Original Article

Nursing workforce in very remote Australia, characteristics and key issues

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Abstract

Objective: To describe the nursing workforce in very remote Australia, characteristics and key issues.

Methods: Data were collected from four main sources: the refined CRANAplus database of remote health facilities; the 2006 census which provided population and percentage of Indigenous people in communities in very remote Australia; a national survey on occupational stress among nurses and an earlier study into violence and remote area nurses conducted in 1995. A descriptive analysis of the data was conducted.

Setting: Health facilities in very remote Australia.

Results: The registered nursing workforce in very remote Australia is mostly female (89%) and ageing, with 40.2% 50 years or over, compared to 33% nationally. Many (43%) are in remote Indigenous communities. Over the last decade, there has been a significant decrease in registered nurses with midwifery qualifications (55%) and in child health nurses (39%) in very remote Australia. Only 5% have postgraduate qualifications in remote health practice.

Conclusion: The nursing workforce in very remote areas of Australia is in trouble. The workforce is ageing, the numbers of nurses per population has fallen and the numbers of midwives and child health nurses have dropped significantly over the last 15 years. As many of these nurses work in Indigenous communities, if these trends continue it is likely to have a negative effect on ‘closing the gap’ in Indigenous health outcomes.

KEY WORDS: Indigenous community, nursing workforce, remote area nurse, remote health, remote workforce, very remote Australia.

Introduction

Registered nurses are the largest and geographically most evenly distributed of all health disciplines in Australia. While numbers of other health professionals generally decrease with increased remoteness, registered nurse numbers are relatively stable.1 However, while numbers of nurses have risen in most of Australia between 2003 and 2007 (830 to 891 full-time equivalent nurses per 100 000 population), numbers have fallen in very remote areas (934 to 865 full-time equivalent nurses per 100 000 population).2

A term to describe nurses who work in remote areas of Australia is remote area nurses (RANs). CRANAplus has described the role of RANs.

RANs in Australia provide and coordinate a diverse range of health care services for remote, disadvantaged or isolated populations. Their practice is guided by primary health care principles1 and includes emergency services, clinical care, health promotion and public health services. RANs work in a variety of settings including outback and isolated towns, islands, tourism settings, railway, mining, pastoral and Indigenous communities.4

The above description most closely resembles the role of nurses in remote primary health care (PHC) clinics. However, nurses in remote Australia work in a variety of settings, particularly small hospitals. There is little population level information about this workforce. To improve our understanding of the RAN workforce, this study identifies and describes the registered nursing workforce in very remote Australia.

Methods

Data were collected from four main sources. The CRANAplus database of remote health facilities,
What is already known on this subject:

- Although the professional body has described the role of a remote area nurse, there is very scanty essential population level information about the nursing workforce in very remote Australia.

What this study adds:

- This paper describes the registered nursing workforce in very remote Australia and the communities in which they work. It details the number of nurses, their characteristics and distribution, and the changes in the workforce over the last 13 years. The study highlights the vulnerable status of the current remote health workforce.

originally developed through the state/territory representatives’ network, was further developed to identify the number of nursing positions and all nursing sites in very remote Australia. The sites were identified through web searches of health services, mine sites, aged care and tourist facilities. The database was further refined by an expert reference group at the 2007 National Council of Remote Area Nurses of Australia (CRANA) Conference. All health facilities that employed registered nurses in very remote communities were included in the revised database and each was contacted by phone or email between August and December of 2008 to verify or obtain information about numbers of registered nurses.

Secondly, population and percentage of Indigenous people in communities in very remote Australia was sourced from the 2006 census. Information on a small number of Indigenous communities found on the Australian Bureau of Statistics website was sourced from the health centres.

The third source of data was a national survey on occupational stress among nurses. This structured questionnaire was distributed to all 1009 registered nurses (1076 nursing positions identified, with 67 positions identified as vacant) working in Accessibility/Remoteness Index of Australia (ARIA+) ‘Very Remote Australia’ in 2008. Each health facility was contacted after the mail out of the questionnaire and a second round of questionnaires were sent out to maximise the response rate. Ethics approval was granted by four human research ethics committees in the Northern Territory (NT) and South Australia.

The last source of data was compared to an earlier study into violence and RANs conducted in 1995. A questionnaire was distributed to all members of the CRANA at that time. A descriptive analysis was conducted, documenting the number of registered nurses, where they worked, how many nurses worked at each health centre and the percentage of Indigenous people in each very remote community from the CRANApplus database. Age, gender and educational qualifications were described from the study into occupational stress among nurses. This was compared with similar data from the earlier study into violence and RANs to identify changes in the workforce over the intervening 13 years.

Results

Response rates

In the study on occupational stress among nurses in very remote Australia, a sample of 349 nurses responded, generating a response rate of 34.6%. This represents not just 34.6% of the sampling frame but 34.6% of the total population. The representativeness of the respondents was compared with the wider remote area workforce population and found that the proportions of responses from each state and territory were representative of overall workforce distribution. The respondents in the NT were compared with a sample of RANs who participated in a NT study of nurse and midwife mobility. Analyses revealed no significant differences between mean, age distribution and gender distribution. In the 1995 study on violence and RANs 227 questionnaires were returned, with a response rate of 41.4%.

Remote nursing positions

Registered nurses work in very remote settings in all states and territories other than Victoria and the Australian Capital Territory, where there are no ‘very remote’ areas. Totally 1076 registered nursing positions at 301 sites in very remote Australia were identified (Table 1). These positions are in a variety of settings that were grouped into eight mutually exclusive categories. Most (85%) nursing positions are in small hospitals (health facilities with in-patients) or PHC clinics (health facilities without in-patients, excluding other categories). Western Australia, Queensland and the NT have the largest number of registered nursing positions in very remote Australia. The NT has the largest number of very remote PHC clinics and nursing positions in this category. All nurses in this category work in teams of six
or less, except for one Indigenous community in the NT which has nine nurses, and two Indigenous communities in Queensland, with nine and 13 nurses, respectively (Table 2).

Many of the identified nursing positions (43%) are in remote Indigenous communities. The majority in very remote PHC clinics without in-patient facilities (78%) are in remote Indigenous communities. There are 532 nurses working at 146 Indigenous communities (Indigenous people > 50%) in very remote Australia.

**Single nurse positions**

There were 59 single nurse PHC clinics identified. The majority of nurses in single nurse PHC clinics are employed by State or Territory governments. The main employers are Queensland Health with 22 (37%) single nurse PHC clinics and Aboriginal Community Controlled Health Organisations (ACCHOs) with 20 (34%).

**Demographics**

The majority of respondents of the national survey of occupational stress of registered nurses in very remote Australia were female (89%); their mean age was 44 years, median age 46, and 40.2% were aged 50 years or over.

The mean hours worked per week by nurses in very remote Australia was 47.6. Mean hours lost because of physical or mental health concerns in a four-week period was 2.8.

In comparing the data on education achievements collected from the occupational stress study in 2008 and the violence study conducted in 1995, it is clear that more nurses are completing university studies now compared with 13 years ago. There has been a change in basic nursing qualifications from a general nursing certificate to a degree in nursing, and an increase in nurses obtaining postgraduate qualifications (Table 3). There has also been a significant decrease in the percentage of nurses with midwifery (from 65% in 1995 to 29% in 2008) and in child health qualifications (from 18% in 1995 to 11% in 2008).

**Limitations**

This paper presents the best available information about the distribution of registered nurses in very remote Australia and the type of facility in which they work. Detailed workforce data are scant. High rates of workforce turnover result in variation of nursing numbers from year to year.

In comparing qualifications between the 2008 and the 1995 surveys, the latter included RANs who were specifically members of the CRANA Inc., whilst the 2008 sample included all nurses working in very remote Australia, irrespective of membership of professional...
organisations. We acknowledge limitations arising from the different sampling methods in the two studies.

Discussion

A changing workforce

Nationally the nursing workforce is continuing to age, but nurses in very remote Australia are slightly older, with an average age of 44 compared to the national average of 43, and the workforce is ageing faster, with 40.2% over 50 compared to 33% nationally. Given national labour market trends it can be anticipated that there will be an increasing shortage of registered nurses in very remote Australia over the next 10 years. On average, RANs work more than two days more per week than all registered nurses nationally. RANs also miss significantly fewer hours for physical or mental health concerns. This is probably due to the difficulty in taking sick leave where there is no replacement.

Midwives and child health nurses

There is a maldistribution of midwives throughout Australia, with most working in cities and regional areas. However, the large apparent reduction in nurses with midwifery qualifications – 65% in 1995 to 29% in 2008 in very remote Australia is alarming. The NT Department of Health and Families has responded by supporting its RANs to undertake midwifery education. There has also been an increase in visiting midwifery services in many jurisdictions.

There has also been an apparent reduction in nurses with child health qualifications, from 18% in 1995 to 11% in 2008. This may be due to the change in postgraduate education and an increase in the variety of courses available to nurses. There is a need to increase the number of nursing with midwifery and child health qualifications in very remote Australia.

Education

While the educational opportunities for nurses in very remote Australia have improved over the last 10 years, there is still only a small percentage (5%) of nurses in very remote Australia prepared specifically for their role. The need for additional education for the advanced practice role of RANs has been well recognised. There is a need for greater effort in meeting the educational needs of RANs, which include emergency and extended clinical skills, public health, cultural safety, PHC, community development and management.

Single nurse clinics

CRANAplus and the Australian Nursing Federation do not support the employment of RANs in single nurse clinics.
posts due to increased stressors such as professional isolation, fatigue, safety, quality and exploitation. The relatively low number of NT Department of Health and Families single nurse clinics\(^{11}\) reflects the current policy of phasing out these clinics.\(^{15}\) Queensland, Western Australia and ACCHOs have yet to establish a similar policy.

### Conclusion

The nursing workforce in very remote Australia is the mainstay of health services to some of the most disadvantaged communities in Australia. The workforce is ageing, working long hours with little time lost for physical or mental health concerns. There appears to have been a significant decrease in midwives and child health nurses in very remote Australia, and while some measures are being undertaken to address this, it remains a significant need. Despite relevant education being available for 10 years, few nurses have remote qualifications for their role. Many of these nurses work in Indigenous communities, and if these trends continue it is likely to have a negative effect on ‘closing the gap’ in Indigenous health outcomes.\(^{15}\)

### References


### Table 3: Comparison of qualifications of nurses in very remote Australia 1995 and 2008

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Fisher et al.(^7) Number (%)</th>
<th>Opie et al.(^5) Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returns</td>
<td>237 (100)</td>
<td>345 (100)</td>
</tr>
<tr>
<td>General nurse certificate</td>
<td>213 (90)</td>
<td>131 (38)</td>
</tr>
<tr>
<td>Diploma in nursing</td>
<td>–</td>
<td>24 (7)</td>
</tr>
<tr>
<td>Degree in nursing</td>
<td>55 (23)</td>
<td>190 (55)</td>
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<tr>
<td>Registered midwife</td>
<td>154 (65)</td>
<td>100 (29)</td>
</tr>
<tr>
<td>Child health certificate + postgraduate qualifications in child health</td>
<td>43 (18)</td>
<td>38 (11)</td>
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<tr>
<td>Psychiatric nursing certificate</td>
<td>12 (5)</td>
<td>10 (3)</td>
</tr>
<tr>
<td>Graduate certificate</td>
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<td>69 (20)</td>
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<tr>
<td>Graduate diploma</td>
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<td>62 (18)</td>
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<tr>
<td>Master</td>
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<td>38 (11)</td>
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<tr>
<td>Postgraduate qualifications in rural or remote health</td>
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<td>17 (5)</td>
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