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Missed care or missed opportunities in general practice nursing

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ABSTRACT

Background: Research into missed care has been conducted in various acute and some community healthcare settings; however, the experiences of general practice nurses (GPNs) are poorly represented in the literature.
Aim: To explore the role of the GPN and whether care activities are missed.
Methods: A qualitative descriptive design was used, employing semistructured interviews with 10 participants. The participants were GPNs working in a metropolitan or regional general practice in Australia, with a minimum of three years of experience in the role. A six-step process for thematic analysis was utilised for the extraction and presentation of findings.
Findings: GPNs rarely miss care; it is either delayed or rescheduled. Findings illustrate missed opportunities to provide care and enhance the role of the GPN. Factors contributing to missed opportunity are as follows: (i) difficulties navigating the GPN–general practitioner (GP) relationship, (ii) GPNs lack ongoing education commensurate with their scope of practice, (iii) Medicare policy fails to fund the GPN role, (iv) a rise in the number of salaried GPs leads to time pressures that limit the GPN role, (v) scope of practice constrained by time deficits, and (vi) communication problems within a siloed healthcare system limit GPN scope of practice.
Discussion: The initial aim was to identify missed care; however, findings suggest that GPNs rarely miss care, but they do miss opportunities to provide care and practice to their full scope.
Conclusion: Internal and external factors specific to the general practice context can contribute to missed opportunities for the work of the GPN.

Summary of relevance
Problem or Issue
Research, to date, identifying missed opportunities specific to the role of general practice nurses has not been published.
What is already known
The role of the general practice nurse is often limited by policy and the private business nature of general practice.
What this paper adds
Care provided by the Australian general practice nurse is rarely missed; however, there are numerous missed opportunities to enhance the nurse's scope of practice or improve patient care. This paper identifies six themes that highlight Australian general practice nurses' shared experiences of factors influencing missed opportunities for the general practice nurse role.

1. Introduction/background

Beatrice Kalisch and colleagues first described the phenomenon of missed nursing care in 2009 (Kalisch, Landstrom, & Hindshaw, 2009). Since then, there has been a plethora of research into missed nursing care, mostly from the acute sector (Fitzpatrick, 2018). Research has examined missed care from the perspective of patients (Kalisch, McLaughlin, & Dabney, 2012a), nurse managers (Dehghan-Nayeri, Shali, Navabi, & Ghaffari, 2018) during times of hospital mergers or in relation to staff satisfaction (Castner, Wu, & Dean-Baar, 2014; Kalisch, Terzioglu, & Duygulu, 2012b), teamwork (Kalisch & Lee, 2010), or the personality traits of the nurse (Drach-Zahavy & Srulovici, 2018). Studies have also focussed on perceptions of missed nursing care in specialised areas such as intensive care units (Rochefort, Rathwell, & Clarke, 2018) or for the older person with specific conditions such as fragility hip fractures (Fitzgerald, Verrall, Henderson, & Willis, 2020).

While Kalisch extended studies to include international collaborators (Kalisch et al., 2012b), the concept was further developed in Europe by the RN4Cast group, which explored the idea of rationed

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care (Schubert et al., 2013). More recently, nurse scholars in Asia (Liu et al., 2018), the Middle East (Cruza et al., 2016; Kalisch et al., 2012b), South America (Siqueira, Caliri, Kalisch, & Dantes, 2013), and Africa (Bekker, Coetzee, Klopper, & Ellis, 2015) have replicated the studies, drawing mainly on the Kalisch survey tool. Universally, this research reports that the primary reasons for missed care are inadequate staffing levels, resource deficits, and poor communication (Verrall et al., 2015).

A small number of studies have explored the concept of missed care in community settings such as nursing homes, outreach aged care programs, and mental health (Phelan & McCarthy, 2016; Phelan, McCarthy, & Adams, 2018). These studies capture community nursing, although they fail to separate out the range of roles played by nurses in these settings (Senek, Robertson, & Ryan, 2021; Willis, Verrall, McInnes, & Pate, 2024). Notably, there is a paucity of research focusing on missed care and the role of the nurse working in general practice. Within the primary healthcare sector and general practice in particular, the issue may not be missed care (Kalisch et al., 2012b) or even rationed care (Schubert et al., 2013), but rather missed opportunities (Tesoro, Peyser, & Villarente, 2018).

1.1. Missed care or missed opportunity

Kalisch defined missed care as any aspect of required patient care that is omitted (either in part or in whole) or delayed (Kalisch et al., 2009), while Schubert, Glass, Clarke, Schaffert-Witvliet, and De Geest (2007) noted that it was an intentional decision to ration, reprioritise, or omit care as a result of time and resource constraints. Defining missed opportunities for general practice nurses (GPNs) is more complex, given the contextual variability of the term's application in healthcare. It ranges from failure to provide timely diagnosis (Lever et al., 2013), preventative services (Gittner et al., 2015), or primary care such as screening (Gulitz, Bustillo-Hernandez, & Kent, 1998), immunisation, or education (Buchbinder, Wilbur, Zuskov, McLean, & Sleath, 2014; Gulitz et al., 1998; Omole, Ngobale, & Ayo-Yusuf, 2010). It also includes failure or delayed testing, lengthy waiting times for referrals or interventions (Gray, Rogawski McQuade, Scheld, & Dillingham, 2018), or a lack of communication about possible treatment options (Caldeira & Timmins, 2015). Missed opportunities have also been linked to specific models of care or clinical care pathways. In such instances, the pathway may lack specific interventions, or the clinician may not provide them (Whalin, Kreuzer, Halenda, & García, 2015).

In many ways, these examples resonate with the concept of missed care rather than missed opportunities, further compounding theory and conceptual development, thus making it difficult to define. The problem is partly the result of differences in the scope of practice of various health professionals. In this study, we have defined missed opportunities for GPNs as 'the failure to perform tasks within the nurse's scope of practice as a result of structural, educational, or interpersonal constraints'. In this definition, structural constraints refer more to policy and organisational issues than to staffing or resource shortages, as is the case of missed care in the acute sector, although, as will be seen, there are some specific situations where these factors may come into play. This paper assists in understanding missed opportunity and how it differs from missed care within a specific context; that of general practice nursing.

1.2. Project background

In Australia, GPNs work in rural, regional, urban, large or small general practices, or with discrete populations such as migrant or refugee groups (Australian Primary Health Care Nurses Association, 2023; Clendon & Munns, 2019). The role has evolved to become a specialist area of nursing, with GPNs having a central role in managing chronic conditions, promoting wellness, and preventing disease within the general practice environment (Halcomb & Ashley, 2019).

Funding for general practices in Australia is through the Medicare Benefits Scheme (MBS) with only a few activities specifically reimbursing nursing tasks, although the small number of practices have access to block or bundle forms of funding that are outside the scope of this paper (Verrall, Willis, & Henderson, 2023). As a consequence of the fee-for-service model, the salaries of GPNs are predominantly funded through practice revenue directly earned by the general practitioner (GP) (Verrall et al., 2023). This arrangement can prove to be an impediment to role expansion, given that the GPN may be restricted to performing tasks such as care planning that are specific to MBS item funding. The GPN role is also influenced by factors such as the demographics of the practice population, consumer needs, the nurse's education and experience, the professional relationship between the GPN and other members of the general practice team, and their willingness to work to their full scope of practice (Verrall et al., 2023).

A further consideration is the education of GPNs, a requirement as most nurses move into general practice, having had a career in acute or aged care and needing orientation to primary care. While some forms of education are available, GPNs are limited in their options. For example, in South Australia, the GP Plus initiative (2007–2010) was designed to increase the number of GPNs and equip those new to general practice with the education necessary to coordinate care for patients with chronic conditions; however, this no longer exists. The Australian Primary Health Care Nurses Association (APNA) provides education to GPNs, but this is mostly limited to financial members. More recently, APNA has been providing a graduate nurse program that may better equip nurses for the role. Education provided by Australia's largest union and professional nursing association, the Australian Nursing and Midwifery Federation (ANMF), does not cater specifically for GPNs, and education offered by private for-profit providers, while targeted, is costly.

Given these issues outlined above, including ongoing discussions about the inability of fee-for-service funding models to meet the care requirements of the Australian population, especially those of the chronically unwell, it is timely that the role of the GPN is critiqued in terms of what is not done, the opportunities missed, and how the role could be enhanced and expanded into the future (Duckett & Willcox, 2022).

2. Methods

To identify missed nursing care in general practice, we used a qualitative descriptive approach. We undertook semistructured interviews with 10 GPNs, with one working in a regional practice in Queensland and nine from metropolitan practices in Adelaide. Practices ranged from a small two-nurse practice to another consisting of 6 GPNs and 19 GPs. We employed a purposeful recruitment approach based on the research team's knowledge of the field, including our knowledge of those nurses who are members of the Australian Primary Health Nurse's Association. Participants were initially approached via email, and following the distribution of an information sheet outlining the aims of the research and details for the interview process, all participants provided consent for the interview. Ethics approval was obtained from the University of (inserted upon acceptance) Low-Risk Human Research Ethics Review Group (Faculty of Health and Medical Sciences) and met the requirements of the National Statement on Ethical Conduct in Human Research 2007 (updated 2018).

Interviews were conducted either in person or online via Microsoft Teams during July and August 2023. The interviews were taped and transcribed by the first author. The initial interview schedule was based on a set of questions developed by Kalisch et al. (2009), our own previous research (reference inserted on acceptance). We initially set out to

capture GPNs' perceptions of missed care; however, following analysis of the first two interviews by the team, findings identified that missed care was not the issue, shifting our focus to the concept of missed opportunities. We pursued this line of inquiry in subsequent interviews, modifying the questions, as well as checking for missed care (a copy of the interview schedule can be obtained from the first author).

Analysis of the interview transcripts drew on the six-step processes outlined by Braun and Clarke and was performed by CV and then confirmed by EW. Braun and Clarke recommend a six-step process of first becoming familiar with the data, followed by generating themes and codes. The fourth step requires a review of the themes to ensure that they reflect the data. Themes are then named, and examples are provided (Braun & Clarke, 2006). As noted above, we shifted our focus after the first 2 to 3 interviews to explore the concept of missed opportunity. Given this, while we followed the six-step process outlined by Braun and Clarke (2006), we needed to also examine the weighting each participant put on missed opportunity as against missed care. It was also at this point that we went back to read the literature on missed opportunity, given this emerging overall theme.

Unlike studies of missed care where nurses identify the range of commonly missed care tasks that are clearly within their scope of practice and their rationales, participants in this study identified barriers to enhancing their role and performing care for patients. We focus on these barriers and identify them as factors influencing missed opportunities for the GPN role. We provide a brief commentary on why GPNs indicated missed opportunity rather than missed care.

3. Findings: not missed care, but missed opportunity

All 10 participants had worked in general practice for between 3 and 30 years. Seven GPNs held additional nursing qualifications in midwifery, diabetes management, child and adolescent health, intensive care nursing, and high-dependency nursing. One GPN was working in a regional practice in Queensland, and nine were from metropolitan practices in Adelaide. Practices ranged from a small two-nurse practice to another consisting of 6 GPNs and 19 GPs. The mean interview time was 40 min. Six themes emerged from the interviews as underlying causes of missed opportunity: (i) difficulties navigating the GPN–GP relationship, (ii) GPNs lack ongoing education commensurate with their scope of practice, (iii) Medicare policy fails to fund the GPN role, (iv) a rise in the number of salaried GPs leads to time pressures that limit the GPN role, (5) scope of practice constrained by time deficits, and (vi) communication problems within a siloed healthcare system limit GPN scope of practice.

In a discussion on the concept of missed care, the GPNs noted that the non-urgent nature of much of their work in general practice meant that care was not missed, although, at times, it might be delayed or rescheduled. As one participant stated:

> We have a team of nurses so if I can't get something done, I will ask another nurse or admin to do it, anything that is not done can always wait until tomorrow (P1).

However, some participants did note a range of missed opportunities; the first to be explored is the relationship between the GPN and GP.

3.1. Theme 1: navigating the general practice nurse–general practitioner relationship

One of the issues for GPNs is the lack of a clear role statement. Many noted that what they do depends on their relationship with the GP.

> It took a long time for one doctor to accept my knowledge base and that I knew what I was doing and then I was involved in more things like accreditation (P 10).

Some GPs are not aware of the GPN's full scope of practice and, as a consequence, do not assign some care to the GPN. This was outlined by one GPN who said:

> If you look at each individual doctor, each has a different understanding of the nurse's role, some will make you feel like you are part of the team and others you need to prompt them like "can I do this for you" because they get caught up in wanting to do it all themselves. They don't understand the role of the nurse (P1).

Where the relationship is robust, the GPN will work to the full scope and assist the GP in providing comprehensive care. The comment by the GPN below illustrates that omissions in care occur because the practice may not employ sufficient numbers of GPNs to work closely with the doctor, or the doctor may not take time to read the GPN notes. To do that, the GP has to value the GPN's input. The GPN may note that particular tests are due and suggest that these be followed up, but they cannot order them.

> There are some things that we pick up that the GP has missed, for example, when we do chronic disease management, we look at things in detail like when did they last have ACR checked or bone density or colonoscopy and if it is due we will flag it with the GP and try and prompt them to do it….we can bring it to their attention but they have to action it, so they actually have to read our notes (P1).

Another participant supported this by saying:

> It is common that there is no handover between when the nurse does a care plan and when the doctor sees the patient. Ideally the nurse would be able to buzz the doctor and the nurse would go into the room and they would have a three-way conversation so that the GP is reinforcing what the nurse is doing and the nurse is reinforcing what the patient's goals are. ……it is not happening because you have too few nurses per GP. Also, the GPs might be part time they don't know the patient very well. (P6).

The two quotes above raise questions about the position of GPNs within general practice and how they are valued. One GPN noted that their work is not evaluated in any audit, pointing to ambiguity surrounding their role. As they note, the consequences are omissions in care.

> The nurse is the person doing a lot of work, but our work is not assessed, that is the thing, you would never know how we are doing because there are no processes except a patient might say they liked something (P6).

3.2. Theme 2: general practice nurses lack ongoing education

While various Primary Health Networks across Australia provide some education to GPNs, participants suggested that practices were not aware of the tailored education required by nurses new to general practice and that specific skills needed for the role are not taught in undergraduate training programs. Those nurses who had accessed the education argued that it focused too much on Medicare items and billing rather than clinical or population health issues, and this was seen to be a missed opportunity to enhance patient care.

In the example captured below, the nurse laments the lack of GPN skill to manage population health data and provide preventative health promotion services:

> A lot of nurses don't know how to get or use data, it is all about population health and most of the nurses don't know how to use the data extraction tools such as PENCAT, POLAR, or PRIMARY SENSE and this is missed opportunity really because we are not looking at the population that is not coming to the surgery, we

need to bring them in…….there needs to be training for nurses to use and understand these tools (P6).

Another participant said:

We miss so many opportunities to claim, we are trying to get our clinical audit going so we can generate lists of people that don't have management plans because the practice is virtually losing money, so we need to generate some business, I know it sounds harsh, but it is also to help patients (P8).

Despite the limitations placed on GPNs by shifts in Medicare policy that limit what tasks are reimbursed, or the willingness of the doctors to allow them to perform the task, some participants took it upon themselves to undertake additional training in clinical skills:

[GPs] wouldn't let nurses do ear syringes, so I found a good external education source and undertook the education. The doctors don't even get education to do ear syringes. The doctors paid for the course for me after I explained the benefits and what I would be able to do and also train the other nurse (P4).

Similarly, some GPNs do not see the value of continuing education and the way it may enhance critical clinical thinking and multidisciplinary teamwork. One example of missed care opportunities is outlined below:

Some nurses feel that continuing professional development (CPD) is a waste of time so they won't do it, …. So, there is an inability of the nurse to think outside what the doctor orders and with that mindset the nurses will say that's not my job, that's the doctor's job. It is a lack of critical thinking from the nurse. …(P4).

As a final comment on the theme of education, two points are relevant. The first identifies the need for the GPN to bring together education and experience, while the second highlights the need to keep abreast of shifts in technological support for general practice auditing:

Education, experience and intuition mean a lot, it might be the sound of a cough or the way someone is sitting, you have the experience to know that it might need to be further explored and you know whether to formulate a plan or not (P7).

Another GPN said:

….unless there is someone in the practice supporting the nurse education then I suppose they don't get it, It is up to us as the senior nurses to educate the new ones but you don't always have the opportunity or time to do that……. (P5).

The consequences of a lack of experience and education are illustrated in the example below:

Unless you have a nurse that is experienced or that went through GP Plus, nurses will do health assessments, using a care plan template that was designed in 1999 and it is pretty basic. There are no measurable parameters. These templates will just have a ticker box, ……. nurses are just filling in the form and giving it to the doctor so really what skills are they using and what are the real benefits for the patients? (P6).

3.3. Theme 3: Medicare policy failures to fund the general practice nurse role

All interview participants highlighted the lack of Medicare provider numbers for most of the care they provide and the erosion of this Medicare service over the years. Previously, there were provider numbers for GPNs to perform Pap smears, and quality improvement payments for specific conditions such as diabetes. These have been discontinued, or extended to include allied health, thus eroding the uniqueness of the nurse's role. While some GPNs do see patients by themselves, most of the time their patient care must be overseen by a GP for the practice to be reimbursed through Medicare. This was seen as a missed opportunity given that the GPN may be educated to undertake a certain task, but due to the GP having to be present or the care task needing to have a specific provider number, there is no financial advantage in having the nurse perform that task. This missed opportunity is reflected in the comment below by a GPN with postgraduate training in Child and Adolescent Family Health Nursing when she notes:

I do the health checks for 1-6 months and I am a trained CAFHN nurse but there is no money for the practice for my work so the doctor needs to come in and see the patient and the mother so we can bill …….Sometimes I would see babies for sleeping or settling and we can't claim for that (P2).

Another GPN stated:

I have been trained to do ear syringing at two different clinics and have done hundreds of them but when I moved here, I am not able to do them because it is clinic policy that the nurses here don't do them (P 10).

A further issue was lack of knowledge of Medicare provider numbers for GPNs. This is partly explained by the introduction of various policy initiatives over time and the failure of the nurses to keep on top of these changes and maximise opportunities for patient care. The recent introduction of Telehealth Medicare item numbers is a case in point:

There is a nurse item number for telehealth, and I don't think it is being utilised very well, it is $12.00, and it could be used if the PN wants to check up on a patient or go through their care plan and that is independent of the GP. I think there is missed opportunity there because most nurses don't know how to initiate that sort of care (P6).

Some participants argued that specific Medicare provider numbers for GPNs would improve the efficiency of the practice and the work of the GP:

I think having Medicare items only for the nurse without the GP having to participate would be ideal to enable the nurses to reach their heights…….nurses need item numbers attached to what they do so the GP is free to keep seeing other patients… there used to be a pap smear item for the PN but they pulled the plug on that but even though the GP didn't need to be present (P5).

Changes in Medicare item numbers reflect the work done by GPNs, as one interviewee stated:

With diabetes cycle of care gone, nothing has replaced it and now the GPs will just see the patient and bill a 36 and make it a long consult to include diabetes care. No one is really following up on the HBA1C and it has become a quality improvement activity to capture this data (P9).

3.4. Theme 4: a rise in the number of salaried general practitioners

Over the past 20 years, there has been a rise in the number of salaried GPs, especially females who are more likely to work part-time and do not want to be self-employed and run a business (Scott, 2014; Verrall et al., 2023). This shift means the GP is now an employee, or independent contractor, on a fixed salary and assigned to see a targeted number of patients per session in line with the Medicare payment model. One GPN explains:

Practices vary so much now and there are a lot less owners and the GPs are just going in and doing their work and going home and they are contracted they are not employees as such and there

has been a whole lot about payroll tax and so there has been emphasis on making them contractors and they are their own workforce sort of thing (P6).

Caring for people with chronic and complex health issues is time-consuming and may not be profitable financially. As a result, the extended care required that could be done in collaboration with the GPN may be omitted. As one participant explains:

> The practice owners are trying to make the practice work financially. The GPs don't seem to go the extra mile and follow up on things until the patient comes back and says, I haven't had this or that done…because they are thinking about how much money can I make in this hour…also they are restricted with time and they just do the here and now and the nurses arrange the referrals and follow up (P5).

3.5. Theme 5: opportunities constrained by time deficits

Similar to nurses working in the acute sector, GPNs also indicated that many opportunities to assist patients did not occur because of a lack of time, while others noted that if they had time, their patient assessments would enable more focused health education. They were also of the view that the time allocated to some care tasks under the Medicare funding model was insufficient for quality care and that administrative staff could probably perform some of the duties assigned to nurses, such as rosters and the ordering of medications and other medical supplies. GPNs also said that the business wheels moved too fast for the less experienced nurses to get all the tasks done on time, meaning that it was difficult to establish patient rapport and encourage health promotion activities. Commenting on this, one GPN said:

> Some of the junior less experienced nurses find it difficult to do everything in the time they had, they just lacked experience and there is not enough time for them …it was just the business wheels turning faster than they should……. If you have that ongoing relationship with the client, then time is not that much of a big deal, because they know you and trust you (P5).

Another GPN also noted that given the time constraints, she used existing care plan templates without considering additional care that could provide the patient with an individualised and tailored regime.

> I just use the template and delete things that aren't relevant, I don't have time to add very much to it, it's already got everything (P8).

Coupled with adequate time, GPNs need the necessary education to equip them to identify needs and plan care effectively. Time pressures can mean that additional care needs not identified on the care plan template are not being identified and acted upon, resulting in a care plan that lacks specificity in relation to each patient's individual needs.

3.6. Theme 6: communication problems within a siloed healthcare system

The lack of coordination within the Australian healthcare system is well known (Henderson et al., 2017). The siloed nature of the system is experienced not only at the interpersonal level between practitioners but also between the acute and primary systems leading to omissions in care. One particular issue highlighted by the participants was the lack of communication between the acute and primary sectors when patients were discharged from the hospital. In their view, this led to care being omitted:

> Communication from the hospitals is shocking and in an ideal world it would be great to contact and follow up on patients that have been in the ED and discharged, we don't get a lot of information and we just have to figure it out as we go along. If we do see a discharge summary later, it will say, "discharge to home, GP to organise referral for this or that or, bloods," there will be a whole list of things for the GP to do but we don't get the discharge summary. There are times when the patient needs a GP review "next week", but it doesn't happen because we don't get the discharge summary in time.
>
> There is a GP liaison to improve that and every now and then we will get a call from a doctor in the ED wanting to give a verbal handover and that is brilliant but not often (P1).

Another participant mentioned her role in assisting to bridge the communication gap:

> We don't get a lot of information from allied health, and not all of the reports are read by the GPs. I spend time looking through those letters and updating their care plan with the recommendations to avoid those things being missed, I make sure I read them and make sure there is a reminder in for let's say bone density test, so things are getting missed because of a lack of process for communication (P1).

4. Discussion

Although we set out to explore missed care in this study, GPNs quickly informed us that they do not miss nursing care activities but delay or reschedule them without risk to the patient. This study identified barriers to the enhancement of the GPN role and limitations to working to their full scope of practice. These were identified as factors contributing to missed opportunities for the role of the GPN. In detailing how this occurs, participants outlined structural, interactional, and process issues that led to missed opportunities for the GPN. An investigation of these factors shows clearly that the issues confronting GPNs differ from those faced by nurses in acute or specialist wards in hospitals. These are outlined below.

4.1. Structural factors leading to missed opportunity

4.1.1. Serial Medicare reform

One of the major issues raised by GPNs was the role of Medicare in determining their role. Established in 1984, Medicare is Australia's universal health insurance system, originally designed to have a strong focus on free primary care services (Verrall et al., 2023). Today, general practice revenue relies on a patient service fee (gap payment) as well as government financial support. General practices are predominantly private businesses, with Medicare funding organised around time-based fee for services (Danato & Segal, 2010). There are very few provider numbers available for specific nursing services, meaning that their capacity to generate funds for the practice is limited, and this curtails much of the work they could perform. This study has identified how Medicare policies have impacted the GPN role. Serial shifts in what a practice can claim for GPN work are part of a broader attempt by Federal and some state governments to reorientate general practice to take a whole-of-population approach (McInnes et al., 2017).

While MBS item numbers and their associated funding are often the driving force for GPNs to be employed, they have also been an impediment to role expansion, with some GPNs restricted to only performing tasks related to MBS item funding such as care planning and health assessments (Anderson, 2012). While there are known benefits of a successful GPN–GP collaboration (Iles et al., 2014), its success is dependent on the willingness of the GP to relinquish some of the duties traditionally performed by them (Verrall, 2007). According to Afzali et al. (2014), this has contributed to some limitations of the role and scope of the GPN in relation to care activities.

This view is supported by Anderson (2012) who suggested that MBS items were an impediment to the expansion of the GPN role because they only allowed for certain tasks to be undertaken and restricted GPNs' ability to provide health promotion and prevention at a more holistic level (Anderson, 2012).

4.2. An increase in the number of salaried general practitioners

A further issue raised by GPNs was the impact of part-time and salaried GPs. In the UK, the research suggests that the level of patient satisfaction is lower where patients are less likely to see the same GP on return visits. Lack of follow-up and patients seeing multiple GPs with little integration of care were reported by the GPNs in this study, leading to care omissions. However, the evidence supporting GPNs' views is ambiguous. An earlier study by Erny-Albrecht, Bywood, and Tertesia (2016) argued that there was no difference in the behaviour between contracted, employee, or owner GPs in continuity of care. This preliminary evidence suggests that more research is required on patient care omissions by contracted or salaried GPs and what this means for the work of the GPN.

4.2.1. Education

The participants noted several issues around the concept of education. In South Australia, the GP Plus initiative (2007–2010) was designed to increase the number of GPNs and equip those new to general practice with the education necessary to coordinate care for patients with chronic conditions; however, this no longer exists. The APNA provides education to GPNs, but this is mostly limited to financial members, while education provided by Australia's largest union and professional nursing association, the ANMF, does not cater specifically for GPNs.

We outlined a range of factors informing the theme of education. Failure of GPNs to partake in educational programs, and the breadth of what is required to learn, coupled with the focus on technical or policy issues to the detriment of clinical expertise, were identified as significant issues for the GPN. The lack of a career structure and income to support educational qualifications, the inexperience of graduate nurses who might take up the role, and the loss of some government-funded, tailored education and training were also identified. In the introduction to the paper, we noted that research involving GPNs is often conflated with community or primary care nursing, which is much broader than nursing within general practice, and this is also a factor in tertiary education programs that have a broad appeal to primary or population health without the detailed analysis of what is required by GPNs. Within the Australian context, this is partly explained by the current model of general practice and the various Medicare initiatives as outlined above.

5. Limitations

One limitation of this research was that 9 of the 10 interview participants worked within metropolitan general practices within South Australia. This provided a rather focussed account of GPNs' experiences. This study did not involve a variety of general practice models; for example, no corporate or government-run practices were involved. Future research needs to address this omission along with possible refinements in the definition of missed opportunity.

6. Conclusion

Our observations suggest that activities provided by the GPN are not missed; instead, they may be delayed or performed by the GP. Research demonstrated that missed opportunities can be attributed to structural aspects, such as policy and MBS payments, and the working arrangements of the GP. Interactional issues such as the GPN–GP relationship and communication were also highlighted. Individual factors contributing to missed opportunities were identified as lack of skill, time, interest, or education. It is also possible that patients themselves lack interest in particular care processes and fail to attend appointments, which culminates in a missed opportunity for both the patient and the nurse. In addition, a particular practice or organisation may lack understanding of the illness pathway and associated supports available or not have appropriate protocols in place or the funds to support them. More research is needed to explore missed opportunities for the GPN that align with the nuances associated with corporate and government-run practices.

Authorship contribution statement

Claire Verrall: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration, Funding acquisition. **Eileen Willis:** Conceptualization, Methodology, Validation, Formal analysis, Writing – original draft, Writing – review & editing, Visualization, Supervision. **Alex Gerrie:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Writing – review & editing. **James Thompson:** Conceptualization, Methodology, Validation, Formal analysis, Writing – review & editing.

Ethical statement

The manuscript involved human research (interviews).

Ethics approval was granted for this practice involvement research by the Office of Research Ethics, Compliance and Integrity — the University of Adelaide, on 22nd June 2023. Ethics approval number: H-2023-129.

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Conflict of interest

The authors declare that they have no conflict of interest.

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