The aim of this review is to explore the literature relating to the delivery of cervical screening by practice nurses (PNs) in the United Kingdom and Australia. Research relating to PNs began in earnest approximately 15 years ago in the UK context, and more recently, c. 2005, in Australia. Although there is scant literature devoted specifically to the role of PNs in cervical screening, literature relating to the role of PNs provides evidence of the extent to which PNs in the United Kingdom and Australia are involved in the provision of cervical screening services. Findings from this review indicate that the role of PNs in the provision of cervical screening differs substantially between the United Kingdom and Australia. PNs in the United Kingdom provide a high percentage of cervical screening services, whereas in Australia general practitioners provide around 80% of all cervical smears, which account for only 0.6% of all procedures undertaken by PNs. Employment and funding models and inadequate multidisciplinary collaboration are contributing to the underutilization of PNs in Australia.

Key words: Australia, cervical screening, general practice, practice nurse, United Kingdom.
Literature (CINAHL) and Medline was conducted using the search terms ‘practice nursing’, ‘practice nurse’ and ‘nurses in general practice’. This proved unusually difficult, however, because of the problem of confounding search terms. Entering ‘practice nurs* in TI or SU’, for example, into the search facility for CINAHL admits all items in which the words ‘nurses’ or ‘nursing’ and ‘practice’ appear in the title or subject, and therefore searches yield many hundreds of items entirely unrelated to practice nurses or practice nursing. A further search using Google Advanced Scholar, using exact phrases, was much more fruitful. In both cases, however, excessive numbers of items were generated because of the frequent appearance of the phrase ‘advanced practice nursing’ in titles. The numbers of results from these searches, therefore, bore no relation to the actual numbers of relevant publications, and so have not been recorded here.

UK PRACTICE NURSES AND CERVICAL SCREENING

In the United Kingdom, accredited training in cervical screening is provided through Marie Curie Cancer Care, family planning courses and through postgraduate study. According to the National Health Service Cervical Screening Programme, every primary care trust has a nominated person responsible for its screening programme and for implementing the national guidelines. Women are advised that they can ask to have their smear taken ‘by a female doctor or nurse’ if they prefer, but this could mean that a woman can choose only the gender of the professional taking the smear, rather than choosing between a doctor and a nurse. More positively, the programme’s recent Cervical Screening: Pocket Guide, downloadable from its web page, is careful to refer to both doctors and nurses whenever discussing the smear test. The programme’s web site publishes detailed statistics but none identifies who conducts the test, so the extent to which PNs are involved in screening is unknown.

However, there appears to have been a steady rise in the proportion of UK PNs undertaking cervical smears, with almost 90% of PNs in a recent study reporting that they had received specialized training in cervical cytology, and that they perform roughly three quarters of cervical tests in general practice settings (Table 1). Furthermore, Jabareen found that whereas PNs carried out 72% of general practice smears in the most affluent practices, this increased to 83% in the most deprived. He also reported that tasks traditionally undertaken by PNs included ‘taking blood, changing dressings, treatment room activities, heath promotion (including height and weight measurement), immunization, cervical smears, and travel advice, [and that it was] was very rare for a GP to take cervical smear biopsy’ (italics added).

AUSTRALIAN PRACTICE NURSES AND CERVICAL SCREENING

It is reasonable to expect that the role of PNs in Australia will be rather different to that in the United Kingdom, given the differences between the two health systems. The extent of PNs’ involvement in cervical smear testing in Australia has not been subject to the detailed analysis of that in the United Kingdom, but data suggest that in relation to GPs, it is almost an exact mirror image of that reported by Jabareen, with the Australian National Cervical Screening Program’s ‘Information for Health Professionals’ identifying that ‘general practitioners take around 80% of all Pap-smears’. According to Byrnes et al., Australian PNs have the potential to improve cervical screening rates in the primary care setting, and yet an extensive search identified very little literature devoted specifically to the role of PNs in cervical screening. A report on PNs in Australia by Watts et al. arose from a partnership among the Royal College of Nursing Australia, the Royal Australian College of General Practitioners and the Australian Government, and sought not only to explore the role of nurses working within the Australian general practice environment but also to identify what educational needs were required to support the role. It stated the following:

... over a quarter of the nurses surveyed indicated they undertook activities in women’s health, which may have included undertaking cervical screening. Yet from the workshops, many general practice nurses indicated they had received limited education in cervical screening, with some learning through non-formal, on-the-job opportunities. Only the occasional general practice nurse appeared to have an accredited qualification in cervical screening. Exploration of the standards required to maintain safe and quality patient care in the area of immunization and cervical screening for general practice nursing is needed.

The confusion and apprehension among GPs and PNs over regulations and standards for cervical screening led the authors to recommended ‘that the Australian Government commission national general practice and nursing
<table>
<thead>
<tr>
<th>Author/Year/Journal</th>
<th>Title</th>
<th>Study type</th>
<th>Participant</th>
<th>Outcomes relevant to this review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenfield et al. (1987) Journal of the Royal College of General Practitioners</td>
<td>Practice nurses: Social and occupational characteristics</td>
<td>—</td>
<td>—</td>
<td>Found that 70% (Σ = 300) reported taking cervical smears</td>
</tr>
<tr>
<td>Atkin et al. (1994) Journal of Advanced Nursing</td>
<td>The role and self-perceived training needs of nurses employed in general practice: Observations from a national census of practice nurses in England and Wales</td>
<td>National survey conducted in 1992–1993</td>
<td>—</td>
<td>Found that 75% of PNs (Σ = 12589) undertook cervical smears</td>
</tr>
<tr>
<td>Caldow et al. (2001) Health Bulletin</td>
<td>Independent nursing practice: A national survey of attitudes of practice employed nurses in Scotland</td>
<td>A 1996 Scottish national survey</td>
<td>—</td>
<td>Found that 81% of PNs were performing cervical smears</td>
</tr>
<tr>
<td>Jabareen (2008) Chapter 4, PhD thesis, Faculty of Medicine, University of Glasgow</td>
<td>Skill mix development in general practice: A mixed method study of general practice nurses and general practitioners</td>
<td>NHS Greater Glasgow</td>
<td>Desk-based analysis of workload and clinical activities of doctors and nurses working in 37 practices across Scotland</td>
<td>Found that almost half (Σ = 200) reported cervical cytology to be their most common clinical task, with &gt;80% saying they had received appropriate specialist training</td>
</tr>
<tr>
<td>PhD thesis, Faculty of Medicine, University of Glasgow</td>
<td>Skill mix development in general practice: A mixed method study of practice nurses and general practitioners</td>
<td>Mixed methods study</td>
<td>PNs accounted for 27.5% of the sample</td>
<td>Found that 80% of PNs undertook cervical cytology in the course of their work, which was rated by roughly half as their most common clinical role, and accounted for up to 85% of all cervical smear tests in general practice settings</td>
</tr>
</tbody>
</table>

PN, practice nurses.
organizations to conduct a stock take of the national regulations and credentialing for immunization and cervical screening with the aim of determining the potential for creating national consistency. Nevertheless, neither the subsequent federal parliamentary research paper on practice nursing by Jolly, nor the report of the Australian general practice nursing study, mentioned cervical screening of any kind. Likewise, the 2009 report of the Australian Institute of Health and Welfare, Cervical Screening in Australia 2006–2007, offers no information regarding the role of nurses, who are mentioned in a single sentence in the 135-page report.

Furthermore, training for PNs to undertake routine screening tasks, including cervical screening, is not mentioned in the report of the federally funded project to develop a national framework for mentoring of PNs. Nonetheless, in the review of education and training for PNs in Australia by Parker et al., it is included in a list of PNs’ responsibilities.

Nagle and Walker’s chapter in an Australian text states that ‘the role of the practice nurse is increasingly encompassing cervical screening, as funding initiatives support this’, but there is no discussion of the role, and no evidence cited that supports this assertion. Earlier studies cast doubt on the extent to which such a role is acceptable to service users. They found that members of the public were uncomfortable with PNs undertaking advanced roles, including cervical screening. A more recent study, however, reported positive attitudes to registered nurse ‘Pap-smear’ providers. Although public confidence might be expected to have increased as service users have become more familiar with the role of the PN, the rate at which PNs actually undertake cervical screening suggests otherwise. Low uptake of cervical screening item numbers also suggests that screening is not widely accepted among PNs’ clinical colleagues either. Annual reviews of general practice are published by the Australian Institute of Health and Welfare, and provide estimates of PN activity, based on data from a sample of general practices. The 2010 review reports that PNs were involved in 6% of all general practice encounters and 4% of all problems managed, but provided <2% of all clinical treatments. The most common procedures they performed were injections (37% of their recorded procedures), dressings (21%), incisions (7%), international normalized ratio (blood tests relating to warfarin) (6%) and check-ups (6%), and the most commonly recorded Medicare item was for immunization (64%).

Most significantly, cervical screening and associated encounters accounted for only 0.5% of PNs Medicare item numbers in the sample, and only 1.4% of all PN Medicare claims nationwide. Whereas immunization accounted for 75% of all PN Medicare items, of all procedures undertaken by PNs, Pap-smears accounted for a mere 0.6%.

Jasiak and Passmore provide one of the few publications devoted to PNs and cervical screening, and write from an Australian perspective. They report a postal survey of PNs who had completed a ‘well women’s screening course’ in New South Wales between 2003 and 2007 (n = 292). Of the 131 respondents, 100 (76%) indicated that their role had expanded since completing the course, but the exact number conducting cervical screening was not stated. The study confirmed the finding of Mills and Fitzgerald that the gender of the GP is a significant factor in determining the likelihood and frequency of PNs conducting smear tests. Furthermore, ‘[p]ractices with one or more female GP were also significantly less likely to have a Well Women’s Clinic ($\chi^2 = 5.14, 1 \text{ df}, P = 0.02$)’. The training that PNs had received was, nonetheless, clearly judged to be adequate to the task since, of those who said they would like more training, only seven said they would like it to include cervical sampling techniques.

**PNs, cervical screening and education in Australia**

In New South Wales, Queensland and Western Australia, accredited courses enabling nurses to undertake cervical screening are provided by the respective family planning organizations; in Victoria, they are available through Family Planning Victoria or the Department of General Practice at the University of Melbourne; in Canberra, they are available through Sexual Health & Family Planning ACT (SHFPACT); and in South Australia, they are provided by Sexual Health Information Networking and Education (SHine SA), in conjunction with SA Cervix Screening Program. At the time of writing, there are no accredited courses located in Tasmania or the Northern Territory.

Nagle and Walker, while stating that cervical screening is an accepted part of the role of the PN in Australia, observe that the majority of PNs could choose not to undertake the required training. Joyce and Piterman’s national study of a sample of 104 Australian PNs found that only 23% had undertaken short courses relating to women’s health, including cervical screening. It must be noted, however, that although representative when
judged according to a variety of existing data, Joyce and Piterman’s sample was self-selected, in the absence of an accessible national database of PNs. Respondents to the Australian General Practice Network 2009 PN workforce survey, when answering about qualifications, did not confine themselves to postgraduate university certificates and diplomas but included short courses available to graduate nurses; nevertheless, no explicit data are presented as to the number of PNs accredited to perform cervical screening, with >10% reported having a postgraduate qualification in women’s health. Why PNs might choose not to obtain training, and whether PNs actually undertake cervical screening once trained, is a matter of speculation. Engaging in additional training could also be impractical, given that many PNs work part-time, the vast majority have already completed other postregistration courses, and that their work is already demanding and broad in scope.

**CONTEXTUAL INFLUENCES**

In Australia, the picture of practice nursing needs to be considered in the context of a lack of understanding of the role of the PN among doctors, and poor interprofessional working arrangements. These were identified in the national study by Watts et al., and are consistent with Price et al.’s conclusion that ‘professional and structural tensions may be unduly influencing the potential role of the nurse in general practice’ (p. 17). The findings of the studies by Mills and Fitzgerald, and Jasiak and Passmore, that cervical screening by PNs is inhibited by resistance from female GPs, and the conclusion by Mills and Fitzgerald that this is just one example of inadequate multidisciplinary collaboration leading to underutilization of PNs, suggest that once they have completed the relevant course, PNs might still not find it easy to incorporate cervical screening into their role.

In relation to interprofessional cooperation, Mills and Hallinan describe the social world of the PN as being medically dominated, and thereby ‘underpinned by a task-based model of primary care funding that focuses on the concerns of the dominant group’ (p. 493). That medical dominance can appear in the most explicit forms is illustrated in a recent study of 25 Australian general practices. This found that in some practices, the GP needed to be physically present in the nurse/patient encounter simply to enable the patient to obtain a Medicare rebate, and that this was perceived by PNs to damage their relationship with patients and to undermine self-confidence.

The study also found that 24% of the 25 practices studied exhibited styles of working in which the nurse had little autonomy over his/her own work and was delegated tasks by doctors. Similar findings have been reported elsewhere, notably the British study by Stark et al., which was described earlier, and the New Zealand study by Kenealy et al., which concluded that ‘[t]he current working environment of practice nurses in New Zealand does not readily support them routinely seeing patients before the GP. We suggest this is a lost opportunity for patient-centred preventive care’ (p. 136). Lastly, it could be observed that there is also likely to be little incentive for PNs to attempt introducing a new model of care when they are working in settings where cervical screening by the doctor is an established practice and accepted by patients without a second thought.

In summary, the key findings of this literature review are the following:

1. Although the literature on the potential for nurses to assist GPs dates back many years, research relating to PNs only began in earnest in the last c.15 years.
2. Most of the Australian literature on PNs has concerned the development of the role, reflecting the desire to identify and legitimate the emerging role of PNs, and for recognition of practice nursing as a specialty in its own right.
3. Although precise figures are not available in Australia, it can safely assume that there are now considerably more than 10 000 PNs nationwide.
4. Whereas in the United Kingdom 70–85% of cervical smears are taken by PNs, in Australia 80% of cervical smears are taken by doctors. In 2009, cervical screening accounted for only 0.6% of the total number of procedures undertaken by PNs in Australia. These figures suggest that not all professional colleagues have accepted that this is a legitimate role for PNs.
5. Despite considerable potential in reducing the incidence of cervical cancer, there are significant structural and interdisciplinary problems in Australia, which inhibit the ability of PNs to fulfil a role in cervical screening, not least those of inadequate remuneration, lack of career structure and poor interprofessional relationships.

The introduction of the Practice Nurse Incentive Program in Australia on 1 January 2012 will perhaps support a more active role for PNs in the provision of cervical screening; however, the loss of specific Medicare item numbers will reduce available metrics concerning
PN activity. The programme will provide incentive payments to eligible general practices, Aboriginal medical services and Aboriginal community controlled health services towards the cost of employing a PN, with the aim of increasing opportunities to flexibly utilize PNs’ skills in areas that meet the needs of clients and improve efficiencies specific to individual practices. Cervical screening activities undertaken by a nurse practitioner working in a general practice are also unable to be clearly identified from the existing Medicare item numbers. We found no studies pertaining to the role of nurse practitioners in Australian general practice.

CONCLUSION

Not only are Australian PNs failing to achieve their potential as a cost-effective contributor to primary health care, but also their value in reducing health-care inequities is not being realized. Evidence from several international studies suggests that PNs tend to improve services in resource-poor areas with low doctor–population ratios, such as remote and rural areas, and in areas of social deprivation. There is a consequent, albeit slow, reduction in inequity between affluent and deprived areas in relation to the screening and detection of cervical cancer. In Australia, the realization of PNs as providers of cervical screening services is a potentially untapped resource constrained by funding and employment models that foster a hierarchy of unsupportive disciplinary power. The recent introduction of a new practice nurse funding model could address some of these constraints.

REFERENCES

21 Jasik S, Passmore E. Enhancing the roles of practice nurses: Outcomes of cervical screening education and training in...


