CSIRO PUBLISHING

REVIEW
https://doi.org/10.1071/PY23127

Australian Journal of Primary Health

LA TROBE UNIVERSITY

An integrative review of missed nursing care and the general practice nurse

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ABSTRACT

Background. The phenomenon of missed care has received increasing interest over the past decade. Previous studies have used a missed care framework to identify missed nursing tasks, although these have primarily been within the acute care environment. The aim of this research was to identify missed care specific to the role of the general practice nurse. **Methods.** An integrative review method was adopted, using The Mixed Methods Appraisal Tool to assist in a methodological appraisal of both experimental, theoretical, and qualitative studies. Thematic analysis was then used to analyse and present a narrative synthesis of the data. Data sources: CINAHL, SCOPUS, Web of Science and Google Scholar databases were searched between 2011 and 2022 for empirical research that reported missed care and the general practice nurse. **Results.** Of the 787 papers identified, 10 papers met the inclusion criteria. Three themes identified missed care in relation to primary healthcare nurses: under-staffing and resourcing, communication difficulties, and role confusion. **Conclusion.** Isolating missed care by general practice nurses was challenging because much of the research failed to separate out general practice nurses from community and primary health care nurses. This challenge was exacerbated by disparity in the way that a general practice nurse is defined and presented in the various databases. While some themes such as those related to communication and understaffing and resourcing demonstrate some parallels with the acute sector, more research is required to identify missed care specific to the general practice nurse.

Keywords: clinic, community, family practice, general practice, missed care, practice nurse, primary care, primary health care.

Received: 17 July 2023
Accepted: 16 January 2024
Published: 6 February 2024

Cite this:
Willis E *et al.* (2024)
Australian Journal of Primary Health **30**, PY23127.
doi:10.1071/PY23127

Introduction

For nearly 20 years, nurses across the globe have highlighted the problem of missed nursing care (Kalisch 2006; Blackman *et al.* 2014; Bragadóttir *et al.* 2016). The issue was first formally raised by Kalisch in the USA, who developed the MISSCARE survey (Kalisch *et al.* 2009), and Schubert working with a team from the RN4Cast group from hospitals in nine countries in Europe who made a distinction between implicit (missed care) and explicit rationing (prioritising or staking) (Schubert *et al.* 2008; Ebright 2010; Ludlow *et al.* 2020). The classic definition of missed nursing care is provided by Kalisch as: *any aspect of required patient care that is omitted* (*either in part or in whole*) *or delayed* (Kalisch *et al.* 2009, p. 1510). Since these earlier studies, research into missed nursing care has accelerated across the world, culminating in a major European funded program between 2016 and 2020 (Papastavrous *et al.* 2016). An increase in research publications has produced consistent results, identifying staffing levels, skill mix and resource deficits as major causative factors, irrespective of country, the organisation of the healthcare system or specialty (Cho *et al.* 2015; Verrall *et al.* 2015; Zuniga *et al.* 2015; Blackman *et al.* 2020*a*).

Both the Kalisch and RN4Cast studies focused on acute hospital surgical and medical wards (Schubert *et al.* 2009; Schubert *et al.* 2013; Palese *et al.* 2015). Subsequent research went on to explore missed care in neonatal intensive care settings (Tubbs-Cooley *et al.* 2015), residential aged care (Blackman *et al.* 2020*b*), rehabilitation wards (Buchini and Quattrin 2012), during hospital mergers or in relation to differences in staffing levels, skill mix and the COVID-19 pandemic (Castner *et al.* 2014; Dabney and Kalisch 2015;

Labrague *et al.* 2022). Missed care has also been examined across varied models of nursing care (Moura *et al.* 2020), cross culturally (Zelenikova *et al.* 2019), from the patient's perspective (Dabney and Kalisch 2015), as well as across various shift times (Blackman *et al.* 2015). Studies from Israel have examined the relationship between nurse personality traits and missed care (Drach-Zahavy and Srulovici 2019), while other researchers have explored the impact of team work (Kalisch and Kyung 2010) and nurse unit managers' perceptions of missed care (Dehghan-Nayeri *et al.* 2018). 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 and McCarthy 2016; Phelan *et al.* 2018). These studies capture community nursing, although fail to separate the broad range of roles played by nurses in these settings (Poghosyan *et al.* 2017; Senek *et al.* 2021).

In Australia, the term practice nurse refers to 'a registered or enrolled nurse employed in a primary care (general practice) setting' (Guzys *et al.* 2021, p. 390). Internationally, these nurses are known as practice nurses in the United Kingdom and New Zealand; however, in Canada, they are known as primary care nurses, family practice nurses or registered practical nurses (Verrall *et al.* 2023). In the USA, nurses working in general/family practice are often nurse practitioners. These nurse practitioners are part of a larger group of nurses known as advanced practice registered nurses, again adding to the confusion. In Ireland, nurses working within general practice are known as practice nurses, in addition, there are nurses who work in the community as well as public health nurses who have a graduate qualification in public health nursing and care for whole population coverage (cradle to the grave).

While the aim of this review focuses on missed nursing care within general/family practice, we note the challenges posed when extrapolating missed care specific to the role of the general practice nurse.

Methods

The synthesis and critical review of empirical literature was guided by the integrative review methods described by Whittemore and Knafl (2005). Integrative reviews contribute to evidence based nursing by adopting a robust and systematic process to search and synthesise diverse methodologies (Whittemore and Knafl 2005). This type of review was specifically chosen as it goes beyond analysis and synthesis of findings to provide new insights related to a specific phenomenon (Lubbe *et al.* 2020). The phenomenon explored for this research was missed nursing care within the general practice context and, according to Lubbe *et al.* (2020), an integrative review is especially important in identifying future research by bridging related areas of work and identifying central issues.

Search strategy

An initial search of the CINAHL database using the search term 'practice nurse', and terms known to be aligned with missed care is shown below:

TI 'practice nurse*' OR AB 'practice nurse*'

AND

TI (missed OR omitted OR undone) OR AB (missed OR omitted OR undone)

NOT

TI 'advanced practice nurse*' OR AB 'advanced practice nurse*'

This search yielded 28 results. Given that the term 'advanced practice nurse' does not relate directly to the general practice nurse role, this was excluded. A manual search of the 28 articles revealed that none specifically separated out general practice nurses in reporting missed care or if they did so, not all s in the research sites participated. As a consequence, it was then decided by the team to employ a wider search strategy as seen below.

The international literature was searched in CINAHL, SCOPUS, Web of Science and Google Scholar databases by applying the following search terms:

nurse or nurses or nursing

AND primary health care OR primary care OR general practice OR family practice OR community

missed OR omitted OR undone.

The following provides an example of how the search terms were used when using the SCOPUS database:

(TITLE-ABS-KEY (nurse OR nurses OR nursing) AND TITLE-ABS-KEY (primary AND health AND care) OR TITLE-ABS-KEY (primary AND care) OR TITLE-ABS-KEY (family AND practice) OR TITLE-ABS-KEY (community) AND TITLE-ABS-KEY (missed OR omitted OR undone) AND NOT TITLE-ABS-KEY (hospital OR acute OR inpatient OR ward) AND NOT TITLE-ABS-KEY (aged OR home OR residential) AND NOT TITLE-ABS-KEY (icu OR nicu OR oncology)) AND PUBYEAR > 2010 AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (SUBJAREA, "NURS"))

Articles were screened via titles, abstracts and full text against the inclusion criteria and appraised for methodological quality. Table 1 presents the inclusion and exclusion criteria applied.

Reference lists were examined for additional relevant papers. Nursing in primary care is rapidly evolving, and to ensure contemporary literature was captured, the search was limited to the period 2011–2022.

Empirical peer reviewed research that reported missed nursing care in primary care settings was included only

Table 1. Exclusion and inclusion criteria.

Inclusion criteria	Exclusion criteria
Articles written in English	Articles not written in English
Articles published from 2011–2022 (December)	Articles published prior to 2011
Primary, peer reviewed research	Articles that were not peer reviewed, primary research such as Editorials and Commentaries
Full text available	Full text not available
General practice, family practice, community, primary health care, advanced practice nurse	Aged care, nursing home, residential aged care facility, hospital, acute, inpatient, ward
Nurse, practice nurse	General practitioner, nurse assistant

where the role of the general practice nurse was identified, and where full text was available in English through institutional repositories. Discussion papers, reviews, reports and editorials were excluded, as were papers that only reported missed care in acute care settings, aged care or mental health facilities.

The database search identified 787 papers. Papers were imported into Endnote X9™ (Clarivate Analytics, 2020), where duplicates were removed ($n = 148$). One author (SM) assessed the titles of the remaining papers ($n = 639$) against the inclusion criteria resulting in the removal of 611 papers. Two papers were added by title after review of reference lists. A review of abstracts ($n = 30$) by two authors (EW and CV) excluded an additional 20 papers. All authors agreed that the remaining 10 papers met the inclusion criteria to undergo full analysis.

The methodological process identified above is presented in the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) diagram shown in Fig. 1.

Data abstraction and synthesis

Data from the remaining 10 papers were extracted into a summary table by the first author (SM) and confirmed by all members of the research team (Table 2). Due to diverse methodologies applied across papers, thematic analysis as described by Braun and Clarke (2006) was used to aggregate findings and present a narrative synthesis of the data. The first author (EW) undertook the initial synthesis and identified the preliminary themes, with all authors reaching consensus on the development of final themes.

Quality appraisal

Retrieved literature were independently appraised by two authors (CV and EP) using the Mixed Methods Appraisal Tool (MMAT) (Hong *et al.* 2018). The MMAT is a validated tool to appraise methodological quality across qualitative, quantitative, randomised control trials, non-randomised trials and mixed methods studies (Hong *et al.* 2018). The tool has been used extensively in the health sciences and to report methodological quality in primary healthcare integrative reviews (Stephen *et al.* 2018; Doherty *et al.* 2020; McInnes *et al.* 2022). Only minor quality issues were identified, for example, the representative sample size of the target population was small in one paper (Vázquez-Sánchez *et al.* 2020). Consistent with the MMAT, no paper was excluded based on methodological quality (Hong *et al.* 2018).

Results

The search yielded 10 papers suitable for review: one from Spain, two from the USA, three from the UK, one from Australia and three from Ireland. Six papers used quantitative methods, three were qualitative and one mixed. Analysis from the review presents those tasks identified as missed with associated rationales. This is followed by a discussion of the following identified themes: under-staffing and resourcing, communication difficulties and role confusion.

In most cases, the nurse researchers modified the survey protocol to more readily match the realities of general or family practice nursing, and in many cases the cohort of those surveyed was wider than nurses working in general or family practices (Phelan and McCarthy 2016; Phelan *et al.* 2017; Halcomb *et al.* 2021). Given this, it was necessary to tease out specific general practice nurse tasks from those of community health nurses. Tasks missed ranged from administrative or communication gaps, to medication errors (Vázquez-Sánchez *et al.* 2020), failure to provide preventative care such as education, health promotion or counselling (Gittner *et al.* 2015; Phelan and McCarthy 2016; Poghosyan *et al.* 2017), liaising with other health professionals (Phelan and McCarthy 2016), patient follow-up, documentation (Phelan and McCarthy 2016; Poghosyan *et al.* 2017), paediatric assessments and immunisation (Phelan and McCarthy 2016), mental health screening (Poghosyan *et al.* 2017) and responding to patient specific concerns (Poghosyan *et al.* 2017). Several studies gave the rates for missed care (Gittner *et al.* 2015; Phelan and McCarthy 2016; Phelan *et al.* 2017, 2018; Senek *et al.* 2020, 2021; Vázquez-Sánchez *et al.* 2020; Halcomb *et al.* 2021). However, the diversity of study designs made it difficult to compare these studies. There were reports on increased missed care, particularly during the COVID-19 pandemic for those patients with chronic conditions (Halcomb *et al.* 2021), for refugees and the homeless (Phelan and McCarthy 2016; Phelan *et al.* 2017) and the uninsured (Gittner *et al.* 2015). Some studies reported that general practice nurses were less likely to miss care compared to other community-based nurses (Halcomb *et al.* 2021; Senek *et al.* 2020, 2021).

Three themes identifying the reasons for missed care were evident in the 10 studies.

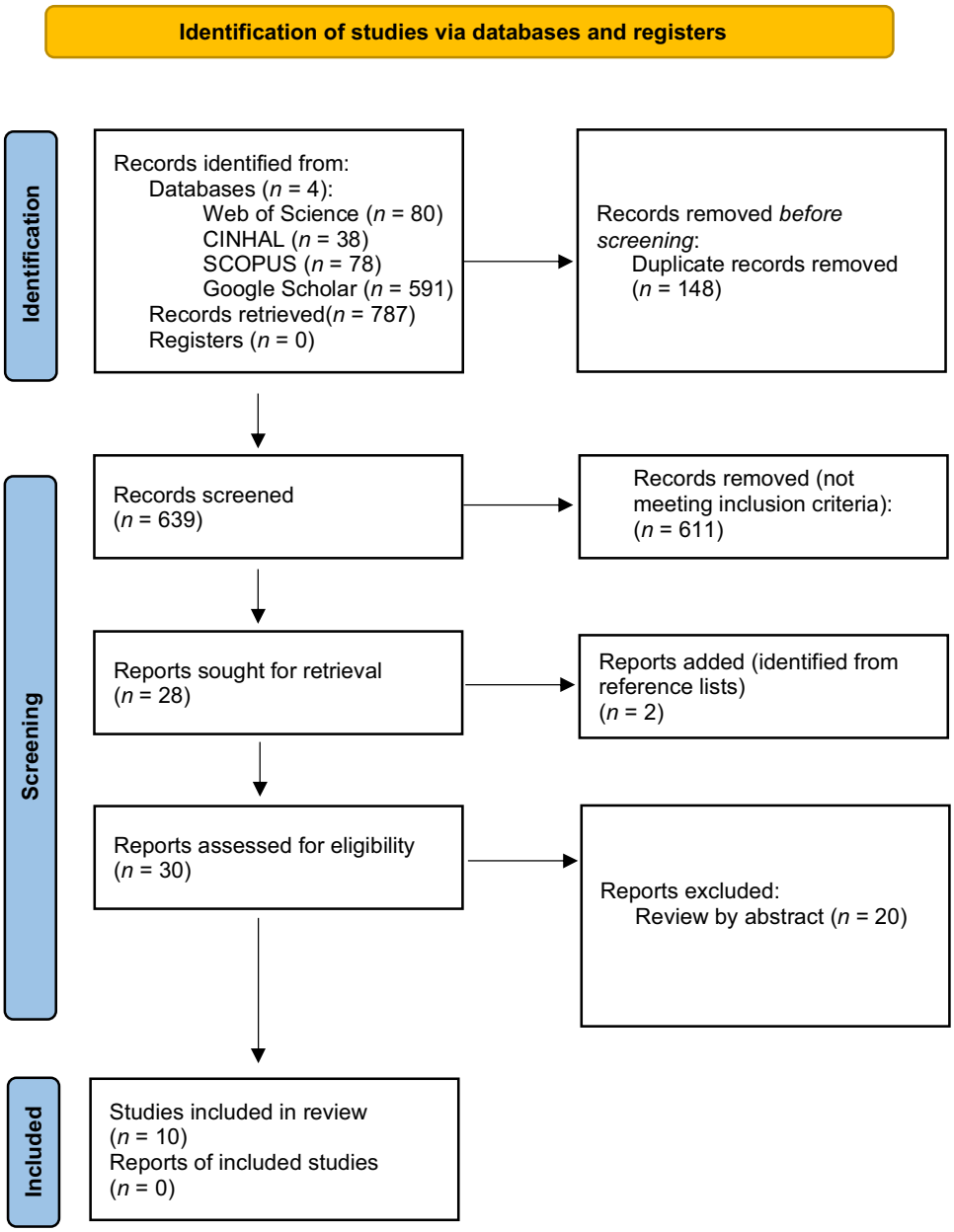

Fig. 1. PRISMA diagram. Source: Haddaway *et al.* (2021).

Under-staffing and resourcing

Six authors identified under-staffing as a major factor for missed nursing care (Gittner *et al.* 2015; Phelan and McCarthy 2016; Phelan *et al.* 2017; Senek *et al.* 2020, 2021; Vázquez-Sánchez *et al.* 2020), noting that caseloads were too high (Phelan *et al.* 2018) and the time with patients too short (Poghosyan *et al.* 2017). Tasks missed increased when staffing was inadequate (Senek *et al.* 2020, 2021). Two studies noted that staff numbers, along with the nurses age, experience and working time, impacted on the number of tasks that were missed (Halcomb *et al.* 2021; Phelan and McCarthy 2016). Closely aligned to staffing was resource scarcity. This included lack of support staff (Poghosyan *et al.* 2017). None mentioned resources such as computers or medical equipment as a resource issue.

Communication difficulties

Communication was identified as a major issue. These issues were sometimes caused by interruptions from other health professionals or family (Vázquez-Sánchez *et al.* 2020), or the nurse being forced to perform non-nursing duties (Halcomb *et al.* 2021), or having to communicate test results across platforms or between practices (Litchfield *et al.* 2014).

Table 2. Summary table: studies identifying missed nursing care in primary care settings.

Author/s	Title	Country	Aim	Sample/ context	Method	Findings
Vázquez-Sánchez *et al.* (2020)	Characteristics of recovery from near misses in primary health care nursing: A prospective descriptive study	Spain	To describe the frequency and types of near misses and the recovery strategies employed by nurses in primary health care	Four nurses working in an urban primary healthcare centre	Quantitative Non-experimental prospective descriptive study (questionnaire)	• A total of 185 near misses were recorded during the study period • The nurses treated an average of 135 patients per week. The average rate of recovery was about one error per week per nurse (s.d. 1.4) • Prevailing near misses were: administrative or communication-related errors, followed by medication-related errors • Of the near misses recorded, 175 occurred in the health centre (94.6%, 95% CI 91.1 to 98.1%) and 10 (5.4%, 95% CI 1.9 to 8.9%) in the patient's home • No near misses were reported on the centre's anonymous error information platform • A significant number of near misses occurred which could have been avoided with better communication among healthcare personnel • Reasons for near misses were work overload, communication issues, anxious about approaching doctor, poor communication with the patient, interruptions by other health professionals or family, ignorance of protocols • Were 10 practice nurses working in GP clinics in Spain. Only four nominated to collect data, although all 10 nurses were trained in method of collecting and recording errors and near misses. Number of near misses were by doctor requiring the nurse to approach the doctor to rectify it • Authors think there should be distinction between near misses and errors made by doctors and nurses given different skill sets • Makes a distinction between errors and omissions • Studies on errors have three phrases: (a) detect/identify an error; (b) comprehend its nature and origin and interrupt its course; and (c) correct or counteract the error (Gaffney *et al.* 2016)
Gittner *et al.* (2015)	Use of six sigma for eliminating missed opportunities for prevention services	USA	To determine if delivery of preventative services could be increased by changing nursing protocols	Number of nurses not specified One medical practice setting only	Quantitative and qualitative Patient interviews/data from medical records	• In the intervention group, nurses always offered needed preventative services to the patient • Preventative services provided were substantially lower in the usual care group (16.3% [748 services provided out of 4457 opportunities]; $P < 0.001$) • Similar differences were observed by category (education/counselling, immunisation and screening) • Of the three categories of preventative services, the lowest was for delivery of education/counselling • Participants receiving usual care had poor rates of receiving needed education/ counselling (5% in usual care group compared with 100% in the intervention group) • Thirty-one percent of the recommended immunisations were given to participants receiving usual care (vs 100% immunisation in the intervention group) • Insurance status significant in intervention group • Doctors were held accountable for delivery of preventative services although the nurse was the one that was charged to see that it was done • Used the SiGMA 6 protocol to deliver it. Is a process that allows for feedback loop of quality improvement

(*Continued on next page*)

Table 2. (*Continued*).

Author/s	Title	Country	Aim	Sample/ context	Method	Findings
Poghosyan *et al.* (2017)	Primary care providers' perspectives on errors of omission	USA	To develop a typology of errors of omission from the perspectives of primary care providers (PCPs) and understand what factors within practices lead to or prevent these omissions	12 physicians and 14 nurse practitioners from several primary care practices (PCPs)	Qualitative interviews	• Many PCPs reported most often omitting patient teaching and being unable to properly educate patients about their conditions, medications or how to self-manage their illness to maintain quality of life • PCPs reported they often fail to follow up with patients regarding their care or check whether the patient adheres to the treatment plan • PCPs reported about missing depression or other mental disorder screening • Because of time constraints, most PCPs reported prioritising patient care needs during the visit despite patients reporting multiple concerns • PCPs were concerned that during the short encounter they were unable to deliver all necessary care to address a patient's needs • Delivering all necessary care is only possible if practices had an adequate number of staff to share the patient load and support staff to delegate patient care tasks • Most PCPs said that effective teamwork and communication within their practices allowed the PCP to deliver thorough care and reduced errors of omission • Also only a small number of GP clinics, and nurses were nurse practitioners, not practie nurses
Halcomb *et al.* (2021)	The impact of COVID-19 on primary health care delivery in Australia	Australia	To validate the 'safe and effective staffing tool' and explore the impact of COVID-19 on the quality of Australian primary health care	359 primary healthcare nurses 167 were employed in general practice	Quantitative Survey	• Just under half of participants were employed in general practice (n = 167, 46.5%), with the remainder employed in community-based services (n = 97, 27.0%) or other primary healthcare settings (n = 95; 26.3%) • Nearly three-quarters of participants (71.3%) were satisfied with the quality of care they delivered • Participants working in general practice, and those with more nursing experience, had significantly higher scores in the factor 'perceptions of quality of care provided' • 19.8% (n = 71) of participants agreed that they left necessary care undone due to lack of time • 26.2% of participants agreed that they were too busy to provide the care that they would like • 39% (n = 140) of participants agreed that too much time was spent on non-nursing duties • Most participants (80.5%) reported that COVID-19 had impacted negatively on the detection and management of non-COVID related health conditions • Used the concept of care left undone • Significant that patients with chronic conditions neglected during COVID-19. This is backed up by AIHW (Australian Institute of Health and Welfare) evidence
Litchfield *et al.* (2014)	Test result communication in primary care: clinical and office staff perspectives	UK	To understand how the results of laboratory tests are communicated to patients in primary care and perceptions on how the process may be improved	Seven registered nurses and three healthcare assistants, four primary care practices	Qualitative Focus groups	• Method for communicating results differed between practices • Anxiety level or health literacy influenced methods by which patients received their test result • Study identified a lack of a method for detecting delayed or missing results • For the majority of tests, it took a patient-initiated request for results for the practice to become aware that a result had not been returned from the laboratory • Which staff member had responsibility for the task was frequently unclear

(*Continued on next page*)

Table 2. (*Continued*).

Author/s	Title	Country	Aim	Sample/ context	Method	Findings
Senek *et al.* (2020)	Nursing care left undone in community settings: results from a UK cross-sectional survey	UK	To demonstrate the prevalence of care left undone and its relationship to registered nurse staffing levels within community nursing	3009 registered nurses (community and care home)	Quantitative Cross sectional survey	• Only 37% of community respondents, and 81% of care home staff, reported having the planned number of nurses on their last shift • Prevalence of care left undone was 34% in the community sector, 33% in the care home sector and 23% in primary care • Care left undone increased as the proportion of registered nurses fell below planned numbers • Of a total of 1742 respondents to one question about care left undone in last shift, 318 were practice nurses; 32% of these indicated 'understaffed' and care was more often left undone when understaffed • When understaffed, 26.5% reported care left undone, while 21.4% in the full complement said care left undone
Senek *et al.* (2021)	Missed care in community and primary care	UK	To explore the prevalence of missed care in community and primary care settings, and to better understand its association with staffing levels	3009 registered nurses (community and care home)	Quantitative Cross sectional survey	In primary care and the community, 63% of shifts were understaffed In primary care and the community, missed care was significantly more likely to occur on understaffed shifts (39%) compared to fully staffed shifts (23%) ($P < 0.01$) Practice nurses reported fewer episodes of missed care compared to community or district nurses 318 were practice nurses and 32% categorised their shifts as understaffed 23% of practice nurses said they missed care (in understaffed categories) while in well-staffed categories, 61% did not miss care
Phelan and McCarthy (2016)	Community nursing in Ireland	Ireland	To identify levels of missed care among practicing public health nurses (PHNs) and community registered general nurses (CRGNs)	283 PHNs and CRGNs	Quantitative	• 235 (74%) were PHNs while 74 (26%) were CRGNs • Missed care was most frequently recorded for items categorised as health promotion • The two health promotion activities most frequently missed were among older people (73.5%, $n = 191$) and in the community at large (73.5%, $n = 186$) • A further 71.8% ($n = 158$) reported that health promotion in the area of heart disease and stroke was also missed • A total of 64.8% ($n = 142$) indicated that health promotion in the area of COPD was missed • 59.1% ($n = 140$) reported that health promotion relating to diabetes was missed • A total of 155 (55.6%) respondents reported that liaising with other healthcare professionals was missed • A further 146 (54.5%) of respondents indicated that advocacy work on behalf of clients was missed • Follow up assessments and initial client needs assessments were less frequently missed at 54.4% ($n = 147$) and 51.7% ($n = 123$) respectively • The highest level of missed care was recorded with regard to the homeless population with 72.1% ($n = 44$) of cases missed • Of those who reported having asylum seekers on their caseload, 67.3% ($n = 33$) indicated that during their last working week, this care had been missed • With regard to the travelling community, 64.4% ($n = 65$) of respondents reported that care relating to this particular disadvantaged group had been missed

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Table 2. (*Continued*).

Author/s	Title	Country	Aim	Sample/ context	Method	Findings
						• With regard to follow up on initial assessments of older people, this was missed in 62.6% (n = 169) of cases • The highest instance of missed care was identified with regard to updating client notes which 79.0% (n = 222) respondents reported • 69% (n = 281) of respondents reporting that 'other' administrative tasks were missed • The assessment of 3 and 4.5 year olds was missed by PHNs in 52.1% (n = 100) of cases • Child health promotion by PHNs was missed in 62.9% (n = 122) of cases
Phelan *et al.* (2017)	Examining missed care in community nursing: a cross section survey design	Ireland	To examine the prevalence of missed care in community nursing	458 community nurses	Quantitative survey	• Findings point to a higher level of missed care in nurses who had less than five years' experience and other variables such as age and those who worked additional unpaid hours • Work with the homeless recorded high levels of missed care (72.1%) • Management of the 'at risk register' for older people was missed by 70.7% of respondents • The updating of client notes was most frequently missed with 79.0% of respondents reporting this as missed • Child health promotion was missed by 62.9% of PHNs • 52.1% of PHNs reported that they had missed a 3–4.5 year old child's health check • Define missed care in three ways
Phelan *et al.* (2018)	Examining the context of community nursing in Ireland and the impact of missed care	Ireland	To identify the quantity of, and reasons for, missed care	283 community nurses	Qualitative interviews	• Missed care could be a result of 'impossible caseloads' • Findings demonstrate that missed care can be a significant yet normalised occurrence in community nursing

Where communication was sound, fewer omissions occurred (Poghosyan *et al.* 2017).

One study examined the problem of failing to communicate test results to patients, and identified a lack of adequate protocols as the key culprit (Vázquez-Sánchez *et al.* 2020). In this study, the researchers found that practices lacked a method for ensuring that patients received their test results, particularly when all was well, or when the results had been held up at a laboratory. According to Vázquez-Sánchez *et al.* (2020), there was no clear identification for which member of the healthcare team had ultimate responsibility for communicating results to patients. The authors found that there was often no routine method for communicating test results and if the patient did not call back, the results were often not reported (Litchfield *et al.* 2014; Vázquez-Sánchez *et al.* 2020).

Role confusion

Closely aligned to communication difficulties was role confusion. Phelan *et al.* (2018) highlighted a lack of understanding of the various roles of community nurses and postulated that this role confusion could contribute to the potential invisibility of the work done by some community nurses. Role confusion was highlighted by Litchfield *et al.* (2014), concluding that clear role delineation and communication protocols could ensure that staff were aware of their responsibilities and help reduce potential for error. Gittner *et al.* (2015) stressed that preventative service delivery was not always a routine part of all nurses roles and according to Vázquez-Sánchez *et al.* (2020), a lack of understanding of each other's roles contributed to anxiety about approaching the doctor about a task not completed.

Senek *et al.* (2021) reported that general practice nurses experienced more missed care than community or district nurses and postulated that this may be due to the controlled nature of their work. However, the specificity of this was lacking and this finding differs from the Halcomb *et al.* (2021) Australian findings.

Two studies by Phelan and colleagues extended beyond those working in general practice, to include nurses undertaking home visits for patients with chronic illness, refugees, the homeless and travellers, again, illustrating the challenges of the various nomenclatures attributed to the primary healthcare nurse, specifically the general practice nurse (Phelan and McCarthy 2016; Phelan *et al.* 2017). In some cases the work of the general practice nurses was separated out from that of other nurses (Poghosyan *et al.* 2017), while in others, similar to the Irish studies, the rates of missed care of all nurses working in community settings were reported as one group (Senek *et al.* 2020).

Significantly, these 10 studies were not as uniform in research design as many of those done in the acute sector in medical or surgical wards (Kalisch and Kyung 2010). For example in the Spanish study, only four of the 10 nurses in the practice agreed to take part, and there was an electronic system already in place to measure care omissions which was not used (Vázquez-Sánchez *et al.* 2020). Another study trialed a health promotion/education intervention and recorded the omissions in care, nominating the differences between the intervention and the care-as-usual group (Gittner *et al.* 2015). In some cases, missed care was the responsibility of the doctor, but nurses failed to alert them to this. This same study reported differences in medical and nursing omissions given the varied skills set (Vázquez-Sánchez *et al.* 2020). An interesting factor in one study was the fact that doctors were held accountable for preventative care, but nurses were responsible for performing the tasks.

Discussion

Ascertaining specific data about missed care and the general practice nurse is problematic. Reasons for this are three-fold; firstly, the nomenclature used to describe a general practice nurse varies between countries. In many instances, general practice nurses are positioned under the umbrella of community nurses, primary healthcare nurses or public health nurses, adding to the challenge of isolating the general practice nurse role and associated missed care. Secondly, an advanced practice nurse has been defined by the Australian College of Nursing as '... a leader in nursing and health care ... enabled through education at master's level' (ACN 2019, p. 6). This term is also used in the USA as an overarching term to which nurse practitioners belong. In addition, despite having different skill sets and scope of practice, there is confusion between the roles of a general practice nurse and nurse practitioner (Madahar 2015). Thirdly, this variation in terminology coupled with role confusion has culminated in barriers to searching databases to elicit specific general practice nurse missed care. Searching subject headings such as community health nurse, practice nurse and family practice nurse provided the research team with a greater opportunity to locate papers specific to the general practice nurse. This was necessary given that the term 'practice nurse' is often confused with the terms 'practical nurse' and 'advanced practice nurse' which can relate to nurses working in a variety of contexts besides general practice clinics. The confusion related to the lack of well-defined terms coupled with the variety of terms used to describe advanced practice nurses internationally has been highlighted by Dowling *et al.* (2013). These authors go on to say that while the term 'advanced practice nurse' is synonymous with a 'clinical expert', consensus on terminology and definitions is integral to any global advancement of the nursing profession (Dowling *et al.* 2013). This confusion added to our challenge and the inability to extrapolate data specific to missed care and the role of the general practice nurse.

Much of the available data groups 'community/PHC' nurses together under the one umbrella, adding to the difficulty

of extrapolating missed care specific to the general practice nurse. This has resulted in the general practice nurse often being included in research surveys and questionnaires that calculate missed care that may be inaccurate for the general practice context. For example, in a study by Halcomb *et al.* (2021), their survey of 359 PHC nurses included 167 general practice nurses, with information provided on the number of nurses, but the study did not highlight the specificity of the general practice nurse role.

An issue not identified, but appears elsewhere in the research literature, is the range of tasks undertaken by general practice nursess. In Australia at least, there does not appear to be a standardised role description with many arguing that the general practice nurse role is determined by their relationship with the general practitioner (McInnes *et al.* 2015).

Studies focusing primarily on the acute sector have identified the antecedents of missed care under the following headings: unit level, nurse level and patient level (Chiappinotto *et al.* 2022). This study identified resource and staff scarcities from a unit or hospital perspective, along with communication issues and role confusion. Within general practice, these issues are related to the nature of the practice and research related to the ownership or governance of a general practice is yet to be conducted. There are similarities in how communication failures contribute to missed care in both sectors; however, role confusion is less of a factor.

Resource and staff scarcities, along with communication issues have been associated with missed care in the acute sector, (Verrall *et al.* 2015). However, while nurses in the acute sector indicated issues with communication, there were few instances reported on role confusion. In addition, findings from the acute sector show that nurses are less likely to miss tasks linked to doctors' orders than those linked to activities of daily living (Bragadóttir *et al.* 2016).

Conclusion

This integrative review culminated in the identification of research articles identifying missed nursing care within the primary health care/community sector. However, as noted above, the studies failed to separate out general practice nurses from other community nurses or failed to identify specific care tasks missed by these nurses. Furthermore, in studies that focused solely on general practice nurses, not all those in the practice participated. As a consequence of these two factors, it is difficult to draw conclusions about the similarities in missed care between those working in the acute sector and those in general practice.

There are calls for an expanded role in general practice nursing. If this is to occur, more nuanced understandings of their role, how it is distinguished out from other community nurses and what they are currently rationalising, needs to be understood.

Limitations

One of the major limitations to this study is the lack of studies that identify specific general practice nurse care tasks from other nurses working in primary care and community settings.

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Data availability. Data sharing is not applicable as no new data were generated or analysed during this study.

Conflicts of interest. The authors declare no conflicts of interest.

Declaration of funding. This research did not receive any specific funding.

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