The role of practice nurses in coordinated care of people with chronic and complex conditions

Elizabeth Patterson, Heidi Muenchberger and Elizabeth Kendall

Abstract

General practice in Australia must cope with growing numbers of individuals with chronic and complex needs. The Australian Government has recognised the need to reform the primary health care sector to address this issue, with recent initiatives, such as coordinated care. The overall goal of coordinated care at a national level is to facilitate integrated care for people with chronic and complex conditions, by enhancing collaborative partnerships among general practitioners, primary health care providers, community service providers and clients. Interestingly, practice nurses (PNs) have not been identified as key stakeholders in the coordinated care service delivery model in Australia. In contrast, an expanded role for PNs has been in place in the United Kingdom and New Zealand for some time. This paper is based on focus group discussions with Australian PNs who have had a range of experiences in coordinated care models. The study identifies an important role for PNs, suggesting trial of a variety of models of coordinated care that include PNs in chronic disease management process.

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What is known about the topic?

In the United Kingdom practice nurses have been seen to have made a positive impact on care coordination. In Australia general practice nurses have not tended to be considered an integral part of coordinated care models for people with chronic and complex conditions.

What does this paper add?

This paper provides the perspectives of practice nurses from general practices participating in coordinated care initiatives.

What are the implications for practitioners?

This study suggests that practice nurses can make important contributions to coordinated care and calls for models of coordinated care that include practice nurses.

THE MANAGEMENT of chronic and complex conditions is a major issue for health systems in the developed world today. The Australian health care system has responded to this problem by introducing a number of initiatives; one of which has been coordinated health care. The overall goal of coordinated care is to facilitate integrated care for people with chronic and complex conditions, by enhancing collaborative partnerships among general practitioners (GPs) and non-medical primary and community services providers. Coordinated care is also based on the development of disease management approaches and evidence-based protocols for multidisciplinary care that maximise the likelihood of effective care within existing resources and enhance the coordination of care across acute and primary care sectors. Key stakeholders of coordinated care include: GPs, who act as care coordinators; community and domiciliary nurses from both public and private sectors, whose role is service coordination; service providers from public, private and institutional health care settings; and the target populations (elderly people with chronic conditions).

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Interestingly, but not surprisingly, practice nurses (PNs), have not been identified as key stakeholders. This paper explores the possible role of PNs in coordinated care consistent with recent Australian Government financial incentives,[1-2] and their experience of current coordinated care activities.

Australian practice nurses

In Australia the title of "practice nurse" refers to a nurse employed to work within a general practice setting. The role of PNs in Australian primary health care has not been defined beyond that of assistants to GPs, and only a minority of general practices employ PNs.[3-8] Before 2001, only about 40% of general practices in Australia employed a nurse. These nurses focused on immunisation, wound care, sterilisation, assisting with procedures and tests, some practice management roles and receptionist duties.[3-8] The nursing aspect of their role was largely hidden, unrecognised, obscured and undervalued in terms of government resource allocation.

The United Kingdom (UK) provides an interesting contrast to this Australian situation. There has been a well documented and growing presence of PNs in primary health care in the UK over the last decade as a result of financial incentives offered to GPs to employ nurses. The numbers of PNs increased dramatically following the introduction of a new contract for GPs in 1990. By 1995, Draper[9] reported that PNs were employed in 88% of British general practices, except in inner London where the proportion was about 66%. This increase in numbers of PNs was accompanied by a significant change in their role from that of treatment room nurse to active involvement or health promotion and management of a multidisciplinary team.[10] This role change reflected the restructuring of the nursing workforce to match the new focus on primary care and offered a new employment area for nurses. It has also been suggested that PNs have had a significant beneficial impact on general practice in the UK, enabling a shift from predominantly illness-centred models to the promotion of health and wellbeing.[11]

In the 2001–02 Australian Government budget, $104.3 million was allocated for GPs in rural and remote areas to employ more nurses and to provide incentives to expand the PN's role to encompass better management of chronic disease and provide population-based health activities.[1] These initial budget incentives have since been supplemented to include funding to GPs in metropolitan areas and Medicare Benefits Schedule (MBS) items which allow GPs to bill for nurse-provided services such as immunisation, wound care and pap smears.[2] The 2005–06 Federal Budget also included $18.2 million through the Nursing in General Practice Training and Support Initiative to relieve workforce pressure in general practice, improve the prevention and management of chronic disease and improve access to, and the quality and integration of, patient care.[12] However, some recent studies have indicated that while there are some PNs working in more advanced roles to achieve these aims, this is still not typical practice.[13-16] In fact, Watts et al[14] noted that general practice nursing "seems to represent the last frontier of the nursing profession … despite the esteem with which general practice nurses are held at the practice level, there is little systematic recognition, acceptance, encouragement, education or support available to build the capacity of nurses to contribute to the future of general practice." (p. 16) Watts and colleagues identified the important role PNs could play in integration, that is, the development and maintenance of effective communication channels within the practice and between the practice and outside organisations and individuals. Thus, it is likely that PNs could also contribute significantly to the process of coordinated care.

Coordinated care has been practised by GPs in several areas of Australia since 1997 with financial assistance from the Federal and state governments. In Brisbane, one innovative GP Division supported GPs to develop skills in coordinated care for people over 50 years of age (over 30 for Indigenous Australians) with chronic and complex conditions of greater than 6 months in duration. Patients receiving terminal, palliative or renal dialysis care, those who lived in residential care and those who were eligible to receive

services through the Department of Veterans Affairs did not receive coordinated care.

The model of coordinated care that was implemented by the Division centred on the GP as the care coordinator and general practice as the coordination point. Community and domiciliary nurses were allocated to general practices as service coordinators (SCs) who contributed to the development of care plans and assessment for the implementation of care plans. The key components of the intervention included a health assessment (usually completed by the GP), a care plan, services aimed at preventing hospital admission or addressing risk factors (purchased through brokerage funds), evidence-based chronic disease management education for GPs and patients, and collaboration between general practice, hospitals and other care providers.

The evaluation of coordinated care was ongoing and included individual and focus group interviews with GPs, SCs and clients about their experiences.[17] Data provided by these stakeholders indicated significant levels of involvement of some PNs in aspects of coordinated care. In some cases, SCs observed that their role was either facilitated or hindered by PNs. Thus, it seems pertinent to examine the experiences of PNs in coordinated care and consider their potential role in the future.

In a focus group format, a convenience sample of seven PNs from six general practices in the catchment area of the Division provided data about their experiences with coordinated care. These PNs supported 25 GPs who had actively participated in coordinated care over the last few years. Focus group questions included the extent, satisfaction and sustainability of their role in coordinated care, their involvement in communication processes and networks and their perceptions of the long-term viability of coordinated care from this perspective.

Practice nurses and coordinated care

The practice nurse role

PNs described their role as largely administrative when they participated in coordinated care. However, during the discussion, a broader role began to emerge; including recruitment of patients, health assessments, and care plan development and monitoring. Although their contribution to care plan development was minimal as the GP or SC usually took responsibility, PNs commented that they assumed an active role if given the opportunity: "I look [at the care plan] and I will tell them [GPs] what I think might help – I feel I am driving it. We are nurses waiting to take part in the care plans". According to the PNs, GPs acknowledged the benefits of involving them in care plan development and coordination of services for clients. However, formal validation of their role was not apparent: "There are some doctors who will use nurses just to clean their equipment … we need fulfilment and professionalism".

Some PNs believed that they had been instrumental in influencing GPs to implement coordinated care. Their own involvement in coordinated care was usually driven by their personal belief in its goals as a service model, but also by the benefits it would have for the practice: "Coordinated care appealed to me and I did it … I wanted to make money for the practice … Since coordinated care, the GPs have seen a lot of the benefits"; and " … I saw the results — it has made me so inclined to pursue it". PNs also described the benefit of the brokerage funding structure for clients. If they saw a positive economic impact on patients they championed the concept of coordinated care to the GP: "I happened to see the bit of paper [about coordinated care] and thought it would be a great opportunity, it appealed to me economically … I thought it would be good for the patient so I took the role of actively recruiting".

Although not a formal process, PNs assumed responsibility for completing health assessments and other documentation as they became more familiar with coordinated care. Indeed, PNs reported that they preferred to complete health assessments because the detail provided by GPs was sometimes lacking: "I do 80% of the health assessment — the GP does the rest" and " … sometimes not much at all is there, the doctors are too busy, they just want to see their patients".

General practitioners also commented that: "I can take a patient — a regular patient of mine, I can do a health assessment in 20 minutes — start and finish without leaving the room". However, PNs recognised the importance of home assessment (usually completed by the SC or another service provider) as part of the care plan development: "The nurse goes out to the home and then you get to see the social side [of the patients' environment]— do they need rails etc?"

PNs recognised that GPs had many time demands, but also considered that GPs lacked the skills required to complete a comprehensive and detailed assessment. For example, one PN reported that she had said to the GP, "Please don't do it. You think you know them but all you do is tick, tick, tick — GPs don't have the interview skills". Some practices actually employed PNs to undertake health assessments and PNs were seen as a crucial resource, taking on the assessment on behalf of the GP.

According to the PNs the variable levels of collaboration, ownership and understanding of their role and key duties within a coordinated care model suggested a need to focus on PN education. PNs reported that training about coordinated care seemed to be exclusive to GPs and was not shared with PNs: "The GPs have something [education/training sessions] and I sometimes tag along"; "We have never been invited"; "Our education has never been seen to be that important"; "I saw a piece of paper" and, "I received a quick note". Some PNs were, therefore, not inclined to participate in coordinated care and were not aware of any potential role. Those PNs who did engage in coordinated care experienced a lack of recognition for their role and educational needs. As a result, they initiated their own education group to share information. They also gleaned information about coordinated care through informal meetings with SCs who visited the practices: "If I had a question I asked the service coordinator ... you can call it training on the job if you like ... my service coordinator would answer any question I needed to know and she would fax me appropriate papers to explain things".

Given the lack of clarity surrounding their role, it was not surprising to find that there was confusion among PNs regarding the degree of input required for care planning, billing procedures and the review process. Although PNs were not formally expected to complete these tasks, they inevitably became involved: "We were not supposed to do care plans — there was a lot of confusion about billing of care plans, I was never sure when I could bill for it." PNs described financial disincentives that limited their role in coordinated care. For instance, many of the tasks PNs performed were not eligible to be billed through the MBS: "The doctor pays us, but our time is not always paid for ... the health assessments make a lot of money — around $200 a patient" and "There are not enough item numbers that recognise the nurse's time ... it minimises their involvement — for instance say you are teaching asthma education to a patient — there should be an item number but there isn't".

PNs were willing to participate in coordinated care, but, due to the lack of formal involvement, found it challenging to balance usual demands with the additional demands of the trial. They believed they were undervalued as a resource and were aware of the need for a clearly defined role in coordinated care in future.

Communication processes and networks

The relationship between SCs and PNs was critical to PN learning: " ... `the service coordinator was excellent, she showed me — we would do the care plans together". However, other comments by PNs demonstrated the gate-keeping role SCs could play, because they could either hinder or facilitate relationships: "The more I know my patients I start to develop relationships, build up trust ... the service coordinator walks in as the 'provider' ... they don't know my patients"; "I facilitate the GP's role in the community ... I will make the decisions who will get to talk to them"; "You are the communication"; "I was always the first point of contact with the practice — keeping in contact with the providers"; "The nurse is the triage of gate-keeping, you deal with the waiting room, the GP and outside stakeholders" and, "We

are the traffic flow wardens". PNs agreed that each practice had its own culture and any visitors, including SCs, had to fit into that culture.

Thus, the capacity of the SC to implement coordinated care depended not only on their own personality, time pressures, application and commitment to the job, but also on the support they received from the PNs. PNs acknowledged the important role of the SC for both clients and the practice, but suggested that this role was facilitated by PNs: "I was incredibly lucky with [our SC] ... she would ask for 10–15 minutes of the doctor's time and often would pass stuff through me".

At times it was difficult for PNs and SCs to negotiate their role demands. The input of the PN into care planning and coordination of care seemed to depend on the capacity of the SC. For instance, where the PN was highly involved and proficient in care coordination tasks, the interaction between the SC and PN was minimal: " ... the two community nurses [SCs] were overworked ... so we were left alone, although sometimes found we were isolated". Conversely, PNs indicated that when the SC had sufficient capacity or did not actively seek collaboration, PNs remained distant from the coordinated care.

PNs considered that time spent with the SC networking and learning about services and coordinated care was worthwhile. However, they also believed that this time should be structured and regular to be of value: "From my point of view it would be good to have something consistent ... to have everyone together, the PN, the SC working as a dynamic team" and "I think the SC should have 1 to 2 hours a week with the PN — go systematically through each patient and address the issues". PNs who were actively involved in the care planning process believed that they facilitated communication between service providers, SCs, GPs and clients: "I have learned so much about what is available ... I ring up [a local community health centre] ... I have built up a good relationship". The benefit of a collaborative SC–PN relationship for patients was recognised.

Similarly, one of the GPs acknowledged the valuable role the PN played in sourcing services and relaying this information to the GP and others: " ... our practice nurse has found out the most wonderful things and it's been so fantastic having her being able to find out what's available". For some GPs, contact with the trial was minimal as the PN managed most of the communication: "I guess from our point of view, the one who has the most contact with the [trial] would be our practice nurse, and I know that she always found the assigned nurses [SCs] and area supervisors fantastic ... our practice nurse is the one who tends to contact those people the most".

Long-term benefits and viability of coordinated care model

PNs agreed that care planning was beneficial for clients where comprehensive assessment had been conducted to develop the initial plans: "They [patients] are looked after better, it shows the comprehensive person, it is wonderful to see" and "It was actually nice, there was an element of care they [patients] never had before". PNs confirmed that the care plan facilitated GP awareness of the ongoing progress of the client's health needs and allowed more efficient use of client/GP time. For example one PN stated, "If the GP is too busy, he wouldn't normally identify any problems — but when you are using a care plan the doctor takes a bit more time and interest and thinks 'What is happening here, let's take a look'". This process provided motivation for GP commitment to coordinated care: "I like seeing the end result and I like seeing people get a better quality of life and seeing their lifestyles improve". As testament to the commitment to coordinated care, the PNs stated that they had taken an active role in facilitating a collective of local practices to support the employment of a permanent SC: "There are a group of PNs who are trying to liaise with a number of practices to implement a community nursing role".

Discussion

The findings provided insight into the possible role of PNs in coordinated care for individuals with complex and chronic conditions. Although

the sample size was small and is not representative, some general conclusions can be made about the nature of the PN role. Similar to the findings of many other studies about the role of PNs in primary health care in Australia, PNs played a supportive rather than instrumental role, but have demonstrated the potential to make a far greater contribution if given the opportunity.[4,6,8,14,18-20] Although initially not recognised or included as key stakeholders in the coordinated care model, the importance of PNs gradually became apparent in the evaluation, highlighting the need to interview PNs. The interview data confirmed the willingness of PNs to contribute to the process of care coordination. There is evidence to suggest that some PNs acted as linchpins, in some cases connecting the key players or facilitating the smooth passage of information and documents to ensure that coordinated care functioned effectively. This picture is similar to that described by Watts el al,[14] who identified "integration" as a key PN role. PNs facilitated interactions and enhanced the role of both GPs and SCs in coordinated care while continuing to contribute to clinical care, organisation and practice administration.

Interestingly, research into models of chronic disease care has highlighted the efficacy of delegating case management to appropriately educated nurses. For example, studies from the UK[21-23] where the role of the PN is more established, have shown that people are accepting of and comfortable with the PN if the nurse has a high level of knowledge and expertise. In addition, studies have suggested that nurses are equally effective as GPs in the identification and management of chronic illness, particularly in terms of follow-up care. For example, Wright et al[23] explored the follow-up care of cardiac patients delivered by PNs and found that when nurses had a high level of knowledge, patient satisfaction was high and the level of access to health care increased.

Recent research in Australia examined the role and acceptability of PNs from the perspective of consumers.[24-25] The consumers in these studies, although accepting that a nurse could have a greater role in general practice, wanted reassurance that any expansion of the PN role would not erode their choice to visit a GP when they wished. Nevertheless, consumers were supportive of PNs undertaking an expanded role if they were competent.

Watts et al[14] also identified expansion of the PN role in chronic disease management. However, they also noted that not all PNs wished to expand their role, as was found in the current study. The degree of role expansion/enhancement should be considered within the context of the specific need at each general practice, and the PN's level of competence and willingness to accept responsibility. PNs commented that their role in coordinated care placed additional demands on their already busy workload and could not be sustained unless formally recognised and remunerated.

Another salient finding from the study was the importance PNs placed on cooperation with SCs. This cooperation was considered to be a key factor in the success of coordinated care. Respect for, and facilitation of, each other's role was important and highlighted the necessity of initiating and sustaining structures that encourage and support collaborative engagement between different primary health care sectors.

A major barrier to coordinated care is the fact that collaboration among nurses is complicated by funding disparities. Although they serve the same clients, primary health care nurses are funded by different bodies with different foci of care. For example, in Queensland, community nurses are funded by the state government health system. They have a focus on public health and preventive health care as well as case management for individuals with complex needs. Domiciliary nurses are funded by non-government (usually charitable) organisations. They tend to focus on individual care and support of the sick, disabled and frail elderly in their own residences. In contrast, practice nurses are usually funded from the income of private medical practices (derived from the MBS and patient contribution) to assist GPs in the primary health care of clients of the practice. All

three groups of nurses may provide services to individuals with complex and chronic health conditions, but without any formal structure to facilitate coordination of care. This situation can result in duplication or gaps in care.

If general practice is to be the hub of primary care for people with chronic conditions, flexible models of funding are required to suit the individual needs and characteristics of each practice. For example, some general practices may want to employ appropriately educated and experienced nurses as case managers. These practices would require appropriate rebates. Other practices may engage the services of community nurses to act as SCs, requiring additional community nursing positions within the state medical system. Alternatively, organisations such as Divisions of General Practice or community groups could be funded to employ nurses as SCs for groups of general practices. Whatever model is adopted, PNs are clearly able to play a critical role in coordinated care and must be fully engaged in the process to facilitate its success.

Conclusion

General practice in Australia must cope with the growing numbers of individuals with chronic and complex needs. The Australian Government has recognised the need to reform the primary health care sector to address this issue, as evidenced by recent initiatives (including MBS items for chronic disease management and funding for innovative models of care such as coordinated care). An expanded role for PNs has been in place in the UK and New Zealand for some time. Despite Australian Government initiatives to follow suit, a number of barriers still exist. This study has suggested the need to trial a variety of models for the inclusion of PNs in chronic disease management to establish their acceptability, feasibility and effectiveness. Given appropriate education, support and recognition, PNs could play a far more significant role in the care and management of people with chronic and complex conditions.

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Competing interests

The authors declare that they have no competing interests.

References

1 Department of Health and Ageing. Nursing in general practice 2001-2002 budget initiative. Canberra: Australian Government, 2002.

2 Department of Health and Ageing. Medicare plus. Canberra: Australian Government, 2003.

3 Bonawit V, Watson L. Nurses who work in medical practices: a Victorian survey. *Aust J Adv Nurs* 1996; 13(4): 28-34.

4 Condon J, Willis E, Litt J. The role of the practice nurse: an exploratory study. *Aust Fam Physician* 2000; 29(3): 272-7.

5 Dunt DR, Temple-Smith MJ, Johnson KA. Nursing outside hospitals: the working experience of community nurses. Job characteristics. *Int J Nurs Stud* 1991; 28(1): 27-37.

6 Keyzer D, Hall J, Mahnken J, et al. A study of nurses employed in the primary care sector doctors' surgeries. In: Gum trees and windmills: a study in the management of time, space and the self-concepts of community-based nurses in one rural area of Victoria. Warnambool: Deakin University, 1991.

7 Le Sueur H, Barnard A. Nurses in general practice in metropolitan Western Australia. (92/06341 [D92/0723]). Canberra: Department of Health, Housing & Community Services, 1993.

8 Patterson EA, Del Mar C, Najman JA. A descriptive study of nurses employed by general practitioners in south-east Queensland. *Aust J Adv Nurs* 1999; 17(2): 13-20.

9 Draper M. UK National Health Service reforms — asserting public values in the face of the market. *Health Issues* 1995; 44(September): 15-8.

10 Dent M, Burney E. Changes in practice nursing: professionalism, segmentation and sponsorship. *J Clin Nurs* 1997; 6(5): 355-63.

11 Practice Nurse Editorial Board. Events that have shaped the role of the practice nurse in the past decade. *Practice Nurse* 1998; 15(8): 455-9.

12 Department of Health and Ageing. Nursing in general practice training and support initiative. Canberra, Australian Government, 2006.

13 Meadley L, Conway J, McMillan M. Education and training needs of nurses in general practice. *Aust J Primary Health* 2004; 10: 21-27.

14 Watts I, Foley E, Hutchinson R, et al. General practice nursing in Australia. Canberra: Royal Australian College of General Practitioners & Royal College of Nursing, 2004.

15 Halcomb E, Patterson E, Davidson P. Evolution of practice nursing in Australia. *J Adv Nurs* 2006; 53: 376-90.

16 Halcomb EJ, Davidson P, Daly J, et al. Australian nurses in general practice based heart failure management: implications for innovative collaborative practice. *Eur J Cardiovasc Nurs* 2004; 3: 135-47.

17 Pricewaterhouse Coopers. Coordinated care trial evaluation report [unpublished report]. 2005.

18 McKernon M, Jackson C. Is it time to include the practice nurse in integrated primary health care? *Aust Fam Physician* 2001; 30: 610-5.

19 Patterson EA, Del Mar C, Najman J. Nursing's contribution to general practice: General practitioners' and practice nurses' views. *Collegian* 1999; 6(4): 33-9.

20 Patterson EA, McMurray A. Collaborative practice between registered nurses and medical practitioners in Australian general practice: moving from rhetoric to reality. *Aust J Adv Nurs* 2003; 20(4): 43-8.

21 Moher M, Yudkin P, Turner R, et al. Trial Collaborative Group. Cluster randomised controlled trial to compare three methods of promoting secondary prevention of coronary heart disease in primary care. *BMJ* 2001; 322: 1338-42.

22 Wiles R. Empowering practice nurses in the follow-up of patients with established heart disease: lessons from patients' experiences. *J Adv Nurs* 1997; 26(4): 729-35.

23 Wright FL, Wiles RA, Moher M. Patients' and practice nurses' perceptions of secondary preventive care for established ischaemic heart disease: a qualitative study. *J Clin Nurs* 2001; 10: 180-8.

24 Cheek J, Price K, Dawson A, et al. Consumer perceptions of nursing and nurses in general practice. University of South Australia, Adelaide: Centre for Research into Nursing and Health Care, 2002.

25 Hegney D, Buikstra E, Fallon T, et al. Consumer perceptions of practice nursing. Toowoomba: University of Southern Queensland, 2004.

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