



# Improving the provision of preconception care in Australian general practice through task-sharing with practice nurses

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Received: 29 July 2022 Accepted: 23 November 2022 Published: 19 December 2022

#### Cite this

Withanage NN et al. (2023) Australian Journal of Primary Health, **29**(3), 217–221. doi:10.1071/PY22161

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#### **ABSTRACT**

Preconception care (PCC) is effective in reducing modifiable risk factors and optimising maternal health. Primary care services such as general practices in Australia are an appropriate setting to provide PCC. However, PCC is not routinely provided in most of these settings, and many reproductive-aged women and men are not aware of the need for PCC. In this forum article, we discuss the factors that hinder PCC provision in Australian general practices and make recommendations on how access to PCC services can be broadened in Australia, including the potential opportunity for general practice nurses to contribute to the provision of PCC.

**Keywords:** general practice, practice nurses, preconception care, preconception counselling, primary health care, primary prevention, public health: practice, reproductive health services, women's health services.

### Introduction

The preconception period is defined as the phase before conception (Toivonen *et al.* 2018). Globally, women have low levels of knowledge relating to the preconception period and may not change their lifestyle behaviours prior to conception (Toivonen *et al.* 2018). Optimal maternal health during this period is a key determinant of pregnancy outcomes, the health of the mother and the newborn (Dean *et al.* 2013; Stephenson *et al.* 2018). Certain lifestyle behaviours such as inadequate physical activity, substance use, poor nutrition and excessive alcohol consumption may negatively influence pregnancy outcomes and thus are classified as preconception risk factors. These risk factors may result in adverse pregnancy outcomes including neural tube defects (NTDs), congenital heart defects, pre-eclampsia, pre-term birth and miscarriage (Bortolus *et al.* 2017; Toivonen *et al.* 2018). Increasing awareness about preconception risk factors can encourage women (and their partners) to modify higher risk behaviours (Kandel *et al.* 2021), which may reduce adverse pregnancy outcomes (Toivonen *et al.* 2018).

Preconception care (PCC) involves interventions that identify and modify the behavioural, biomedical and social risks present in reproductive-aged women and men before pregnancy. PCC differs from prenatal care, which is the care provided during pregnancy (Khan et al. 2019). Women who receive PCC are more likely to reduce risk factors and therefore have improved pregnancy outcomes (Dean et al. 2013). PCC interventions include, but are not limited to, fertility-awareness education (Hampton et al. 2016), dietary modification, folate supplementation, education on preconception risk factors and risk screening during the preconception period (Khan et al. 2019). According to a study conducted in Hungary, folic acid -containing multivitamin supplementation prevented 90% of NTDs, as well as about 40% of congenital heart defects (Czeizel et al. 2013). Furthermore, there is evidence that PCC is effective in reducing diabetes-related congenital malformations, maternal hyperglycaemia and preterm delivery during the first trimester of pregnancy in women with pre-existing diabetes mellitus (Wahabi et al. 2010). Globally, PCC provided in community and hospital settings has been effective in improving health knowledge of preconception risk factors (Mittal et al. 2014) and optimising behaviour change, including reducing alcohol and tobacco

consumption (Shannon *et al.* 2014), increasing folate intake (Elsinga *et al.* 2008) and encouraging weight loss (Mazza *et al.* 2013). These interventions can reduce maternal morbidity and mortality and improve pregnancy outcomes by reducing the risk of miscarriage, NTDs, abnormal birth weight and preterm birth (Elsinga *et al.* 2008; Temel *et al.* 2014; De-Regil *et al.* 2015; Tydén 2016; Khan *et al.* 2019).

In Australia, common lifestyle risk factors that lead to adverse pregnancy outcomes include inadequate physical activity, poor nutrition, excessive alcohol consumption and obesity (Thrift and Callaway 2014; McCormack *et al.* 2017). According to the Australian Institute of Health and Welfare, from 2017 to 2018, only 2.4% of women aged 18–24 years met the fruit and vegetable intake guidelines and 50% were insufficiently physically active, whereas 60% of women aged >18 years were overweight or obese and 31% exceeded risky alcohol drinking guidelines (AIHW 2019). The high incidence of lifestyle risk factors in the Australian population highlights the importance of raising awareness about preconception health.

Primary care settings such as general practices are usually the first point of healthcare contact for most people in Australia (Gordon *et al.* 2022) and hence an ideal setting to provide PCC. Although Australia does not have national PCC guidelines (Dorney and Black 2018), the Royal Australian College of General Practitioners (RACGP) and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) recommend implementing PCC in primary care settings for all reproductive-aged women (The Royal Australian College of General Practitioners (RACGP) 2016; Stephenson *et al.* 2018).

PCC is important for reproductive-aged women and can be provided opportunistically or routinely (Alemu et al. 2021). In Australian general practice, PCC is most commonly provided opportunistically (Walker et al. 2021) by general practitioners (GPs), who are the main PCC providers in Australia (Dorney and Black 2018). Opportunistic PCC involves GPs taking chances to raise preconception health topics and advice when they could, such as when women initiate discussions on stopping contraception, pregnancy planning or fertility (Walker et al. 2021). However, with one-third of pregnancies in Australia being unintended (Taft et al. 2018) and not all women being aware of the need for PCC (Khan et al. 2019), they may miss out on PCC if this is not provided routinely (Lang et al. 2020). Routine provision of PCC involves ongoing comprehensive counselling, healthcare professional assessments, action planning and providing clinical resource tools that optimises the health of women before conception (Tuomainen et al. 2013; Dorney and Black 2018; Simone et al. 2021). To ensure all reproductive-aged women have the opportunity to receive PCC, ideally PCC should be routinely discussed during their GP consultations (Fuehrer et al. 2015). However, given time restrictions and competing priorities during GP consultations, not all GPs routinely provide PCC or discuss the importance and availability of PCC (Mazza et al. 2013; M'hamdi et al. 2017).

Despite recognition of the importance of PCC and recommendations for provision of PCC in general practices, several factors hinder the routine provision of PCC in general practice. This article aims to discuss the factors that hinder PCC provision in Australian general practices and makes recommendations on how access to PCC services can be broadened in Australia, including the potential opportunity for general practice nurses to contribute to the provision of PCC.

## Factors that hinder routine provision of PCC in Australian general practices

#### **Patient factors**

A range of factors hinder reproductive-aged women's access to routine PCC services. First, women may not actively seek PCC as they may not be aware of the preconception phase and/or the availability of PCC services (Khan et al. 2019). Second, women may perceive themselves as having sufficient knowledge of preventative care, especially if they have already had children (Poels et al. 2017); hence, they may not attend general practices or initiate PCC discussions with their GP (Khan et al. 2019). Furthermore, GPs are often required to manage a range of patient issues and therefore have competing priorities during a single consultation. Patients may have more immediate health conditions to discuss with their GP and may not have the time or opportunity to discuss PCC, particularly as GP consultations are time-restricted (Kizirian et al. 2019). Although booking more GP consultations would allow more time for PCC, this may not be acceptable to women, and may increase the burden on clinics and limit access for other patients with more critical conditions (Mazza et al. 2013). Therefore, preventative services like PCC may be considered a lower priority by GPs (M'hamdi et al. 2017).

### Healthcare provider factors

There are certain factors that limit GPs from routinely providing PCC in Australian general practices. A lack of national guidelines on PCC (Dorney and Black 2018) may contribute to inconsistencies in GPs' practices regarding the provision of PCC (Kizirian et al. 2019). GPs may also have different understandings of what constitutes PCC and their perceptions of risk factors may differ (Harris et al. 2009; Dorney and Black 2018; Stephenson et al. 2018). For example, the majority of GPs surveyed in one study in Sydney, Australia, did not consider overweight to be a significant preconception issue, and only 53% of GPs were aware of RACGP and/or RANZCOG PCC guidelines (Kizirian et al. 2019). Even though the RACGP and/or RANZCOG guidelines are valuable resources, all GPs may not be aware of these

resources that could enhance their preconception knowledge (Ojukwu *et al.* 2016).

# Improving access to PCC services through task-sharing with nurses

The World Health Organization (WHO) recognises tasksharing as an important strategy to improve access to health services (WHO 2017). Task-sharing enables lay and mid-level healthcare professionals, including community health workers, nurses and midwives, to safely provide clinical tasks, which would otherwise be provided by highlevel healthcare professionals (WHO 2017). Internationally, nurse-led primary care interventions are increasingly being implemented to fill gaps in care, improve quality of care, and reduce health inequities (Hoare et al. 2013; Moulton et al. 2022). There is evidence that nurse-led interventions improve self-management and health outcomes in a number of different health contexts; for example, asthma, weight loss, and blood pressure control (Hoare et al. 2013), and increase patients' satisfaction with their care (Laurant et al. 2005). Although there is limited evidence on the effectiveness of practice nurse (PN) provision of PCC in primary care settings, a study conducted in 2021 in the United States (US) demonstrated a successful PN-led initiative that strengthened implementation of PCC in a small primary care clinic (Simone et al. 2021). Task-sharing with PNs is a promising approach for improving access to PCC; however, given the limited evidence, its usefulness, effectiveness and applicability in the context of Australian general practices is still to be explored.

The provision of PCC in Australian general practice could be enhanced by task-sharing between GPs and PNs (Walker et al. 2021; Moulton et al. 2022). In Australia, approximately 14 000 PNs work within general practice and around 63% of general practices employ at least one PN (Lane et al. 2017), who could contribute to PCC services. Many PNs in Australia contribute to the provision of some sexual and reproductive healthcare services, including performing cervical screening tests, community education, distributing education resources and screening for sexually transmissible infections (Abbott et al. 2013; Moulton et al. 2021); however, they are often underutilised in the provision of the range of sexual and reproductive health services that are within their scope of practice, including PCC (Moulton et al. 2021). Women, PNs and GPs are receptive towards the idea of sharing the provision of PCC services between PNs and GPs (Hampton and Mazza 2015; Walker et al. 2021), and women perceive PNs to be approachable and understanding when discussing lifestyle factors (Mitchell et al. 2011). Although this presents an opportunity for PNs to contribute to PCC, a number of barriers need to be addressed to enhance PNs' contribution to PCC provision, as described below.

In order for PNs to play a greater role in providing PCC services, certain barriers need to be addressed. First, PNs will require PCC training and associated resources to develop their knowledge and confidence to provide PCC (Walker et al. 2021: Dorney et al. 2022). The Australian Primary Health Care Nurses Association provides an Australian government-funded online learning module, designed to improve the capacity of PNs to provide PCC in general practices (Hammarberg and Stocker 2021). An evaluation undertaken to explore the effectiveness of this module found that this learning module significantly improved PNs preconception knowledge and enhanced their confidence to provide PCC (Hammarberg and Stocker 2021). However, to encourage PNs to complete the training module, PNs may need ongoing professional development support from the practice (Price and Reichert 2017). Lack of appropriate funding models presents another significant barrier to task-sharing the provision of PCC with PNs (Walker et al. 2021; Dorney et al. 2022). Currently, most PNs are not eligible for a Medicare Benefit Scheme (MBS) provider number, hence the time spent with PNs would not be billable through MBS (Walker et al. 2021). Although some women may be willing to pay privately for PCC services (Walker et al. 2021), this may not be feasible for most. Therefore, to expand and financially support the role of PNs to provide PCC, appropriate reimbursements including a Medicare item number to bill PCC consultations with PNs could be allocated by the government (Walker et al. 2021). It is clear that a gap exists between current and recommended PCC for women in Australian general practice (Walker et al. 2020). To address this gap and improve PCC provision, it will be important to build on the successful PN-led PCC initiative in the US to develop and evaluate a model of care involving PNs in the delivery of PCC, and assess its effectiveness, feasibility and acceptability in Australia general practices.

Enhancing PCC provision in general practices would contribute to improving health knowledge, reducing preconception risk factors, and improving pregnancy outcomes in Australia. To support adequate PCC provision, there is a need to improve evidence-based PCC resources using the RACGP and/or RANZCOG PCC guidelines and encourage GPs to use these resources, which may enhance their preconception knowledge (Kizirian *et al.* 2019). The provision of PCC by PNs through a task-sharing approach may further enhance access to PCC services; however, although there is potential for PNs to contribute in this way, it is clear that current barriers must be addressed. This includes training support, development of appropriate funding models, and importantly, developing a model of care involving PNs as PCC providers.

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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. Danielle Mazza and Jessica Botfield are guest editors of the Australian Journal of Primary Health, but were blinded from the peer-review process for this paper.

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

**Author contributions.** NW, JB, KB and DM designed this study. NW led the manuscript writing with input from all authors. All authors reviewed and approved the final manuscript.

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