared. Once work routines were developed, they provided structures that continued forward through time with little effort. Established routines assisted general practice teams to work collaboratively and streamline work processes.

The importance of shared vision was most obvious when it was absent. When teams did not share a vision for care coordination, collaborate, unanimously agree on roles, and negotiate use of resources, RNs’ experiences were likely to be negative. In extreme examples, an absence of a shared vision resulted in behaviour that was described as sabotage. Participants believed that individual control rather than shared vision resulted in high levels of resistance from other team members.

The value of RNs’ broad skill base
Paradoxically, RNs were expected to be both autonomous practitioners and team players. They needed to possess a broad range of professional skills, attitudes, knowledge and behaviours. Participants commented that the skills required to provide chronic condition care coordination were unlikely to be acquired in other settings, such as the aged or acute care sectors. They believed that even though RNs developed valuable disease-related knowledge and skills in other settings, they were unprepared for the demands of work in the general practice:

... because when I did two years in a hospital and then went to practice nursing and I looked after diabetic patients, but I didn’t know the first thing about diabetes, really, even after studying at university. So you have got to want to actually look for that yourself ... you have got to be very self-motivated and be pro-active. (Final FG, p.27)

Knowledge of funding mechanisms associated with care coordination was particularly important. Participants highlighted the importance of RNs being experienced, because care coordination was an advanced role. RNs providing care coordination needed to be skilled at negotiating the team environment, understand and utilise power relationships within the environment, and adapt to specific funding mechanisms. Although some participants believed that passion for chronic disease management could negate inexperience, they thought that engagement of inexperienced RNs in care coordination was generally inappropriate.

Although health-related resources are available, care coordination required RNs to develop and maintain local knowledge and networks. Some state-based organizations have made a concerted effort to develop resource directories, however, “services changed daily” (GPLO FG). Thus, RNs frequently relied on established relationships and ways of working to assist
patients’ access services. Maintaining local knowledge was time consuming and information was sometimes inaccessible. Thus, RNs needed sufficient skills to proactively establish and maintain links and to continually update knowledge about resource availability in a constantly changing environment.

**Theme two: the intervention in context**

Participants believed that sustainable RN-provided care coordination was dependent on the ease of implementation, “*We have to make it easy and we have to make it sustainable ... we have to make it user-friendly*” (GPLO FG). A user-friendly model would be pragmatic, clear, uncomplicated, flexible, contextually relevant, responsive and able to be implemented with or without training. A pragmatic, clear, user-friendly model of care coordination would be highly regarded by general practice, but would require, “*going right back to the basics of chronic disease management*” (GPLO FG). Developing a sustainable model would be an iterative process requiring negotiation, understanding and embedding of RN-provided care coordination within the work flows of the general practice.

**Allocating time for RN-provided care coordination**

Participants identified adequate and effective time allocation as an important pre-requisite. They noted that the time required for care coordination was more onerous than had been anticipated, and concluded that implementing a program without allowing sufficient time was burdensome, created stress, and inhibited understanding of what was needed. Time constraints also restricted reflection on what was working well and what needed to be adjusted. Although having time to provide care meant that “*... things became more ... patient-
One way to more effectively use time was to use electronic platforms and formats based on “good templates” (RN FG). However, participants identified that RN-provided care coordination could not be easily digitised because “…[if] it was tick the boxes, spit out the care plan, spit out the health assessment … [then] we are not dealing with the patient as a holistic person” (RN FG) or responsive to diverse patient needs.

Implementing a formalised model of RN-provided care coordination would not happen quickly. Some participants recommended “a staged rollout” (GPLO FG) in which participation was voluntary. They recommended individualising the new model, tailoring the program to each general practice and preparing RNs and general practice teams. Where an individualised approach was not possible, expectations needed to be well-managed from the beginning. Without preparation, planning, and expectation management, sustainability was doubtful.

*Mentoring and support*

Participants identified that individual capacity and professional isolation needed to be addressed if RN-provided care coordination was to be successful. They believed that mentoring would assist overcoming these issues. Although Division GPLOs regularly adopted a mentoring role with RNs, their capacity was limited and they struggled to assist RNs during the pilot project. The result was that the GPLOs began to feel isolated. Thus, both RNs and mentors required supportive networks. An alternative to relying on GPLOs to mentor RNs was to delegate the mentoring role to experienced general practice RNs, but
participants believed that diligence would be required to ensure these RNs were adequately remunerated in an already time-poor and funding-restricted environment.

**Theme three: achieving outcomes and transforming professional practice**

When RN-provided care coordination was implemented in an optimal care context, participants identified an increased capacity for improved patient relationships, potential for transformation of professional practice, improvements in patient and general practice outcomes, and workforce satisfaction. Participants believed that the personal, holistic, and longitudinal interaction between RNs and patients was integral to assisting patients achieve and sustain health-related behavioural changes.

Participants provided many examples of instances where patients shared important health-related information that had not previously been shared or offered during standard GP consultations. When patients shared information, care was able to be provided differently, and positive health outcomes were more likely. RNs were able to provide information to the GP that would otherwise have been overlooked. Time was the most common factor that participants believed positively altered the care relationship.

Participants believed that the outcomes they had achieved were satisfying and rewarding. When patients responded positively, participants described professional satisfaction “I really think building relationships with the patients, it really has been awesome. I didn’t think I could feel so good about it to be honest” (RN FG). For some participants, this process resulted in transformation of their professional practice. They gradually found different ways of interacting with patients that were patient-centred rather than professionally-directed. Most participants referred to a “special” relationship that developed. Participants stated that
patients were more highly motivated to make agreed lifestyle changes when they felt special. Participants believed that skills such as motivational interviewing and goal-setting were most valuable.

**Discussion**

Within teams of health care providers, interventions need to be workable and able to be integrated if they are to ‘fit’ within the context and become part of routine practice. Interventions such as RN-provided care coordination, which was piloted in this study, are more likely to become part of routine practice if they: (a) confer an interactional advantage, (b) equal or improve relational integration through accountability and confidence within networks, (c) improve skill-set workability by calibrating to an agreed skill-set at a recognizable location in the division of labour, and (d) support contextual integration by conferring an advantage on an organization in flexibly executing and realizing work (May, 2006).

“Interactional workability”: How the practice was operationalised

There was evidence that participants believed relationships with patients had improved, resulting in improved clinical measurements and overall patient well-being. RNs believed they were appropriately skilled and well positioned to develop relationships as they assessed patients’ health, social, and emotional well-being. Patients often provided RNs with information not routinely shared with GPs (Phillips, et al., 2007). Three factors were believed to be instrumental in improving the relationship: (a) the availability of time, (b) goal-setting and identifying areas of concern from the patients’ perspective, and (c) the nurses’ skills and knowledge. Other authors have reached similar conclusions (Patterson, et al., 2007).
Without extra time, RN-provided care coordination was generally not considered practical in busy general practices. Usually, RNs’ use of time was relatively unstructured (Phillips, et al., 2008). However, Phillips and her colleagues (2008) found that RNs performed an average of 17.4 activities per hour, with some RNs performing as many as 36 activities per hour. Thus, it was unsurprising that the extra time required for care coordination was frequently believed to be unavailable or impractical.

RN-provided care coordination can be operationalized within general practice when it “fits” with the RN’s work in the general practice. Sufficient time was allocated to RN-provided care coordination when it was seen as legitimate (that is, financially viable) by all team members. When developing meaningful goals with patients achieved positive patient outcomes, RNs’ work was legitimised.

“Relational Integration”: The impact on inter-professional relationships.

Existing hierarchies needed to be negotiated. Professional hierarchies were usually based on discipline or employment status (Phillips, et al., 2008). RNs were almost always employees of the general practice (Mills & Fitzgerald, 2008). Consequently, authority for RNs to utilize their clinical expertise depended on the nature of their relationship with their employer (usually a GP). RNs needed to effectively span professional and cultural boundaries to negotiate hierarchically-based care provision structures, and have the ability to identify and engage with key general practice power-brokers. In some general practices, implementation of RN-provided care coordination contributed to the disintegration of relationships that were not well-established or trust-based. At the extreme, failure of these relationships was described as “sabotage”. Thus, authority structures within the general practice setting influenced implementation of RN-provided care coordination. When RNs were able to
demonstrate the validity of care coordination; authoritative structures became less hierarchical and the contribution of RNs was validated.

“Skill-Set Workability”—the “fit” with existing skill-sets.

Participants identified that RNs required a broad skill-set to undertake care coordination. When they were given the authority and had the capacity to utilise their clinical knowledge and skills, RNs were able to provide individually-focused primary care within a team environment, and had an essential role in providing care (Halcomb, Davidson, & Patterson, 2008; Porritt, 2007). By engaging in roles that effectively utilized their knowledge and clinical skill base, RNs could significantly change the way chronic conditions were managed in general practice (Halcomb, Davidson, Salamonson, Ollerton, & Griffiths, 2008).

Participants frequently identified the RNs role in chronic condition care coordination as being advanced because of complex patient needs and complex funding environments. Clinical leadership, personal drive and the ability to negotiate with patients, other team members, and the broader network of health care providers were believed to be necessary skills of RNs. Indeed, participants believed that RNs required a unique set of skills to be able to work in general practice, and that some of the required skills were not readily obtainable in other settings.

Unique skills often related to understanding and negotiating funding mechanisms. This finding is consistent with that of Phillips and her colleagues (2008) who commented that nurses function as “agents of connectivity” between different disciplines within general practice. Thus, RNs relied on clinical, people and organisational skills and a small business orientation (Phillips, et al., 2008) to establish the boundaries of their role.
The ability to interact with the broader network of health care providers was especially important to access the health-related resources that patients required. Participants identified that successful implementation of RN-provided care coordination, transformed their professional practice. Although they believed they were providing holistic patient-centred care prior to the intervention, the opportunity to approach care more actively resulted in a different type of relationship with patients. When they were able to achieve a different type of relationship, they were more satisfied with their role and felt as if their skills and abilities were being utilized in a way that was consistent with their view of professional nursing. However, RNs required education, training and support (Siegloff, St John, Keleher, & Patterson, 2007) because care coordination contrasted with traditional hospital-based training, which emphasized technical and task-orientated acute care (Macdonald, Rogers, Blakeman, & Bower, 2008; Patterson, et al., 2007; Willis, et al., 2000). Other researchers have found that effective role development increased RNs’ job satisfaction and improved the quality of care provision (Senior, 2008).

"Contextual Integration"— the “fit” within the organisational context.

The major challenge for embedding RN-provided care coordination was the organisational context. Several barriers were evident in the way that relationships were established and skill-sets were utilized. For example, when a shared vision was absent, then forming relationships and dividing work between team-members remained ad hoc, based on power hierarchies, personal drive and individual leadership. The finding that funding was an ever present issue was not unexpected, because Australian health care system funding structures limit the scope and type of care that nurses in general practice can provide (Parker & Keleher, 2008). While
a shared vision was thought to be a way of negotiating RN-provided care coordination within existing funding parameters, it was not a panacea.

Allocating space for RN-provided care coordination was identified as essential for successful implementation. However, most general practices have traditionally been designed for GP-consulting rather than team-based care provision (Jackson, 2006). Therefore, adequate planning for the implementation of RN-provided care coordination was essential. Planning required a shift towards a team-based approach to care delivery and from a focus on acute, reactive, treatment room care to pro-active, ongoing care. This shift relied on teams’ ability to establish and maintain local area knowledge and networks based on trust, which required time to establish and maintain.

Limitations

This study investigated how a RN-provided care coordination model ‘fit’ within the general practice context. We were unable to access the views of either GPs or other general practice staff, which may have been different. However, the Department of Health and Aging’s (2007) evaluation of the second round of the National Care Coordination Trials concluded that GPs and service providers involved in the trials believed the experience was valuable for patients and established positive partnerships. Additionally, only a small number of general practices were involved in this pilot project. The general practices had received additional funding that had been sourced by the local Division of General Practice to remunerate general practices for RNs’ time for commitment to the pilot project. There has been no economic data collected in association with the study, thus it is not possible to determine the financial viability or otherwise of RN-provided care coordination in general practice.
The pilot intervention was designed and implemented in an Australian general practice context. Although the broader health system was considered when designing the intervention, participants were mostly reluctant to establish comprehensive networks beyond their practices with the wider health care system. It will be important for future studies to explore ways of moving chronic condition care coordination beyond the boundaries of single facilities or institutions if care fragmentation is to be reduced.

*Implications for practice*

This study has shown that RN-provided chronic condition care coordination can work if it is adequately resourced at all levels. However, it was viewed as a risk by some general practices, where RN-provided chronic condition care coordination was negatively evaluated on undervalued. In these circumstances, the ability of nurses to influence the organizational structures, social norms, group processes and conventions impacting on their practice was limited. GPs and their associated institutions (e.g., Medicare Locals) remained the major power-brokers that could either hamper or facilitate change. In some circumstances the impetus for change was created when GPs recognized the value of implementing the model (i.e., patient outcomes, financial viability, and change in workload). Unless financial viability could be proved, general practices were unlikely to participate, so the enthusiasm and change experienced by individual RNs became irrelevant. Thus, a unique role for Medicare Locals exists. Developing financially astute models of chronic condition care delivery within existing funding arrangements is essential to successful successfully embed RN-led chronic condition care. RNs require mentoring and support to improve their understanding of the business orientation of general practice if they are to become adept at manipulating their role to best “fit” with current contexts and funding arrangements and achieve better care
coordination for people with chronic conditions. Additionally, GPs and practice managers require similar mentoring and support regarding the value that RN-provided care coordination can bring to both patients and the general practice.

An implementation challenge arose when individual health professionals, health professional groups or health care organizations had differing understandings of the work of the RN. For some participants, the work of RN-provided chronic condition care coordination was understood in terms of the quality of the patient relationship and the quality of health care outcomes for the patient. Some of these participants experienced a transformation of their professional practice when they saw the positive health outcomes for patients. For other participants, the work of RN-provided chronic condition care coordination was understood from the point of view of the cost-effectiveness of the work. These participants experienced a transformation when they perceived to be engaging in a financially viable approach to chronic condition care coordination. Thus, the way that individuals, groups and organizations understood the work of chronic condition care coordination could be based on differing goals and values. These findings highlight the need for exploring collaborative, equitable, and non-hierarchical or power-based ways of sharing knowledge, skills and decisions that contribute to person-centred attitudes and behaviours, that is practising inter-professionally (Newton, Wood & Nasmith, 2012).

**Conclusion**

We have shown that RNs who provide care coordination in general practice needed to be (a) flexible, (b) able to understand and interpret guidelines in a local context, (c) able to function as independent and autonomous practitioners while simultaneously contributing effectively as team members, (d) skilled clinicians with highly developed personal characteristics, (e)
knowledgeable about the financial value of care that they were providing from the perspective of both patients and the general practice, (f) efficient and effective managers of time, (g) efficient and effective creators and maintainers of relationships, (h) efficient and effective problem-solvers, (i) visionary leaders with a learning orientation, (j) able to network and use external resources, and (k) committed to achieving quality outcomes for patients and for general practices. Even though the model of care intervention was based on coordinating care for individual patients, implementation required coordination and navigation of the context within which care was delivered.

This study has confirmed that the heterogeneity of general practice creates an impasse for sustainability that can only be addressed through shared and agreed understandings of new models of RN-provided care coordination, and close attention to development and implementation processes. The complexities embedded within the health care system and the place of general practice in the system needed to be understood and successfully negotiated if RN-provided chronic condition care is to fit within existing contexts. Without additional funding sources, RN-provided care coordination is unlikely to continue, and RNs will most probably revert to usual care delivery. Success in achieving the potential for RN-provided chronic condition care coordination roles will require attention to educational preparation, support of individual nurses, together attending to organisational structures, financial implications and team member relationships within individual general practices.

**Conflict of Interest**

Nil.

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