

**Nursing and midwifery  
labour force 2005**

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# **Nursing and midwifery labour force 2005**

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# Contents

|   |           |
|---|-----------|
| Acknowledgments.....  | vi        |
| Abbreviations.....  | vii       |
| Notes and Symbols .....   | vii       |
| Summary .....   | viii      |
| <b>1 Introduction.....</b>  | <b>1</b>  |
| Who are nurses? .....   | 1         |
| Data sources .....  | 2         |
| <b>2 Registered and enrolled nurses .....</b>   | <b>5</b>  |
| <b>3 Employed nurses .....</b>  | <b>9</b>  |
| Age and sex .....   | 9         |
| Geographic overview.....  | 10        |
| Working hours .....   | 12        |
| Hours worked in main and second jobs .....  | 16        |
| <b>4 Nursing supply.....</b>  | <b>20</b> |
| <b>5 State and territory profiles .....</b>   | <b>24</b> |
| Introduction .....  | 24        |
| New South Wales.....  | 25        |
| Victoria.....   | 27        |
| Queensland .....  | 29        |
| Western Australia.....  | 31        |
| South Australia .....   | 33        |
| Tasmania.....   | 35        |
| Australian Capital Territory .....  | 37        |
| <b>6 Sources of new entrants and re-entrants to the nurse labour force .....</b>          | <b>39</b> |
| Nurse training.....   | 39        |
| Nurse migration .....   | 40        |
| Nurses not employed in nursing .....  | 41        |
| <b>Appendix A Explanatory notes on the Nursing and Midwifery Labour Force Census.....</b> | <b>42</b> |
| <b>Appendix B Additional tables available from the AIHW website .....</b>                 | <b>47</b> |
| <b>Glossary.....</b>  | <b>48</b> |
| <b>References.....</b>  | <b>52</b> |
| <b>List of tables .....</b>   | <b>53</b> |
| <b>List of figures .....</b>  | <b>55</b> |

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Comments and suggestions from the National Health Workforce Principal Committee Jurisdictional Planners were also gratefully received.

# Abbreviations

|       |   |
|-------|---|
| ABS   | Australian Bureau of Statistics                   |
| AIHW  | Australian Institute of Health and Welfare        |
| ASGC  | Australian Standard Geographical classification   |
| DEMs  | Direct entry midwives                             |
| DEST  | Department of Education, Science and Training     |
| DIC   | Department of Immigration and Citizenship         |
| ERP   | Estimated Resident Population                     |
| FTE   | Full-time equivalent                              |
| NCVER | National Centre for Vocational Education Research |
| VET   | Vocational educational and training               |

## Notes and symbols

Throughout this publication, data may not add to the totals shown due to the estimation process for non-response (see 'Explanatory notes'). As a result of this process the estimated numbers of nurses may be in fractions, but are rounded to whole numbers for publication. Percentages are calculated on the unrounded figures. Where tables contain a 'not stated' category, percentage calculations exclude this category. Percent distributions may not sum to 100 because of rounding.

The population data used in this report are from the Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) Series. The ABS publishes preliminary, revised and final ERP figures. The 2005 ERP for states and territories shown in this report are from the 'preliminary' series, while the 2005 ERP for geographic regions are from the 'revised' series. There is a small difference between the total Australian populations between these two series.

|      |  |
|------|--|
| –    | nil or rounded to zero   |
| ..   | not applicable   |
| n.a. | not available  |
| n.p. | not publishable because of small numbers, confidentiality concerns or other concerns about the quality of the data |

# Summary

This report provides information on the nursing and midwifery labour force, based primarily on estimates derived from the 2005 Australian Institute of Health and Welfare (AIHW) Nursing and Midwifery Labour Force Census. This census collects information on the demographic and employment characteristics of nurses and midwives who were registered or enrolled in Australia at the time of the survey. It is conducted annually by state and territory health departments, with the questionnaire administered in most jurisdictions by the nursing and midwifery registration boards, in conjunction with the registration renewal process.

Estimates of the number of nurses and midwives by demographic and labour force characteristics, work locations and work activity are presented in this report. It also provides a picture of variations in the estimated supply of nurses across Australia in 2005, and in comparison to previous years.

The main findings of the report are:

- In 2005, the total number of nurses identified by the Nursing and Midwifery Labour Force Census (after adjusting for multiple registrations) was estimated to be 285,619, comprising 230,578 registered nurses and 55,042 enrolled nurses.
- The number of registered and enrolled nurses increased by 9.8% between 2001 and 2005.
- Between 2001 and 2005, the number of nurses actually employed in nursing increased by 7.1%, from 228,230 to 244,360.
- The average weekly hours worked by nurses and midwives increased from 30.7 hours in 2001 to 33.0 hours in 2005. Over the same period, the proportion of nurses working part-time (less than 35 hours per week) declined from 53.3% to 49.8%. This finding should be interpreted with some care as changes to the census form may have meant that unpaid hours were reported more fully in 2005 than 2001.
- Overall, nursing supply increased by 9.9% between 2001 and 2005, from 1,031 full-time equivalent (FTE) nurses per 100,000 to 1,133 FTE nurses per 100,000. This was mainly a result of both a 7.1% rise in the number of employed nurses and a 7.5% increase in the average hours they worked over this period. Due to the change in the question on hours worked in the AIHW survey, as outlined in the dot point above, this increase in FTE may be an over-estimate.
- Nursing supply appears to be evenly distributed across regions, ranging from 1,177 FTE nurses per 100,000 in Very remote areas to 1,074 in Major cities.
- The nursing labour force continued to age. The average age of employed nurses increased from 42.2 years in 2001 to 45.1 years in 2005. Over the same period, the proportion of nurses aged 50 years and over increased from 24.4% to 35.8%.
- Nursing continued to be a female-dominated profession, with males comprising 7.9% of employed nurses in 2005 (down from 8.4% in 2001).

The 2005 nursing and midwifery labour force estimates should be interpreted carefully, due to the relatively low response rates to the census and to the manner in which Victorian estimates were derived. The overall response rate to the 2005 census, excluding Victoria, is estimated to be 55.0%, a substantial decline from the 77.2% national response rate in 2001. In 2005, response rates in the Northern Territory (13.7%) and Western Australia (26.9%) were



particularly low. As a result, no estimates have been published for the Northern Territory. Estimates for Western Australia have been included in this report, but should be treated with care. The national estimates are based on census results from all jurisdictions, as the impact of any bias in responses from Western Australia and the Northern Territory is likely to be relatively small at the national level.

As Victoria could not provide data for 2005, estimates for that year are based on responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to registration/enrolment benchmark figures for 2005.

It should be noted that the estimates provided in this report may vary from workforce estimates produced by individual jurisdictions, as the AIHW adjusts to take account of nurses and midwives who respond in the survey that they are working mainly or only in another jurisdiction, and because of differences in imputation and estimation processes.



# 1 Introduction

This report is an overview of the demographic and labour force characteristics of nurses and midwives in Australia in 2005, based on information collected in the 2005 Nursing and Midwifery Labour Force Census. Some data from the 2001, 2003 and 2004 collections are also provided for comparison purposes and to provide an indication of trends in the nursing labour force over the previous 4 years. While this report focuses on the data from the nursing and midwifery labour force census collections, additional data are included on higher education from the Department of Education, Science and Training (DEST), on vocational education and training (VET) from the National Centre for Vocational Education Research (NCVER) and on migration from the Australian Bureau of Statistics (ABS).

## Who are nurses?

In this report, the term 'nurse' includes all persons who were either registered or enrolled with a state/territory nursing and midwifery registration board at the time the Nursing and Midwifery Labour Force Census was conducted. 'Registered nurses' include registered midwives, direct entry midwives, nurse practitioners, midwife practitioners, and Division 1, 3, 4 and 5 nurses in Victoria. 'Enrolled nurses' include enrolled nurses (mothercraft), and Division 2 nurses in Victoria.

All nurses in Australia must be either registered or enrolled with the appropriate state or territory nursing/midwifery board to practise. To approve registration or enrolment, registration boards must be satisfied that the applicant has completed an appropriate nursing or midwifery course, is fit and competent to practise, has a state of health such that they can practise safely and has sufficient command of the English language to ensure safe practice.

Most nurses are clinicians and, in the Nursing and Midwifery Labour Force Census, are defined as providing direct patient care, treatment, diagnosis or advice. Other nurses work as administrators, teachers/educators, or researchers.

The qualifications and skill level required for registration/enrolment vary, reflecting the type of work and level of responsibility for the various nursing classifications in the workplace. For registered nurses, a 3-year bachelor or post-graduate degree in nursing, or the equivalent, is usually required. This degree includes both theoretical and clinical aspects.

In some jurisdictions, midwives are now recognised as a separate profession. To register and practise as a midwife, a person must have appropriate qualifications in midwifery. There are two paths to these qualifications. Originally, midwives had to first qualify as a registered nurse and then undertake additional education and training in midwifery. However, universities now offer direct entry midwifery undergraduate programs. Direct entry midwives (DEMs), as with other midwives, must be registered with a nursing/midwifery board to practise, but DEMs are restricted to practising midwifery only, whereas other midwives are also able to practise general nursing.

Nurse practitioners also train as registered nurses but undergo additional education and training in nursing at an advanced level, in line with their additional responsibilities. Working autonomously in an advanced and extended clinical role, but in collaboration with other health professionals as part of a multidisciplinary team, authorised nurse practitioners may perform some of the functions traditionally performed by a medical practitioner, such

as prescribing some medications, ordering diagnostic tests and making referrals when operating within approved guidelines (ANPA 2006). Nurse practitioners are only a small group, numbering in the order of 200 in 2005, and are registered as such only in New South Wales, Victoria, South Australia, Western Australia and the Australian Capital Territory. States and territories have introduced, or are in the process of introducing, legislation to ensure that the title of nurse practitioner can only be used by those with the appropriate authorisation.

Enrolled nurses usually work with registered nurses to provide patients with basic nursing care, undertaking less complex procedures than registered nurses. Enrolled nurses must have completed an appropriate VET course or equivalent, usually of one year's duration and providing a theoretical base, as well as supervised clinical experience.

In addition to requiring the appropriate qualifications, registered and enrolled nurses are expected to achieve and maintain competence in whatever setting they practise, and to meet guidelines regarding recency of practice. National Competency Standards, which are agreed to by all states and territories, set out the core competency standards by which a nurse's training and performance is assessed in order for her/him to obtain and retain registration or enrolment as a nurse in Australia (ANMC 2005a, 2005b). Nurses wishing to re-register who have not had sufficient nursing practice in the preceding 5 years are required to undertake a re-entry to practice program. First year registered nurses are offered graduate nurse programs in the workplace to enable them obtain the required clinical competencies in order to practise without supervision.

## **Data sources**

This report focuses on data from the Nursing and Midwifery Labour Force Census conducted by the states and territories, supplemented with higher education data from DEST, VET data from the NCVET and migration data from the ABS. A brief description of these data sources is provided below and a detailed explanation of the Nursing and Midwifery Labour Force Census methodology and treatment of the data is provided in Appendix A.

## **The Nursing and Midwifery Labour Force Census**

The Nursing and Midwifery Labour Force Census collects information from nurses and midwives about labour force aspects such as employment characteristics, work locations and work activity. The population covered is registered nurses/midwives and is drawn from the registration files maintained by each state and territory nurses/midwives registration board or council.

The census is undertaken by each state and territory government health authority, with the co-operation of the relevant nursing/midwifery registration board. Nurses on the register/role at the time of the renewal process in each jurisdiction are sent a questionnaire, usually along with their registration renewal form, by each state/territory registration board. Responses to the census are processed by, or on behalf of, the state/territory health authorities and then sent to the AIHW for compilation into a national data set, analysis and publication. The final data collection is referred to as the 'AIHW Nursing and Midwifery Labour Force Census' and is cited in this manner as the source of data for most of the tables in this report.

Participation in the census is voluntary, and not all nurses who receive a questionnaire respond. To account for survey non-responses, the data are weighted up to the relevant registration and enrolment figures supplied by the nursing boards. Also, some nurses and midwives return partially completed questionnaires only and, where the proportion of missing values is small (less than 5%), values are imputed from other variables, based on the known distribution of survey responses to the variable. These imputing and weighting procedures are explained in Appendix A.

In 2005, a major revision to the Nursing and Midwifery Labour Force Census questionnaire was implemented in all jurisdictions except South Australia, resulting in some items in the South Australian data being different from those used elsewhere. For the purposes of this publication, data items which concord across jurisdictions are presented in a national context. Items with limited concordance are presented in state and territory profiles which show these data separately for each jurisdiction.

The response rates to the 2005 Nursing and Midwifery Labour Force Census in Western Australia and the Northern Territory were low (26.9% and 13.7% respectively). As a result, no estimates have been published for the Northern Territory in this report. Estimates for Western Australia have been included, but should be treated with care. Due to the relative size of the nursing and midwifery workforce in Western Australia and the Northern Territory, any biases in the estimates are unlikely to have a significant effect on the accuracy of the national figure. As a result, the estimates for Australia in this report include estimates for the Northern Territory and Western Australia.

Also in 2005, the Nursing and Midwifery Labour Force Census data for Victoria were unavailable and, in order to provide some national estimates for 2005, the 2006 Victorian survey responses were weighted to 2005 registration/enrolment figures supplied by the Nurses Board of Victoria. Therefore, care should be taken when using averages or making comparisons over time for Victoria and in making comparisons between Victoria and other jurisdictions.

The 2004 Nursing and Midwifery Labour Force Census figures for Western Australia have been revised because of a revision to the figures used for weighting (see Appendix A for details of weighting procedures). This flowed through to adjustments in the national figures for 2004. As a result, national figures and Western Australian figures which are in this 2005 report are different from those published in the 2004 report (AIHW 2006). In order to show the revised time series, updated 2004 data have been included in the tables which present nursing supply, as well as the 2001 and 2005 interval, which is mainly used in this report for comparisons over time. The 2004 report has not been revised, however the additional tables associated with the 2004 report <<http://www.aihw.gov.au/publications/index.cfm/title/10380>> have been revised.

## **Education data**

Data for students commencing and completing registered nurse basic training courses are from the DEST Higher Education Statistics series which contains data relating to students enrolled in higher education courses in each Commonwealth-funded higher education provider. Administrative records are maintained by each provider and sent to DEST where data are extracted and statistical reports produced.

Data for enrolled nurses are from the NCVET's statistical series on VET. Administrative records are maintained by VET providers and sent to the NCVET where statistical reports on

enrolments and completions are produced. Also, the NCVER conducts an annual survey of students after course completion to measure student outcomes from VET (the Student Outcomes Survey). In this publication, enrolment data show all current enrolments in basic enrolled nurse training courses from the administrative collection. Because the administrative data show all completions, including those that may not have resulted in achieving a qualification, the 'successful completions' (or 'graduates' as per the VET system) of basic enrolled nurse training courses have been sourced from the Student Outcomes Survey.

## **Migration data**

Persons arriving in, or departing from, Australia provide information on incoming and outgoing passenger cards. Incoming passengers also provide information in visa applications. These and other information available to the Department of Immigration and Citizenship (DIC) serve as a source for statistics of overseas arrivals and departures that are produced and published by the ABS.

However, these movements are not all for employment reasons, and therefore cannot be equated precisely with additions to and losses from the nursing labour force. Data on 'reason for journey', which includes 'employment' are available only for long-term visitor arrivals and long-term resident departures.

## 2 Registered and enrolled nurses

In 2005 there were 294,764 nursing registrations and enrolments in Australia (Table 1 and Figure 1). After taking account of the 9,145 apparent multiple registrations/enrolments (that is, nurses who were registered in more than one jurisdiction), the number of registered and enrolled nurses in Australia in 2005 was estimated as 285,619. This is a rise of 9.8% from 2001 (Table 1). Over the same period, the size of the nursing labour force (those employed in nursing, on leave, or looking for work) increased by 7.8%, while the number employed in nursing increased by 7.1%. In contrast, the number working as a clinical nurse increased by 2.7% over the period. The proportion of the nursing labour force looking for work in nursing declined from 2.1% in 2001 to 1.2% in 2005. Between 2004 and 2005 there was a sharp increase in the numbers reporting 'other' as their main nursing role, although this may be due to changes made to the survey form.

**Table 1: Nurses: labour force status and nursing role in main job, 2001 to 2005<sup>(a)</sup>**

| Labour force status/nursing role in main job                             | 2001           | 2003           | 2004 <sup>(b)</sup> | 2005           | Per cent change between 2001 and 2005 |
|--|----------------|----------------|---------------------|----------------|---------------------------------------|
| <b>In the nursing labour force</b>                                       | <b>236,562</b> | <b>245,531</b> | <b>253,592</b>      | <b>254,956</b> | <b>7.8</b>                            |
| <i>Employed in nursing</i>   | 228,230        | 236,645        | 243,916             | 244,360        | 7.1                                   |
| <b>Nursing role in main job</b>  |                |                |                     |                |                                       |
| Clinical nurse   | 191,731        | 195,975        | 203,517             | 196,998        | 2.7                                   |
| Clinical management and/or nursing/midwifery administration              | 23,741         | 25,536         | 24,314              | 25,976         | 9.4                                   |
| Lecturer/teacher/educator and/or supervisor of new nurses <sup>(c)</sup> | 6,352          | 7,138          | 7,579               | 7,226          | 13.8                                  |
| Researcher   | 1,839          | 2,056          | 2,069               | 1,976          | 7.5                                   |
| Other  | 4,567          | 5,939          | 6,437               | 12,183         | 166.8                                 |
| On extended leave  | 3,457          | 4,781          | 5,183               | 7,488          | 116.6                                 |
| <i>Looking for work in nursing</i>                                       | 4,875          | 4,106          | 4,493               | 3,108          | -36.2                                 |
| Employed elsewhere   | 1,997          | 1,588          | 1,814               | 1,094          | -45.2                                 |
| Not employed   | 2,878          | 2,518          | 2,678               | 2,014          | -30.0                                 |
| <b>Not in the nursing labour force</b>                                   | <b>23,513</b>  | <b>27,846</b>  | <b>29,110</b>       | <b>30,663</b>  | <b>30.4</b>                           |
| Overseas   | 4,336          | 4,476          | 4,546               | 2,081          | -52.0                                 |
| <i>Not looking for work in nursing</i>                                   | 19,177         | 23,371         | 24,564              | 28,582         | 49.0                                  |
| Employed elsewhere   | 10,194         | 12,010         | 12,370              | 14,579         | 43.0                                  |
| Not employed   | 8,983          | 11,361         | 12,194              | 14,003         | 55.9                                  |
| <b>Total registered and enrolled nurses</b>                              | <b>260,075</b> | <b>273,378</b> | <b>282,702</b>      | <b>285,619</b> | <b>9.8</b>                            |
| Multiple registrations and enrolments <sup>(d)</sup>                     | 7,502          | 9,168          | 8,928               | 9,145          | 2.2                                   |
| <b>Total registrations and enrolments</b>                                | <b>267,577</b> | <b>282,546</b> | <b>291,630</b>      | <b>294,764</b> | <b>10.2</b>                           |

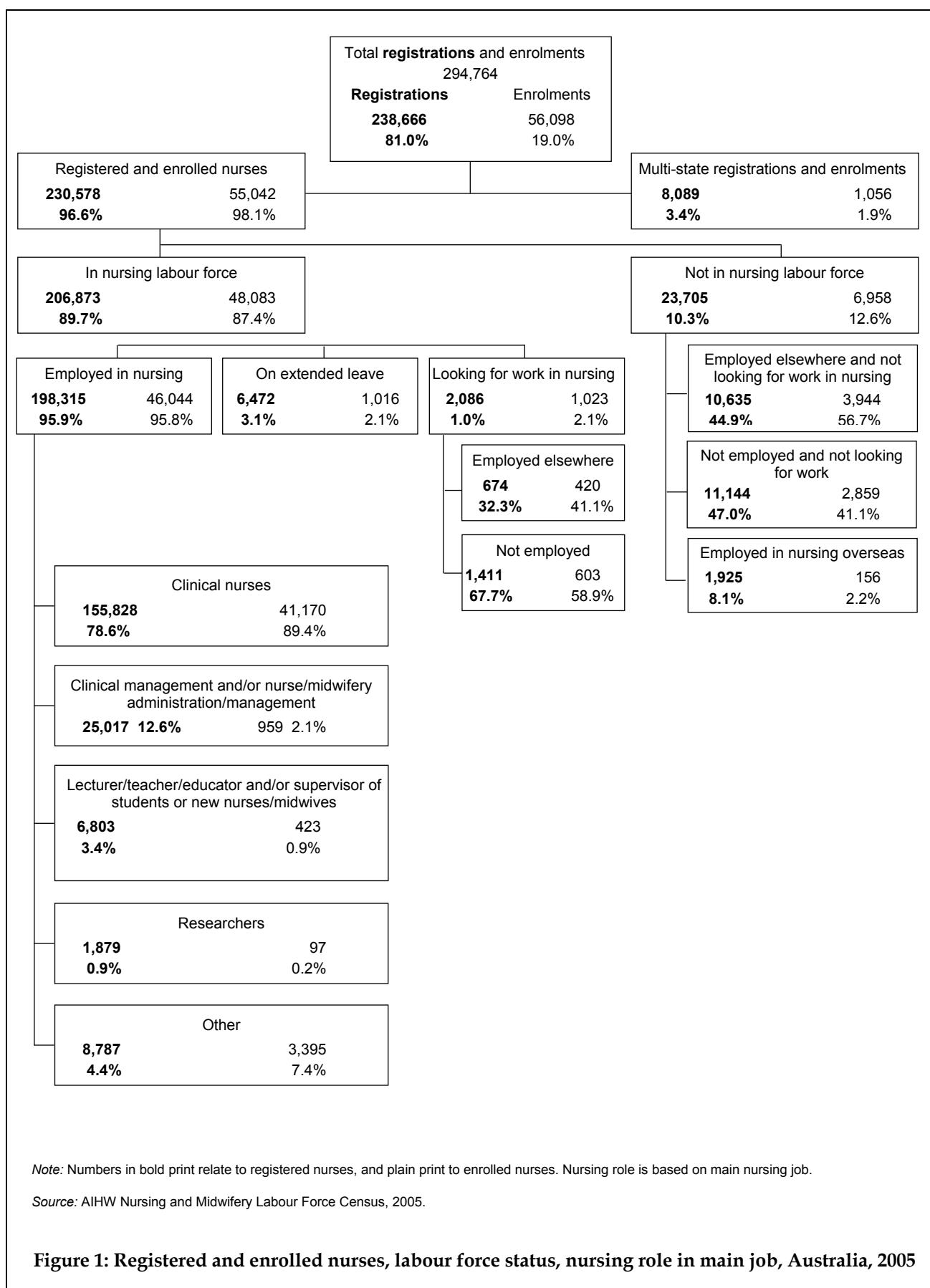
(a) National data were not collected on the nursing and midwifery labour force in 2002.

(b) WA data for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

(c) In 2003 (in all states/territories except NSW) and in 2004 and 2005 (in all states/territories), 'supervisor of new nurses' was collected as a separate category in the survey. It is not known how nurses in this category reported their role in other years. In 2005, supervising/supporting students/new nurses/midwives was collected together with education, lecturing and clinical education.

(d) For more information, see 'Multiple registrations and enrolments' in the Glossary.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 to 2005.



**Figure 1: Registered and enrolled nurses, labour force status, nursing role in main job, Australia, 2005**



In 2005, most registered and enrolled nurses were in the nursing labour force (89.3%), either employed in nursing (85.6%), on extended leave (2.6%) or looking for work in nursing (1.1%). The remaining registered and enrolled nurses were either working as a nurse overseas (0.7% in 2005) or not looking for work in nursing (10.0%) (Table 1).

Registered nurses comprised 80.7% of all nurses (registered and enrolled) in 2005, and their numbers grew at a faster rate between 2001 and 2005 (up by 10.3%) than those of enrolled nurses (up by 8.0%) (Table 2).

**Table 2: Registered and enrolled nurses, 2001 to 2005**

|                   | <b>2001</b>    | <b>2003</b>    | <b>2004<sup>(a)</sup></b> | <b>2005</b>    | <b>Per cent change<br/>between<br/>2001 and 2005</b> |
|-------------------|----------------|----------------|---------------------------|----------------|--|
| Registered nurses | 209,109        | 218,615        | 226,702                   | 230,578        | 10.3   |
| Enrolled nurses   | 50,966         | 54,762         | 56,000                    | 55,042         | 8.0  |
| <b>All nurses</b> | <b>260,075</b> | <b>273,378</b> | <b>282,702</b>            | <b>285,619</b> | <b>9.8</b>   |

(a) The WA data for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

Sources: AIHW Nursing Labour Force survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 to 2005.

Comparisons between the states and territories using the 2005 data are problematic due to the data quality issues mentioned above, that is, the low response rates in Western Australian and the Northern Territory and the need to use 2006 responses for Victoria. For the other jurisdictions, the growth in numbers of registered and enrolled nurses (after accounting for multiple registrations) between 2004 and 2005 was above the national average of 1.0% in Tasmania (8.3%), the Australian Capital Territory (6.4%), Queensland (1.9%) and South Australia (1.9%), while New South Wales experienced a decline of 1.8% (Table 3).

The composition of the nursing population between registered and enrolled nurses was weighted towards registered nurses, with 80.7% nationally being in this category (Table 3). The proportion who were registered nurses was 85.3% in Tasmania and 75.9% in South Australia.

The census form asked nurses 'Are you registered/endorsed/authorised by your board to practise as a midwife?'. Nearly one-fifth (19.6%) of all nurses indicated they had such authorisation (Table 4).

In 2005, the estimated number of nurses employed in nursing was 244,360, or 85.6% of all registered and enrolled nurses (Table 3). Much of the remainder of this report focuses on this group.

**Table 3: Registered and enrolled nurses: labour force status and state and territory, 2005**

|                                       | NSW           | Vic <sup>(a)</sup> | Qld           | WA <sup>(b)</sup> | SA            | Tas          | ACT          | NT <sup>(c)</sup> | Australia <sup>(d)</sup> |
|---------------------------------------|---------------|--------------------|---------------|-------------------|---------------|--------------|--------------|-------------------|--------------------------|
| <b>Registered nurses in 2005</b>      |               |                    |               |                   |               |              |              |                   |                          |
| Employed                              | 61,299        | 52,830             | 35,060        | 19,105            | 17,841        | 5,692        | 3,425        | n.p.              | 198,315                  |
| On extended leave                     | 2,236         | 1,987              | 993           | 630               | 341           | 126          | 96           | n.p.              | 6,472                    |
| Looking for work in nursing           | 951           | 390                | 388           | 155               | 140           | 23           | 39           | n.p.              | 2,086                    |
| Overseas                              | 1,157         | 245                | 232           | 54                | 199           | 11           | 27           | n.p.              | 1,925                    |
| Not looking for work in nursing       | 12,847        | 3,004              | 2,621         | 1,983             | 722           | 232          | 349          | n.p.              | 21,779                   |
| <b>Total</b>                          | <b>78,491</b> | <b>58,455</b>      | <b>39,294</b> | <b>21,927</b>     | <b>19,243</b> | <b>6,084</b> | <b>3,936</b> | n.p.              | <b>230,578</b>           |
| <b>Enrolled nurses in 2005</b>        |               |                    |               |                   |               |              |              |                   |                          |
| Employed                              | 11,876        | 16,206             | 6,313         | 3,800             | 5,810         | 953          | 683          | n.p.              | 46,044                   |
| On extended leave                     | 345           | 357                | 120           | 84                | 73            | 16           | 21           | n.p.              | 1,016                    |
| Looking for work in nursing           | 367           | 384                | 99            | 66                | 75            | 13           | 19           | n.p.              | 1,023                    |
| Overseas                              | 76            | 39                 | 24            | 13                | 3             | —            | —            | n.p.              | 156                      |
| Not looking for work in nursing       | 3,469         | 1,622              | 614           | 658               | 317           | 69           | 54           | n.p.              | 6,803                    |
| <b>Total</b>                          | <b>16,134</b> | <b>18,607</b>      | <b>7,170</b>  | <b>4,620</b>      | <b>6,278</b>  | <b>1,051</b> | <b>777</b>   | n.p.              | <b>55,042</b>            |
| <b>All nurses in 2005</b>             |               |                    |               |                   |               |              |              |                   |                          |
| Employed                              | 73,174        | 69,036             | 41,373        | 22,904            | 23,651        | 6,645        | 4,108        | n.p.              | 244,360                  |
| On extended leave                     | 2,582         | 2,344              | 1,114         | 714               | 414           | 142          | 117          | n.p.              | 7,488                    |
| Looking for work in nursing           | 1,318         | 773                | 487           | 221               | 214           | 36           | 59           | n.p.              | 3,108                    |
| Overseas                              | 1,234         | 284                | 256           | 67                | 203           | 11           | 27           | n.p.              | 2,081                    |
| Not looking for work in nursing       | 16,316        | 4,625              | 3,235         | 2,641             | 1,040         | 301          | 403          | n.p.              | 28,582                   |
| <b>Total 2005</b>                     | <b>94,624</b> | <b>77,062</b>      | <b>46,464</b> | <b>26,547</b>     | <b>25,521</b> | <b>7,135</b> | <b>4,714</b> | n.p.              | <b>285,619</b>           |
| <b>Total 2004</b>                     | <b>96,374</b> | <b>75,617</b>      | <b>45,913</b> | <b>25,996</b>     | <b>25,037</b> | <b>6,590</b> | <b>4,431</b> | <b>2,744</b>      | <b>282,702</b>           |
| Per cent change between 2004 and 2005 | -1.8          | 1.9                | 1.2           | 2.1               | 1.9           | 8.3          | 6.4          | n.p.              | 1.0                      |

(a) Estimates for Victoria for 2005 are derived from responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to 2005 registration and enrolment benchmark figures.

(b) Estimates for WA for 2005 should be treated with caution due to the low response rate (26.9%) in the 2005 census.

(c) Estimates for the NT for 2005 are not separately published due to the very low response rate to the census in that jurisdiction (13.7%).

(d) The total for Australia includes estimates for the NT and WA. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in their estimates are unlikely to have a significant effect on the accuracy of the national figure.

Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

**Table 4: Registered and enrolled nurses authorised as a midwife, 2005**

|                                | NSW    | Vic <sup>(a)</sup> | Qld    | WA <sup>(b)</sup> | SA     | Tas   | ACT   | NT <sup>(c)</sup> | Australia <sup>(d)</sup> |
|--------------------------------|--------|--------------------|--------|-------------------|--------|-------|-------|-------------------|--------------------------|
| Number authorised as midwife   | 17,904 | 14,476             | 12,160 | 4,351             | 4,195  | 772   | 1,100 | n.p.              | 55,992                   |
| Total registrations/enrolments | 94,624 | 77,062             | 46,464 | 26,547            | 25,521 | 7,135 | 4,714 | n.p.              | 285,619                  |
| Per cent authorised as midwife | 18.9   | 18.8               | 26.2   | 16.4              | 16.4   | 10.8  | 23.3  | n.p.              | 19.6                     |

(a) Estimates for Victoria for 2005 are derived from responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to 2005 registration and enrolment benchmark figures.

(b) Estimates for WA for 2005 should be treated with caution due to the low response rate (26.9%) in the 2005 census.

(c) Estimates for the NT for 2005 are not separately published due to the very low response rate to the census in that jurisdiction (13.7%).

(d) The total for Australia includes estimates for the NT and WA. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in their estimates are unlikely to have a significant effect on the accuracy of the national figure.

Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

### 3 Employed nurses

Between 2001 and 2005, the number of registered and enrolled nurses employed as nurses in Australia was estimated to have increased by 7.1%, from 228,230 to 244,360, mainly a result of an 8.2% increase in the number of employed registered nurses over the 5 year period (tables 1 and 3). The number of employed enrolled nurses also increased, but to a lesser extent (2.3%). In 2005, 81.2% of nurses employed in Australia were registered nurses (Table 3).

#### Age and sex

Nursing continued to be a female-dominated profession, with males comprising 7.9% of employed nurses in 2005 (down from 8.4% in 2001). The proportion of registered nurses who were male decreased between 2001 and 2005 (from 8.6% to 8.0%); while for enrolled nurses the male proportion was stable (7.3% in 2001 and 7.1% in 2005) (Table 5).

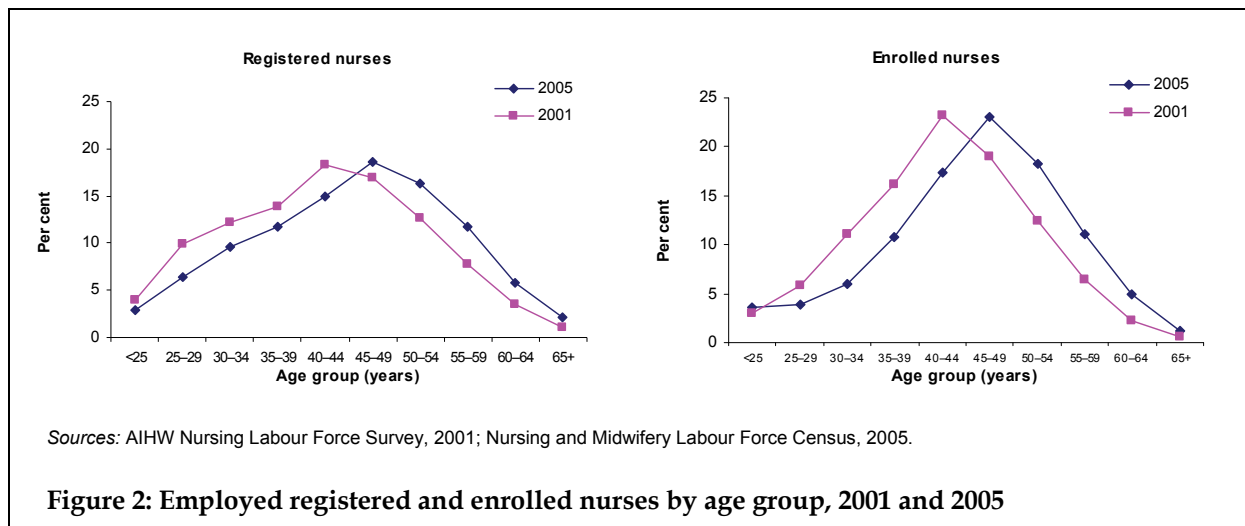
The population of both registered and enrolled employed nurses aged, on average, between 2001 and 2005. In 2001, the average age of employed nurses was 42.2 years (42.1 years for registered and 42.5 years for enrolled nurses). In 2005, the average age was 45.1 years (45.0 years for registered and 45.5 years for enrolled nurses). The proportion of nurses who were aged 50 years or older also increased, from 24.4% to 35.8% over the same period (Table 5).

**Table 5: Employed registered and enrolled nurses: age and sex, 2001 and 2005**

|                     | Registered nurses | Enrolled nurses | All nurses     |
|---------------------|-------------------|-----------------|----------------|
| <b>2001</b>         |                   |                 |                |
| Number              | 183,224           | 45,006          | <b>228,230</b> |
| % male              | 8.6               | 7.3             | <b>8.4</b>     |
| Average age         | 42.1              | 42.5            | <b>42.2</b>    |
| % 50 years or older | 25.1              | 21.8            | <b>24.4</b>    |
| <b>2005</b>         |                   |                 |                |
| Number              | 198,315           | 46,044          | <b>244,360</b> |
| % male              | 8.0               | 7.1             | <b>7.9</b>     |
| Average age         | 45.0              | 45.5            | <b>45.1</b>    |
| % 50 years or older | 35.9              | 35.4            | <b>35.8</b>    |

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005.

The ageing of the nursing workforce is illustrated in Figure 2, with the age peak for registered and enrolled nurses shifting from the 40–44 year age group in 2001 to the 45–49 year age group in 2005.



## Geographic overview

### States and territories

The characteristics of nurses varied across jurisdictions in 2005. The average age of employed nurses was higher than the national average of 45.1 years in Queensland (46.5 years) and lower in New South Wales (43.4 years) (Table 6). The proportion of nurses who were male was above the national figure of 7.9% in Tasmania (10.5%) and lower in Queensland (6.5%).

Between 2001 and 2005, the proportion of clinical nurses increased in all jurisdictions. The largest increase occurred in South Australia (up by 6.0 percentage points), followed by New South Wales (up by 4.5 percentage points). The smallest increases were in Tasmania (up by 0.8 of a percentage point) and Queensland (up by 0.9 of a percentage point) (Table 6). Over this period, the number of nurses per 100,000 population (the nursing rate) rose in all jurisdictions except Queensland, where it dropped from 1,083 to 1,044 nurses per 100,000 population. Both South Australia and Tasmania experienced an increase in the nursing rate of more than 10%. The decline in the Queensland rate is the result of Queensland's population growth (9.2%) being greater than the state's increase in employed nurse numbers (5.3%).

**Table 6: Employed registered and enrolled nurses: selected characteristics, states and territories, 2001 and 2005**

|                                  | NSW       | Vic <sup>(a)</sup> | Qld       | WA <sup>(b)</sup> | SA        | Tas     | ACT     | NT <sup>(c)</sup> | Australia <sup>(d)</sup> |
|----------------------------------|-----------|--------------------|-----------|-------------------|-----------|---------|---------|-------------------|--------------------------|
| <b>2001</b>                      |           |                    |           |                   |           |         |         |                   |                          |
| Number                           | 70,905    | 63,807             | 39,297    | 21,613            | 21,071    | 5,700   | 3,751   | 2,087             | <b>228,230</b>           |
| Average age (years)              | 41.7      | 41.9               | 42.2      | 43.6              | 42.5      | 42.8    | 43.8    | 41.7              | <b>42.2</b>              |
| % male                           | 9.1       | 8.2                | 8.7       | 5.2               | 9.1       | 9.0     | 6.2     | 7.5               | <b>8.4</b>               |
| % registered nurses              | 82.6      | 76.2               | 83.5      | 80.3              | 76.8      | 85.8    | 81.4    | 85.1              | <b>80.3</b>              |
| % clinical nurses <sup>(e)</sup> | 87.0      | 88.7               | 91.1      | 89.5              | 85.0      | 92.4    | 88.9    | 89.7              | <b>88.4</b>              |
| Nursing rate <sup>(f)</sup>      | 1,078     | 1,328              | 1,083     | 1,137             | 1,394     | 1,208   | 1,175   | 1,055             | <b>1,176</b>             |
| Australian population            | 6,575,217 | 4,804,726          | 3,628,946 | 1,901,159         | 1,511,728 | 471,795 | 319,317 | 197,768           | <b>19,413,240</b>        |
| <b>2005</b>                      |           |                    |           |                   |           |         |         |                   |                          |
| Number                           | 73,174    | 69,036             | 41,373    | 22,904            | 23,651    | 6,645   | 4,108   | n.p.              | <b>244,360</b>           |
| Average age (years)              | 43.4      | 45.8               | 46.5      | 46.7              | 44.0      | 45.2    | 45.4    | n.p.              | <b>45.1</b>              |
| % male                           | 9.7       | 6.8                | 6.5       | 5.2               | 9.1       | 10.5    | 7.2     | n.p.              | <b>7.9</b>               |
| % registered nurses              | 83.8      | 76.5               | 84.7      | 83.4              | 75.4      | 85.7    | 83.4    | n.p.              | <b>81.2</b>              |
| % clinical nurses <sup>(e)</sup> | 91.5      | 90.8               | 92.0      | 90.3              | 91.0      | 93.2    | 90.1    | n.p.              | <b>91.2</b>              |
| Nursing rate <sup>(f)</sup>      | 1,080     | 1,375              | 1,044     | 1,139             | 1,534     | 1,369   | 1,263   | n.p.              | <b>1,202</b>             |
| Australian population            | 6,774,249 | 5,022,346          | 3,963,968 | 2,010,113         | 1,542,033 | 485,263 | 325,161 | 202,793           | <b>20,328,609</b>        |

(a) Estimates for Victoria for 2005 are derived from responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to 2005 registration and enrolment benchmark figures.

(b) Estimates for WA for 2005 should be treated with caution due to the low response rate (26.9%) in the 2005 census.

(c) Estimates for the NT for 2005 are not separately published due to the very low response rate to the census in that jurisdiction (13.7%).

(d) The total for Australia includes estimates for the NT and WA. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in their estimates are unlikely to have a significant effect on the accuracy of the national figure.

(e) Clinical nurses include those whose nursing role in their main job was 'clinician nursing' or 'clinical management and or nurse/midwifery administration'.

(f) Nurses per 100,000 population.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005; ABS revised ERP data.

## Remoteness areas

The Remoteness Area Structure within the Australian Standard Geographical Classification (ASGC) (ABS 2002) has been used in this report to show data by geographic region.

Across the regions, in 2005, employed nurses working in Inner regional areas were, on average, older (46.1 years) than colleagues in other regions while those in Major cities were younger (44.6 years). The proportion of male nurses was lower in Outer regional and Remote areas (6.1% and 4.9%, respectively) compared with the national figure (7.9% male) (Table 7).

Between 2001 and 2005, the nursing rate rose in all regions, with the largest occurring in Outer regional areas, from 1,059 to 1,190, and Very remote areas, from 957 to 1,078, (up by 131 and 121 nurses per 100,000 population, respectively). These rises resulted from increases in nurse numbers being larger than population growth, compared with other regions and nationally.

**Table 7: Employed registered and enrolled nurses: selected characteristics, region of main job, 2001 and 2005**

|                                  | Major cities | Inner regional | Outer regional | Remote  | Very remote | Not stated | Australia         |
|----------------------------------|--------------|----------------|----------------|---------|-------------|------------|-------------------|
| <b>2001</b>                      |              |                |                |         |             |            |                   |
| Number                           | 136,553      | 44,627         | 21,319         | 3,334   | 1,709       | 20,687     | <b>228,230</b>    |
| Average age (years)              | 41.9         | 43.2           | 43             | 42.8    | 41.7        | 41.1       | <b>42.2</b>       |
| % male                           | 8.4          | 8.7            | 5.9            | 5.0     | 8.1         | 10.4       | <b>8.4</b>        |
| % registered nurses              | 83.7         | 75.5           | 71.3           | 70.9    | 78.2        | 79.0       | <b>80.3</b>       |
| % clinical nurses <sup>(a)</sup> | 87.2         | 89.7           | 90.4           | 89.7    | 90.9        | 90.9       | <b>88.4</b>       |
| Nursing rate <sup>(b)</sup>      | 1,061        | 1,109          | 1,059          | 1,028   | 957         | ..         | <b>1,176</b>      |
| Australian population            | 12,870,843   | 4,025,689      | 2,013,837      | 324,329 | 178,542     | ..         | <b>19,413,240</b> |
| <b>2005</b>                      |              |                |                |         |             |            |                   |
| Number                           | 152,889      | 51,610         | 24,657         | 3,543   | 1,936       | 9,725      | <b>244,360</b>    |
| Average age (years)              | 44.6         | 46.1           | 46.0           | 45.2    | 45.3        | 45.4       | <b>45.1</b>       |
| % male                           | 8.1          | 8.0            | 6.1            | 4.9     | 8.1         | 9.3        | <b>7.9</b>        |
| % registered nurses              | 84.3         | 77.2           | 73.6           | 74.4    | 79.9        | 73.6       | <b>81.2</b>       |
| % clinical nurses <sup>(a)</sup> | 90.8         | 92.0           | 92.1           | 92.3    | 91.9        | 90.9       | <b>91.2</b>       |
| Nursing rate <sup>(b)</sup>      | 1,136        | 1,199          | 1,190          | 1,090   | 1,078       | ..         | <b>1,201</b>      |
| Australian population            | 13,459,716   | 4,303,095      | 2,072,383      | 324,947 | 179,619     | ..         | <b>20,339,759</b> |

(a) Clinical nurses include those whose nursing role in their main job was 'clinician nursing' or 'clinical management and or nurse/midwifery administration'.

(b) Nurses per 100,000 population.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005; ABS preliminary ERP data.

Nurse numbers in Outer regional areas and Very remote areas rose by 15.7% and 13.3%, respectively, while population growth was 2.9% and 0.6%, respectively. Nationally, the growth in nurse numbers was 7.1 % and the population growth was 4.8% over the period.

## Working hours

'Total hours worked' is an indicator of the total workload of nurses. It includes hours worked in both the main and second nursing job. For the purposes of this report, nurses working less than 35 hours per week in total are defined as working 'part-time' and nurses working 35 hours or more in total are defined as working 'full-time'.

Some care should be taken in interpreting any change in hours worked over time, due to changes in the question on working hours on the AIHW Nursing and Midwifery Labour Force Census form. In 2001, most jurisdictions asked respondents to report paid hours usually worked and total hours (including paid and unpaid hours) usually worked. Respondents were not asked to break down their 'usual' hours into paid and unpaid hours separately and little direction was given as to whether it should include overtime. In the 2003 and 2004 censuses, most jurisdictions specified that hours be broken down into more detailed categories, including paid (regular and overtime) and unpaid hours usually worked. Some specified the inclusion of overtime hours as well. In the 2005 Census even further detail on hours worked was asked of respondents in most jurisdictions (hours worked in regular pay, hours worked above contract hours, hours of paid overtime worked and unpaid hours worked). South Australia asked the same question in 2005 as in 2003 and 2004.

Changes in the detail asked of respondents on their working hours, and the specific request to include overtime and unpaid hours, may have contributed, at least in part, to the apparent increase in total hours worked by nurses and midwives from 2001 to 2005 described below.

**Table 8: Employed registered and enrolled nurses: average total weekly hours worked<sup>(a)</sup>, proportion working part-time and 50 hours or more per week, 2001 to 2005**

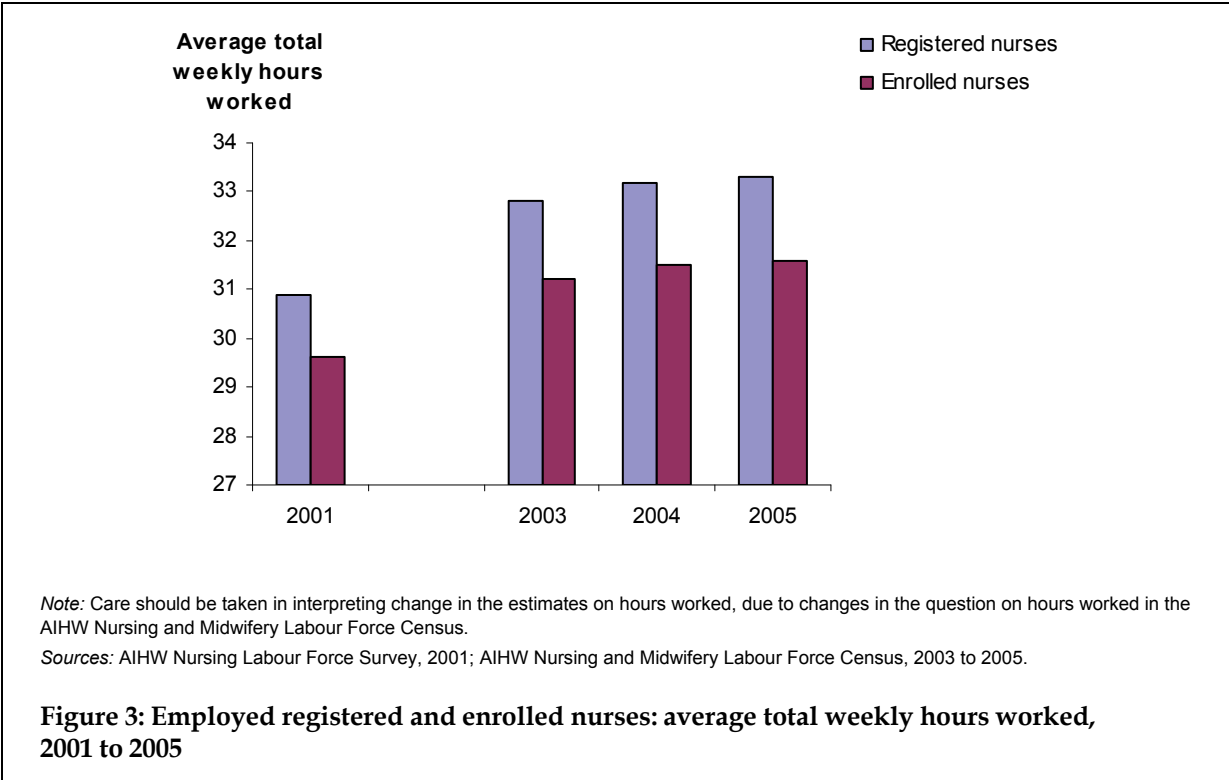
| Year                | Registered nurses    |                            |                            | Enrolled nurses      |                            |                            | All nurses           |                            |                            |
|---------------------|----------------------|----------------------------|----------------------------|----------------------|----------------------------|----------------------------|----------------------|----------------------------|----------------------------|
|                     | Average weekly hours | Per cent working part-time | Per cent working 50+ hours | Average weekly hours | Per cent working part-time | Per cent working 50+ hours | Average weekly hours | Per cent working part-time | Per cent working 50+ hours |
| 2001                | 30.9                 | 51.6                       | 1.9                        | 29.6                 | 60.4                       | 2.0                        | 30.7                 | 53.3                       | 1.9                        |
| 2003                | 32.8                 | 48.6                       | 5.8                        | 31.2                 | 56.1                       | 4.1                        | 32.5                 | 50.0                       | 5.5                        |
| 2004 <sup>(b)</sup> | 33.2                 | 48.1                       | 6.2                        | 31.5                 | 55.7                       | 4.7                        | 32.8                 | 49.6                       | 5.9                        |
| 2005                | 33.3                 | 48.2                       | 6.7                        | 31.6                 | 56.6                       | 4.7                        | 33.0                 | 49.8                       | 6.3                        |

(a) Care should be taken in interpreting change in the estimates on hours worked, due to changes in the question on hours worked in the AIHW Nursing and Midwifery Labour Force Census.

(b) The WA data for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 to 2005.

The average number of hours worked by all nurses rose from 30.7 hours in 2001 to 33.0 hours in 2005 and there were increases for both registered and enrolled nurses (Table 8). There was an apparent rise in average hours between 2001 and 2003 (up by almost 2 hours), and another rise from 2003 to 2005 of half an hour (Figure 3). Between 2001 and 2005, the overall proportion of nurses working 50 hours or more rose, from 1.9% to 6.3%, while the proportion working part-time decreased, from 53.3% to 49.8% (Table 8).



The pattern was similar for both registered and enrolled nurses. However, enrolled nurses worked fewer weekly hours than registered nurses. In 2005, registered nurses worked, on average, 33.3 hours per week in total, compared with 31.6 hours worked by enrolled nurses. Enrolled nurses were also more likely than registered nurses to work part-time (56.6% compared with 48.2%) and less likely to work 50 hours or more (4.7% compared with 6.7%).

## Age

The hours worked by nurses not only differed by registration/enrolment status, but also by age (Table 9). In 2005, 77.8% of registered nurses aged less than 25 years were working 35–49 hours per week, a much higher proportion than for any other age group. Of registered nurses in this age group, 16.7% were working less than 35 hours per week (defined as part-time). In comparison, 56.5% of registered nurses aged 35–44 years and 51.9% of those aged 55 years and over worked part-time. Both registered and enrolled nurses aged 35–44 years were more likely than those in any other age group to work under 20 hours per week.

For enrolled nurses, weekly hours worked did not differ with age as much as for registered nurses, with enrolled nurses of all ages more likely to work part-time than registered nurses.

**Table 9: Employed registered and enrolled nurses: percent distribution of total weekly hours worked, by age, 2005**

| Age (years)              | Total weekly hours worked (per cent) |             |             |            | Total        | Total number of nurses | Average weekly hours worked |
|--------------------------|--------------------------------------|-------------|-------------|------------|--------------|------------------------|-----------------------------|
|                          | <20                                  | 20–34       | 35–49       | 50+        |              |                        |                             |
| <b>Registered nurses</b> |                                      |             |             |            |              |                        |                             |
| <25                      | 2.4                                  | 14.3        | 77.8        | 5.5        | 100.0        | 5,683                  | 39.1                        |
| 25–34                    | 13.1                                 | 26.5        | 54.0        | 6.5        | 100.0        | 31,638                 | 34.5                        |
| 35–44                    | 18.9                                 | 37.6        | 37.5        | 6.0        | 100.0        | 52,870                 | 31.1                        |
| 45–54                    | 9.4                                  | 36.9        | 46.3        | 7.3        | 100.0        | 69,324                 | 34.3                        |
| 55+                      | 12.9                                 | 38.9        | 41.4        | 6.7        | 100.0        | 38,800                 | 32.8                        |
| <i>Total</i>             | 13.0                                 | 35.2        | 45.1        | 6.7        | 100.0        | 198,315                | 33.3                        |
| <b>Enrolled nurses</b>   |                                      |             |             |            |              |                        |                             |
| <25                      | 15.8                                 | 35.9        | 41.8        | 6.5        | 100.0        | 1,621                  | 32.2                        |
| 25–34                    | 17.5                                 | 35.4        | 41.5        | 5.6        | 100.0        | 4,550                  | 31.8                        |
| 35–44                    | 18.5                                 | 44.3        | 32.7        | 4.5        | 100.0        | 12,945                 | 30.0                        |
| 45–54                    | 10.6                                 | 43.2        | 41.8        | 4.4        | 100.0        | 19,000                 | 32.5                        |
| 55+                      | 11.6                                 | 45.0        | 38.6        | 4.8        | 100.0        | 7,929                  | 32.0                        |
| <i>Total</i>             | 13.8                                 | 42.8        | 38.7        | 4.7        | 100.0        | 46,044                 | 31.6                        |
| <b>All nurses</b>        |                                      |             |             |            |              |                        |                             |
| <25                      | 5.3                                  | 19.0        | 70.0        | 5.7        | 100.0        | 7,304                  | 37.6                        |
| 25–34                    | 13.6                                 | 27.6        | 52.5        | 6.4        | 100.0        | 36,189                 | 34.1                        |
| 35–44                    | 18.8                                 | 38.9        | 36.6        | 5.7        | 100.0        | 65,814                 | 30.9                        |
| 45–54                    | 9.7                                  | 38.3        | 45.3        | 6.7        | 100.0        | 88,323                 | 33.9                        |
| 55+                      | 12.7                                 | 39.9        | 40.9        | 6.4        | 100.0        | 46,729                 | 32.7                        |
| <b>Total</b>             | <b>13.2</b>                          | <b>36.6</b> | <b>43.9</b> | <b>6.3</b> | <b>100.0</b> | <b>244,360</b>         | <b>33.0</b>                 |

Source: AIHW Nursing and Midwifery Labour Force Census, 2005.



## States and territories

Across the jurisdictions, there was some variation in average weekly hours worked by nurses. In 2005, nurses in the Australian Capital Territory worked the highest weekly hours on average (34.4 hours), followed by New South Wales (34.2 hours). Between 2001 and 2005, there was an apparent increase in the hours worked by nurses and midwives in all jurisdictions. For example, the averages increased by 2.0 hours in New South Wales and 4.4 hours in South Australia (Table 10).

**Table 10: Employed registered and enrolled nurses: average total weekly hours worked<sup>(a)</sup>, states and territories, 2001 and 2005**

|                   | NSW  | Vic <sup>(b)</sup> | Qld  | WA <sup>(c)</sup> | SA   | Tas  | ACT  | NT <sup>(d)</sup> | Australia <sup>(e)</sup> |
|-------------------|------|--------------------|------|-------------------|------|------|------|-------------------|--------------------------|
| <b>2001</b>       |      |                    |      |                   |      |      |      |                   |                          |
| <i>All nurses</i> | 32.2 | 30.2               | 31.3 | 28.8              | 27.5 | 29.6 | 31.9 | 35.1              | <b>30.7</b>              |
| Registered nurses | 32.3 | 30.6               | 31.5 | 29                | 27.8 | 29.8 | 31.5 | 35.4              | <b>30.9</b>              |
| Enrolled nurses   | 31.5 | 28.9               | 30.3 | 28                | 26.5 | 28.5 | 33.4 | 33.4              | <b>29.6</b>              |
| <b>2005</b>       |      |                    |      |                   |      |      |      |                   |                          |
| <i>All nurses</i> | 34.2 | 31.8               | 33.5 | 31.8              | 31.9 | 33.1 | 34.4 | <i>n.p.</i>       | <b>33.0</b>              |
| Registered nurses | 34.4 | 32.2               | 33.6 | 32.0              | 32.3 | 33.3 | 34.3 | <i>n.p.</i>       | <b>33.3</b>              |
| Enrolled nurses   | 33.0 | 30.3               | 32.7 | 30.9              | 30.8 | 32.3 | 35   | <i>n.p.</i>       | <b>31.6</b>              |

(a) Care should be taken in interpreting change in the estimates on hours worked, due to changes in the question on hours worked in the AIHW Nursing and Midwifery Labour Force Census.

(b) Estimates for Victoria for 2005 are derived from responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to 2005 registration and enrolment benchmark figures.

(c) Estimates for WA for 2005 should be treated with caution due to the low response rate (26.9%) in the 2005 census. The WA estimates for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

(d) Estimates for the NT for 2005 are not separately published due to the very low response rate to the census in that jurisdiction (13.7%).

(e) The total for Australia includes estimates for the NT and WA. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in their estimates are unlikely to have a significant effect on the accuracy of the national figure.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005.

## Remoteness areas

In 2005, nurses in Remote and Very remote areas experienced longer working hours than other nurses, an average of 34.7 hours per week in Remote areas and 38.2 hours in Very remote areas compared with the national average of 33.0 hours (Table 11).

Nurses in Remote and Very remote areas also experienced larger apparent increases in average hours between 2001 and 2005, rising, on average, by 4.2 hours in Remote areas and 4.4 hours in Very remote areas, compared with the national average of a rise of 2.3 hours (Table 11).

**Table 11: Employed registered and enrolled nurses: average total weekly hours worked, region of main job, 2001 and 2005**

|  | Major cities | Inner regional | Outer regional | Remote     | Very remote | Not stated | Australia   |
|--|--------------|----------------|----------------|------------|-------------|------------|-------------|
| <b>2001</b>  |              |                |                |            |             |            |             |
| <i>All nurses</i>  | 31.0         | 29.9           | 30.1           | 30.5       | 33.8        | 30.7       | <b>30.7</b> |
| Registered nurses  | 31.2         | 30.2           | 30.5           | 31.6       | 34.4        | 31.0       | <b>30.9</b> |
| Enrolled nurses  | 30.1         | 29.0           | 29.0           | 27.9       | 31.5        | 29.1       | <b>29.6</b> |
| <b>2005</b>  |              |                |                |            |             |            |             |
| <i>All nurses</i>  | 33.1         | 32.3           | 33.5           | 34.7       | 38.2        | 31.6       | <b>33.0</b> |
| Registered nurses  | 33.3         | 32.7           | 33.9           | 35.7       | 39.1        | 32.2       | <b>33.3</b> |
| Enrolled nurses  | 31.9         | 31.0           | 32.1           | 31.9       | 34.4        | 29.7       | <b>31.6</b> |
| <b>Change in average total hours between 2001 and 2005</b> | <b>2.1</b>   | <b>2.4</b>     | <b>3.4</b>     | <b>4.2</b> | <b>4.4</b>  | <b>0.9</b> | <b>2.3</b>  |

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005.

## Employment sector

The profile of nurses by employment sector changed little between 2003 and 2005, with around two-thirds of nurses employed in the public sector (67.2% in 2003, 65.4% in 2004 and 65.9% in 2005). During these years nurses employed in the public sector worked, on average, 2.5 hours per week more than nurses employed in the private sector (Table 12).

**Table 12: All employed nurses: selected characteristics, employment sector of main job, 2003 to 2005**

| Characteristics                 | 2003    | 2004    | 2005    |
|---------------------------------|---------|---------|---------|
| <b>Public sector</b>            |         |         |         |
| Number                          | 159,022 | 159,621 | 161,085 |
| % in sector                     | 67.2    | 65.4    | 65.9    |
| % registered                    | 80.6    | 81.1    | 82.3    |
| Average hours worked (per week) | 33.4    | 33.7    | 33.9    |
| <b>Private sector</b>           |         |         |         |
| Number                          | 77,622  | 84,296  | 83,275  |
| % in sector                     | 32.8    | 34.6    | 34.1    |
| % registered                    | 78.4    | 78.1    | 79.0    |
| Average hours worked (per week) | 30.7    | 31.2    | 31.4    |

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 to 2005.

## Hours worked in main and second jobs

In 2005, 28,787 employed nurses (11.8%) reported having a second nursing job (Table 13). While information on both the main and second job is sought from respondents, full details about their second job were provided less often than details of their main job. This results in higher proportions of missing or 'not stated' values for aspects of the second job.

**Table 13: Employed nurses: number and average weekly hours worked in main and second nursing job, 2005**

|                                   | Number         | Average hours worked in main job | Average hours worked in second job | Total average weekly hours worked |
|-----------------------------------|----------------|----------------------------------|------------------------------------|-----------------------------------|
| Nurses with a main job only       | 215,573        | 32.1                             | ..                                 | 32.1                              |
| Nurses with a main and second job | 28,787         | 28.3                             | 11.9                               | 40.2                              |
| <b>Total</b>                      | <b>244,360</b> | <b>31.6</b>                      | <b>..</b>                          | <b>33.0</b>                       |

Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

Overall, nurses worked, on average, 33.0 hours per week. For nurses with only one job, the average was slightly lower at 32.1 hours per week. Nurses working an additional job worked fewer hours in their main job (28.3 hours) than those with only one job but an additional 11.9 hours on average per week in their second job (Table 13).

## Employment characteristics

Tables 14, 15, and 16 show the weekly hours worked in both main and second nursing jobs by nurse role, sector and work setting in 2005. In interpreting the tables it should be noted that a second nursing job may be in a different role, sector and setting from the main job.

In 2005 the most common nursing role for a second job was as a clinical nurse (Table 14); a second job in the public sector was more common than in the private sector (Table 15); and the most common settings for a second job were hospitals and residential aged care services, (Table 16).

**Table 14: Employed nurses: number and average weekly hours worked in main and second nursing job, nursing role, 2005**

| Nursing role  | Main nursing job |                      | Second nursing job |                                     | Total average weekly hours in all jobs <sup>(b)</sup> |
|---|------------------|----------------------|--------------------|-------------------------------------|---|
|   | Number           | Average weekly hours | Number             | Average weekly hours <sup>(a)</sup> |   |
| Clinical nursing role                                     | 222,974          | 31.6                 | 19,883             | 12.6                                | 32.9  |
| Clinical nurse  | 196,998          | 30.7                 | 18,856             | 12.5                                | 32.1  |
| Clinical nurse manager/administrator                      | 25,976           | 38.6                 | 1,027              | 14.2                                | 39.6  |
| Non-clinical nursing role                                 | 21,385           | 31.9                 | 3,568              | 12.2                                | 33.6  |
| Lecturer/teacher/educator and/or supervisor of new nurses | 7,226            | 34.2                 | 1,393              | 12.5                                | 36.4  |
| Researcher  | 1,976            | 32.0                 | 451                | 12.2                                | 34.3  |
| Other   | 12,183           | 30.4                 | 1,724              | 12.0                                | 31.9  |
| Not stated  | ..               | ..                   | 5,336              | 8.9                                 | ..  |
| <b>Total</b>  | <b>244,360</b>   | <b>31.6</b>          | <b>28,787</b>      | <b>11.9</b>                         | <b>33.0</b>   |

(a) The average hours in second job is calculated based only on those nurses who had a second job. Total average weekly hours are not, therefore, an addition of average hours worked in main job and average hours worked in second job.

(b) Based on nursing role in main job.

Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

In 2005, nurses who were clinical nurse managers/administrators in their main nursing job worked, on average, the highest number of hours per week (38.6 hours compared with

31.6 hours for all nurses). Nurses working in this role in their second job also worked more hours, on average, than all nurses (14.2 hours compared with 11.9 hours for all nurses) (Table 14).

The average hours worked by nurses employed in a non-clinical role (non-clinicians) in their main job showed that those who were a lecturer/teacher/educator and/or supervisor of new nurses worked more hours (34.2) than in the other non-clinicians (31.9 for non-clinicians, overall), whereas non-clinicians in their second job worked similar hours across the roles (ranging from 12.0 to 12.5 hours) (Table 14).

Nurses with a main job in the public sector worked an average of 32.7 hours per week in that job, while those with a main job in the private sector worked fewer (29.7) hours (Table 15). Those with a second job worked similar hours in both the public and private sector in that job (11.4 and 11.7 hours, respectively).

**Table 15: Employed nurses: number and average weekly hours worked in main and second nursing job, employment sector, 2005**

| Employment sector <sup>(a)</sup> | Main nursing job |                      | Second nursing job |                                     | Total average weekly hours in all jobs <sup>(b)</sup> |
|----------------------------------|------------------|----------------------|--------------------|-------------------------------------|---|
|                                  | Number           | Average weekly hours | Number             | Average weekly hours <sup>(b)</sup> |   |
| Public                           | 161,085          | 32.7                 | 13,841             | 11.4                                | 33.9  |
| Private                          | 83,275           | 29.7                 | 13,262             | 11.7                                | 31.4  |
| Not stated                       | ..               | ..                   | 1,684              | 16.8                                | ..  |
| <b>Total</b>                     | <b>244,360</b>   | <b>31.6</b>          | <b>28,787</b>      | <b>11.9</b>                         | <b>33.0</b>   |

(a) Based on sector of main job.

(b) The average hours in second job is calculated based only on those nurses who had a second job. Total average weekly hours are not, therefore, an addition of average hours worked in main job and average hours worked in second job.

Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

Nurses working in psychiatric hospitals/mental health facilities in their main job were more likely than other nurses to work a relatively high number of hours, with two-thirds (66.4%) working full-time (35 hours or more) compared with 46.4% overall, working full-time in their main job (Table 16). Nurses with a second nursing job in the education sector (schools and tertiary education) reported working a high number of hours compared with nurses with a second job in other work settings. Around one in five (18.2% in schools and 21.8% in tertiary education) worked 20 hours or more per week compared with 14.9%, overall.

**Table 16: Employed nurses: per cent distribution of weekly hours worked<sup>(a)</sup> in main and second nursing jobs, work setting, 2005**

| Work setting                                 | Hours worked in main nursing job (per cent) |             |             |            |              | Hours worked in second nursing job (per cent) |             |            |              | Number of nurses with a second nursing job | Total number of nurses <sup>(b)</sup> |
|--|---|-------------|-------------|------------|--------------|---|-------------|------------|--------------|--|---------------------------------------|
|  | <20 hours                                   | 20–34 hours | 35–49 hours | 50+ hours  | Total        | <20 hours                                     | 20–34 hours | 35+ hours  | Total        |  |                                       |
| Hospital                                     | 14.1  | 39.0        | 43.1        | 3.8        | 100.0        | 85.7  | 12.3        | 2.0        | 100.0        | 9,979                                      | 144,064                               |
| Psychiatric hospital/ mental health facility | 7.4   | 25.0        | 61.2        | 6.4        | 100.0        | 82.2  | 14.9        | 2.8        | 100.0        | 731  | 10,570                                |
| Day procedure centre                         | 25.2  | 42.0        | 30.7        | 2.1        | 100.0        | 91.5  | 7.0         | 1.5        | 100.0        | 661  | 3,538                                 |
| Residential aged care centre                 | 16.6  | 44.8        | 33.4        | 5.2        | 100.0        | 81.1  | 16.0        | 2.9        | 100.0        | 4,057                                      | 32,459                                |
| Hospice                                      | 16.2  | 44.6        | 34.1        | 5.1        | 100.0        | 85.9  | 13.1        | 1.0        | 100.0        | 142  | 1,283                                 |
| Community health centre                      | 14.5  | 34.4        | 48.2        | 3.0        | 100.0        | 87.4  | 10.5        | 2.1        | 100.0        | 1,347                                      | 13,581                                |
| Doctors' rooms/ medical practice             | 29.6  | 45.3        | 23.8        | 1.3        | 100.0        | 92.6  | 6.6         | 0.8        | 100.0        | 2,016                                      | 8,461                                 |
| Outpatient clinic                            | 17.0  | 36.6        | 43.4        | 3.0        | 100.0        | 90.8  | 9.2         | 0.0        | 100.0        | 267  | 2,151                                 |
| School                                       | 16.5  | 28.6        | 44.5        | 10.5       | 100.0        | 82.5  | 15.1        | 2.4        | 100.0        | 198  | 1,554                                 |
| Tertiary institution                         | 14.7  | 23.7        | 46.4        | 15.2       | 100.0        | 78.5  | 15.6        | 5.9        | 100.0        | 941  | 2,386                                 |
| Other <sup>(c)</sup>                         | 15.5  | 33.5        | 44.4        | 6.6        | 100.0        | 81.8  | 14.4        | 3.8        | 100.0        | 3,262                                      | 18,680                                |
| Not stated                                   | 14.3  | 36.9        | 44.4        | 4.3        | 100.0        | 86.6  | 8.1         | 5.3        | 100.0        | 5,185                                      | 5,633                                 |
| <b>Total</b>                                 | <b>15.0</b>                                 | <b>38.5</b> | <b>42.1</b> | <b>4.3</b> | <b>100.0</b> | <b>85.2</b>                                   | <b>11.9</b> | <b>3.0</b> | <b>100.0</b> | <b>28,787</b>                              | <b>244,360</b>                        |

(a) Percentages exclude nurses who did not report the hours they worked, whereas nurse numbers include them.

(b) Based on work setting of main job.

(c) In 2005, the questions used to collect 'work setting' in the survey changed in all jurisdictions except for South Australia. Not all categories in the South Australian data could be aligned with other jurisdictions' data and those which did not match directly are included in the 'other' category for all jurisdictions. These categories are: outpatient clinic, domiciliary care, Rural hospital and health service/ multipurpose service, Developmental disability service, Defence/Government, commercial, industry/business.

Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## 4 Nursing supply

Raw counts of the number of people employed in nursing do not, by themselves, provide an accurate indication of the supply of nurses, as it does not take into account the relatively high proportion of part-time workers. For this reason, it is more appropriate to assess the supply of labour using the numbers of full-time equivalent (FTE) nurses, a measure which accounts for both the number of employed nurses and the hours they worked.

Overall, there was an apparent increase in nursing supply by 9.9% between 2001 and 2005, from 1,031 FTE nurses per 100,000 population to 1,133 (Table 17). This was mainly a result of both a 7.1% rise in the number of employed nurses and a 7.5% increase in the average hours they worked over this period.

As outlined earlier in the section on hours worked, the increase in hours worked from 2001 to 2005 should be interpreted with care, due to changes in the way the question on hours worked was asked in the AIHW census. Consequently, apparent changes in supply should also be interpreted with care.

### Full-time equivalent measure (FTE)

The FTE is calculated by dividing the total hours worked by all employed nurses in all their nursing jobs in a week, by the number of hours considered to be a standard working week. The FTE measures how many standard week workloads were worked by nurses.

In this report most of the tables on FTE are based on 35 hours as a standard working week. However, Tables 19 and 21 provide FTE estimates based on a 38 hour standard working week, for comparison with other FTE data from other sources.

The usefulness of the FTE measure can be enhanced by relating it to the relevant population (that is, by calculating FTE per 100,000 population). This (referred to as the 'FTE rate') allows meaningful comparisons to be made across geographic regions, jurisdictions, and time.

**Table 17: Employed nurses: number, average hours, FTE nurses<sup>(a)</sup> and FTE rate<sup>(b)</sup>, 2001 to 2005**

|                            | 2001    | 2003    | 2004 <sup>(c)</sup> | 2005    | Per cent change<br>between<br>2001 and 2005 |
|----------------------------|---------|---------|---------------------|---------|---|
| <b>Registered nurses</b>   |         |         |                     |         |   |
| Number of nurses           | 183,224 | 189,071 | 195,339             | 198,315 | 8.2   |
| Average weekly total hours | 30.9    | 32.8    | 33.2                | 33.3    | 7.8   |
| FTE nurses                 | 161,760 | 177,186 | 185,293             | 188,683 | 16.6  |
| FTE rate <sup>(a)</sup>    | 833     | 892     | 922                 | 928     | 11.4  |
| <b>Enrolled nurses</b>     |         |         |                     |         |   |
| Number of nurses           | 45,006  | 47,574  | 48,577              | 46,044  | 2.3   |
| Average weekly total hours | 29.6    | 31.2    | 31.5                | 31.6    | 6.8   |
| FTE nurses                 | 38,062  | 42,409  | 43,720              | 41,572  | 9.2   |
| FTE rate <sup>(a)</sup>    | 196     | 213     | 218                 | 204     | 4.3   |
| <b>All nurses</b>          |         |         |                     |         |   |
| Number of nurses           | 228,230 | 236,645 | 243,916             | 244,360 | 7.1   |
| Average weekly total hours | 30.7    | 32.5    | 32.8                | 33      | 7.5   |
| FTE nurses                 | 200,190 | 219,741 | 228,584             | 230,396 | 15.1  |
| FTE rate <sup>(a)</sup>    | 1,031   | 1,106   | 1,138               | 1,133   | 9.9   |

(a) FTE calculated based on a 35 hour standard working week.

(b) FTE nurses per 100,000 population.

(c) The WA data for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 to 2005; ABS unpublished ERP data.

**Table 18: Registered and enrolled nurses: FTE rate<sup>(a)</sup>, based on a 35-hour standard working week, states and territories, 2001, 2004 and 2005**

|                     | NSW          | Vic <sup>(b)</sup> | Qld        | WA <sup>(c)</sup> | SA           | Tas          | ACT          | NT <sup>(d)</sup> | Australia <sup>(e)</sup> |
|---------------------|--------------|--------------------|------------|-------------------|--------------|--------------|--------------|-------------------|--------------------------|
| <b>2001</b>         |              |                    |            |                   |              |              |              |                   |                          |
| Registered nurses   | 822          | 885                | 814        | 757               | 850          | 882          | 861          | 908               | 833                      |
| Enrolled nurses     | 169          | 261                | 155        | 179               | 245          | 140          | 208          | 150               | 196                      |
| <b>Total nurses</b> | <b>992</b>   | <b>1,146</b>       | <b>968</b> | <b>935</b>        | <b>1,095</b> | <b>1,022</b> | <b>1,071</b> | <b>1,058</b>      | <b>1,031</b>             |
| <b>2004</b>         |              |                    |            |                   |              |              |              |                   |                          |
| Registered nurses   | 924          | 925                | 846        | 890               | 1,049        | 1,031        | 702          | 1,570             | 922                      |
| Enrolled nurses     | 174          | 322                | 150        | 179               | 321          | 180          | 207          | 121               | 218                      |
| <b>Total nurses</b> | <b>1,099</b> | <b>1,249</b>       | <b>998</b> | <b>1,069</b>      | <b>1,374</b> | <b>1,212</b> | <b>1,173</b> | <b>1,262</b>      | <b>1,138</b>             |
| <b>2005</b>         |              |                    |            |                   |              |              |              |                   |                          |
| Registered nurses   | 889          | 968                | 849        | 869               | 1,068        | 1,116        | 1,032        | n.p.              | 928                      |
| Enrolled nurses     | 165          | 279                | 149        | 167               | 332          | 181          | 210          | n.p.              | 204                      |
| <b>Total nurses</b> | <b>1,055</b> | <b>1,249</b>       | <b>999</b> | <b>1,035</b>      | <b>1,398</b> | <b>1,295</b> | <b>1,242</b> | <b>n.p.</b>       | <b>1,133</b>             |

(a) FTE nurses per 100,000 population (based on 35-hour week).

(b) Estimates for Victoria for 2005 are derived from responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to 2005 registration and enrolment benchmark figures.

(c) Estimates for WA for 2005 should be treated with caution due to the low response rate (26.9%) in the 2005 census. The WA estimates for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

(d) Estimates for the NT for 2005 are not separately published due to the very low response rate to the census in that jurisdiction (13.7%).

(e) The total for Australia includes estimates for the NT and WA. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in their estimates are unlikely to have a significant effect on the accuracy of the national figure.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005; ABS 2005.

**Table 19: Registered and enrolled nurses: FTE rate<sup>(a)</sup>, based on a 38-hour standard working week, states and territories, 2001, 2004 and 2005**

|                     | NSW          | Vic <sup>(b)</sup> | Qld        | WA <sup>(c)</sup> | SA           | Tas          | ACT          | NT <sup>(d)</sup> | Australia <sup>(e)</sup> |
|---------------------|--------------|--------------------|------------|-------------------|--------------|--------------|--------------|-------------------|--------------------------|
| <b>2001</b>         |              |                    |            |                   |              |              |              |                   |                          |
| Registered nurses   | 757          | 815                | 749        | 697               | 783          | 813          | 793          | 837               | 767                      |
| Enrolled nurses     | 156          | 240                | 143        | 165               | 226          | 129          | 192          | 138               | 181                      |
| <b>Total nurses</b> | <b>914</b>   | <b>1,055</b>       | <b>892</b> | <b>862</b>        | <b>1,009</b> | <b>941</b>   | <b>986</b>   | <b>975</b>        | <b>950</b>               |
| <b>2004</b>         |              |                    |            |                   |              |              |              |                   |                          |
| Registered nurses   | 851          | 852                | 780        | 819               | 966          | 950          | 892          | 1,049             | 849                      |
| Enrolled nurses     | 160          | 296                | 138        | 165               | 296          | 166          | 190          | 111               | 200                      |
| <b>Total nurses</b> | <b>1,012</b> | <b>1,150</b>       | <b>919</b> | <b>985</b>        | <b>1,265</b> | <b>1,117</b> | <b>1,080</b> | <b>1,162</b>      | <b>1,048</b>             |
| <b>2005</b>         |              |                    |            |                   |              |              |              |                   |                          |
| Registered nurses   | 819          | 891                | 782        | 800               | 983          | 1,028        | 951          | n.p.              | 855                      |
| Enrolled nurses     | 152          | 257                | 137        | 154               | 305          | 167          | 193          | n.p.              | 188                      |
| <b>Total nurses</b> | <b>972</b>   | <b>1,150</b>       | <b>920</b> | <b>954</b>        | <b>1,288</b> | <b>1,193</b> | <b>1,144</b> | <b>n.p.</b>       | <b>1,044</b>             |

(a) FTE nurses per 100,000 population (based on 38-hour week).

(b) Estimates for Victoria for 2005 are derived from responses to the 2006 AIHW Nursing and Midwifery Labour Force Census, weighted to 2005 registration and enrolment benchmark figures.

(c) Estimates for WA for 2005 should be treated with caution due to the low response rate (26.9%) in the 2005 census. The WA estimates for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

(d) Estimates for the NT for 2005 are not separately published due to the very low response rate to the census in that jurisdiction (13.7%).

(e) The total for Australia includes estimates for the NT and WA. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in their estimates are unlikely to have a significant effect on the accuracy of the national figure.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005; ABS 2005.

It was noted in the Data sources section that the Western Australian figure and, consequently, the national figure for the number of employed nurses in 2004 has been revised since the 2004 report was published. Therefore, as well as the 2001 and 2005 interval which is mainly used in this report for comparisons over time, the updated nursing supply figures for 2004 are included in the geographic comparisons in tables 18 and 19 to show the revised time series.

Using the revised estimates for 2004, there was a slight decrease in apparent nursing supply between the last two censuses. Based on a 35 hour standard working week, supply declined from 1,138 FTE nurses per 100,000 population in 2004 to 1,133 in 2005 (Table 18). Based on a 38 hour standard working week, supply declined from 1,048 FTE nurses per 100,000 population in 2004 to 1,044 in 2005 (Table 19).

In 2005, nursing supply across the regions was highest in Very remote areas followed by Outer regional areas (Tables 20 and 21). Longer working hours (Table 11) are partly responsible for the higher supply in these areas. Inner regional, Outer regional and Very remote areas experienced an apparent rise in supply between 2004 and 2005 while, in the remaining regions, supply decreased, with the largest decrease occurring in Major cities.

**Table 20: Employed registered and enrolled nurses: FTE rate<sup>(a)</sup>, based on a 35-hour standard working week, geographic region of main job, 2001, 2004 and 2005**

|                           | Major city   | Inner regional | Outer regional | Remote       | Very remote  | Australia <sup>(b)</sup> |
|---------------------------|--------------|----------------|----------------|--------------|--------------|--------------------------|
| <b>2001</b>               |              |                |                |              |              |                          |
| Registered nurses         | 792          | 722            | 658            | 658          | 736          | 833                      |
| Enrolled nurses           | 149          | 225            | 252            | 238          | 188          | 196                      |
| <b>Total nurses</b>       | <b>940</b>   | <b>947</b>     | <b>910</b>     | <b>896</b>   | <b>925</b>   | <b>1,031</b>             |
| <b>2004<sup>(c)</sup></b> |              |                |                |              |              |                          |
| Registered nurses         | 919          | 832            | 788            | 828          | 867          | 922                      |
| Enrolled nurses           | 175          | 260            | 282            | 271          | 219          | 218                      |
| <b>Total nurses</b>       | <b>1,095</b> | <b>1,093</b>   | <b>1,070</b>   | <b>1,100</b> | <b>1,087</b> | <b>1,138</b>             |
| <b>2005</b>               |              |                |                |              |              |                          |
| Registered nurses         | 912          | 866            | 849            | 827          | 963          | 928                      |
| Enrolled nurses           | 162          | 242            | 288            | 255          | 213          | 204                      |
| <b>Total nurses</b>       | <b>1,074</b> | <b>1,107</b>   | <b>1,139</b>   | <b>1,081</b> | <b>1,177</b> | <b>1,133</b>             |

(a) FTE nurses per 100,000 population (based on 35-hour week).

(b) As not all respondents reported the location of their main job, the FTE rate for Australia is higher than for any of the geographic regions.

(c) The WA data for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005; ABS 2005.



**Table 21: Employed registered and enrolled nurses: FTE rate<sup>(a)</sup>, based on a 38-hour standard working week, geographic region of main job, 2001, 2004 and 2005**

|                           | Major city   | Inner regional | Outer regional | Remote       | Very remote  | Australia <sup>(b)</sup> |
|---------------------------|--------------|----------------|----------------|--------------|--------------|--------------------------|
| <b>2001</b>               |              |                |                |              |              |                          |
| Registered nurses         | 729          | 665            | 606            | 606          | 678          | 767                      |
| Enrolled nurses           | 137          | 208            | 232            | 219          | 173          | 181                      |
| <b>Total nurses</b>       | <b>866</b>   | <b>872</b>     | <b>839</b>     | <b>825</b>   | <b>852</b>   | <b>950</b>               |
| <b>2004<sup>(c)</sup></b> |              |                |                |              |              |                          |
| Registered nurses         | 846          | 767            | 725            | 762          | 799          | 849                      |
| Enrolled nurses           | 162          | 239            | 260            | 250          | 202          | 200                      |
| <b>Total nurses</b>       | <b>1,009</b> | <b>1,007</b>   | <b>985</b>     | <b>1,014</b> | <b>1,001</b> | <b>1,048</b>             |
| <b>2005</b>               |              |                |                |              |              |                          |
| Registered nurses         | 840          | 797            | 782            | 762          | 887          | 855                      |
| Enrolled nurses           | 149          | 223            | 265            | 235          | 196          | 188                      |
| <b>Total nurses</b>       | <b>989</b>   | <b>1,019</b>   | <b>1,049</b>   | <b>996</b>   | <b>1,084</b> | <b>1,044</b>             |

(a) FTE nurses per 100,000 population (based on 38-hour week).

(b) As not all respondents reported the location of their main job, the FTE rate for Australia is higher than for any of the geographic regions.

(c) The WA data for 2004 have been revised and therefore the national figures shown here may differ from those previously published.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2005; ABS 2005.

# 5 State and territory profiles

## Introduction

This section presents data from the 2005 AIHW Nursing and Midwifery Labour Force Census for each state and territory (except the Northern Territory) on the characteristics of employed nurses by clinical area of nursing. The relationship between clinical area and post-registration or enrolment qualifications is examined, firstly by looking at whether nurses and midwives working in clinical areas had completed courses of study particular to that area, and then whether those nurses with qualifications in particular areas were practising in corresponding clinical areas at the time of the survey.

The following should be taken into account in interpreting the information in this section:

- The term 'qualification' is used generally, to refer to completed post registration or enrolment courses of study relating to nursing or midwifery, that were 6 months or longer in duration. It may include non-formal courses of more than 6 months duration, as well as courses that did not result in a formal qualification. It does not include skills gained in a particular clinical area through on-the-job informal training or short courses. See the Glossary for further detail.
- In the survey, nurses and midwives could record multiple areas of study but only one clinical area of practice in their main job. Thus, the proportions reporting working in clinical areas will be underestimated.
- Not all nurses and midwives who reported in the survey that they had completed a course of study provided details regarding the course. It is estimated that around 35% of employed nurses and midwives who indicated that they had completed a course did not provide further detail regarding the field of study. Thus, the proportions of nurses and midwives with post-registration/enrolment qualifications in particular fields of study, as shown in figures 4–17, will be underestimates.
- A different survey form was used by South Australia than by other jurisdictions, with different categories of clinical areas of practice and areas of study. The format of the questionnaire for these questions was also different. Therefore, care should be taken in comparing results for South Australia to those for other jurisdictions.
- The survey response rate for the Northern Territory was too low to support this type of analysis.

In general, across most jurisdictions, the clinical areas with relatively high proportions of nurses with corresponding post-registration/enrolment qualifications were Family and child health and Critical care/emergency. Areas with relatively low proportions of nurses with corresponding post-registration/enrolment qualifications were Aged care and Rehabilitation/disability (figures 4, 6, 8, 10, 12 and 16).

The other perspective (that is, the post-registration/enrolment qualifications completed by the nursing workforce and the proportions of nurses and midwives who were working in a corresponding clinical area) is illustrated in figures 5, 7, 9, 11, 13, 15 and 17.

While the inferences that can be drawn from this data are limited by the caveats outlined above, some broad relationships can be seen. For example, in New South Wales, 23.1% of nurses who reported their main job was working in Perioperative care held Perioperative qualifications. In that same state, 69.1% of the qualifications in the field of Perioperative care were held by nurses working in Perioperative clinical areas.

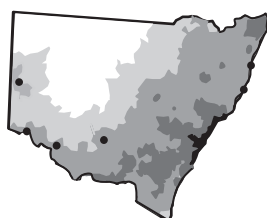
# New South Wales

Area: 800,628 sq km

Population: 6, 774,249

Number of nurses: 73,174

FTE rate of nursing supply: 1,055



ASGC Remoteness Areas

- Very remote
- Remote
- Outer regional
- Inner regional
- Major city

In New South Wales in 2005, the largest proportion of nurses worked in the clinical area of Critical care/emergency (16.8% or 12,274 nurses), followed by Aged care (13.8% or 10,066 nurses). Critical care/emergency nurses were more likely to be younger than other nurses in the state and Aged care nurses were more likely to be older (39.2 years and 49.2 years, on average, respectively, compared with 43.4 years overall (Table 22).

One third (33.4%) of nurses working in the area of Mental health were male compared with 9.7% for the state, and a quarter (25.6%) of mental health nurses were working part-time, compared with 43.0% for the state.

Nurses working in Midwifery worked shorter hours, on average, whereas those in Critical care/emergency worked longer hours (31.8 hours and 35.6 hours compared with 34.2 hours for the state).

## Clinical area of nursing and nurse characteristics

Table 22: Employed nurses by clinical area: selected characteristics, New South Wales, 2005

| Clinical area <sup>(a)</sup>      | Number        | Average age (years) | Per cent male | Per cent registered | Average weekly hours worked | Per cent part-time | Per cent with post-registration/enrolment qualifications |
|-----------------------------------|---------------|---------------------|---------------|---------------------|-----------------------------|--------------------|--|
| <i>Medical and surgical areas</i> |               |                     |               |                     |                             |                    |  |
| Medical                           | 8,978         | 42.6                | 8.5           | 77.2                | 34.3                        | 42.1               | 42.9   |
| Surgical                          | 6,126         | 40.6                | 7.5           | 83.0                | 33.5                        | 44.8               | 35.1   |
| Mixed medical and surgical        | 6,838         | 42.2                | 6.5           | 72.4                | 33.1                        | 47.5               | 33.3   |
| <i>Other clinical areas</i>       |               |                     |               |                     |                             |                    |  |
| Aged care                         | 10,066        | 49.2                | 6.4           | 76.1                | 33.6                        | 48.6               | 30.1   |
| Community health                  | 4,230         | 45.6                | 6.6           | 90.3                | 32.4                        | 47.6               | 44.0   |
| Critical care/emergency           | 12,274        | 39.2                | 13.2          | 92.4                | 35.6                        | 36.1               | 59.4   |
| Family and child health           | 1,820         | 44.9                | 2.0           | 94.1                | 32.0                        | 50.7               | 71.3   |
| Mental health                     | 4,315         | 44.7                | 33.4          | 86.3                | 37.8                        | 25.6               | 52.6   |
| Midwifery                         | 5,539         | 43.7                | 1.2           | 96.7                | 31.8                        | 55.0               | 58.4   |
| Perioperative                     | 5,588         | 41.6                | 8.2           | 86.6                | 34.5                        | 41.9               | 50.6   |
| Rehabilitation/disability         | 2,828         | 46.2                | 18.3          | 68.2                | 34.9                        | 39.9               | 31.7   |
| Other <sup>(b)</sup>              | 4,572         | 45.6                | 8.9           | 86.3                | 35.3                        | 39.2               | 59.8   |
| <b>Total</b>                      | <b>73,174</b> | <b>43.4</b>         | <b>9.7</b>    | <b>83.8</b>         | <b>34.2</b>                 | <b>43.0</b>        | <b>46.2</b>  |

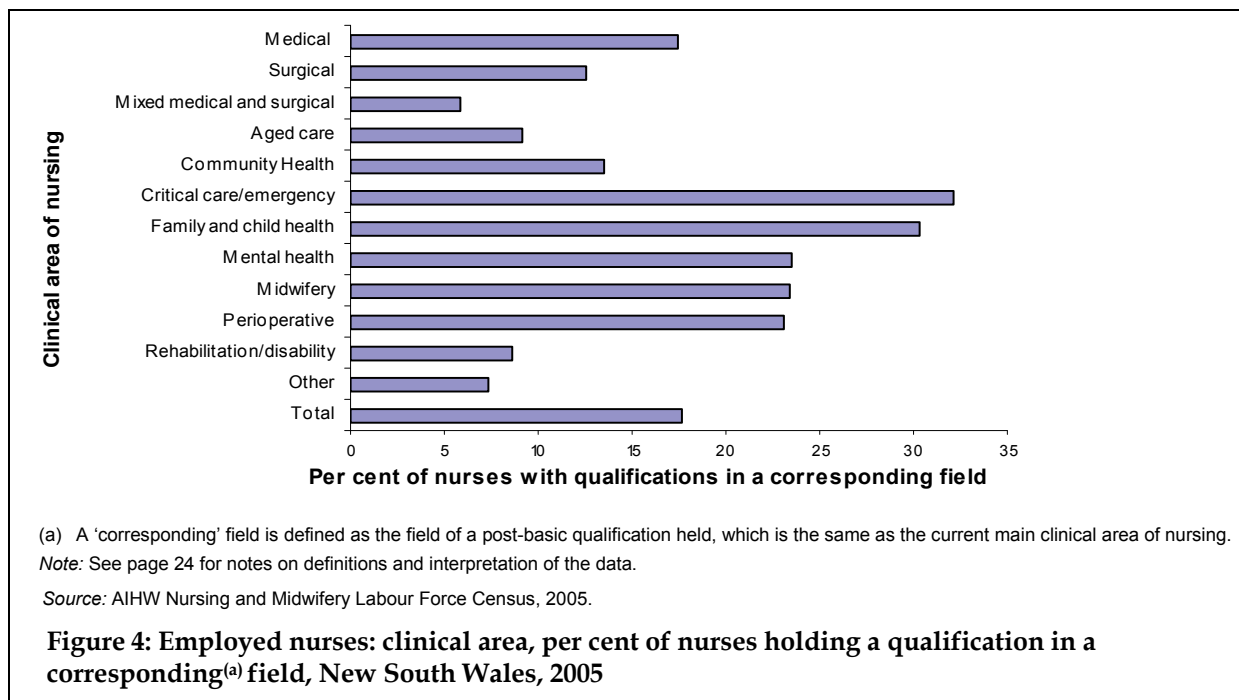
(a) Updates to the clinical categories comprising these clinical areas were introduced in the 2005 questionnaire, resulting in these categories not being directly comparable with those used in previous years.

(b) Includes non-clinicians (i.e. administrators, teachers/educators and researchers).

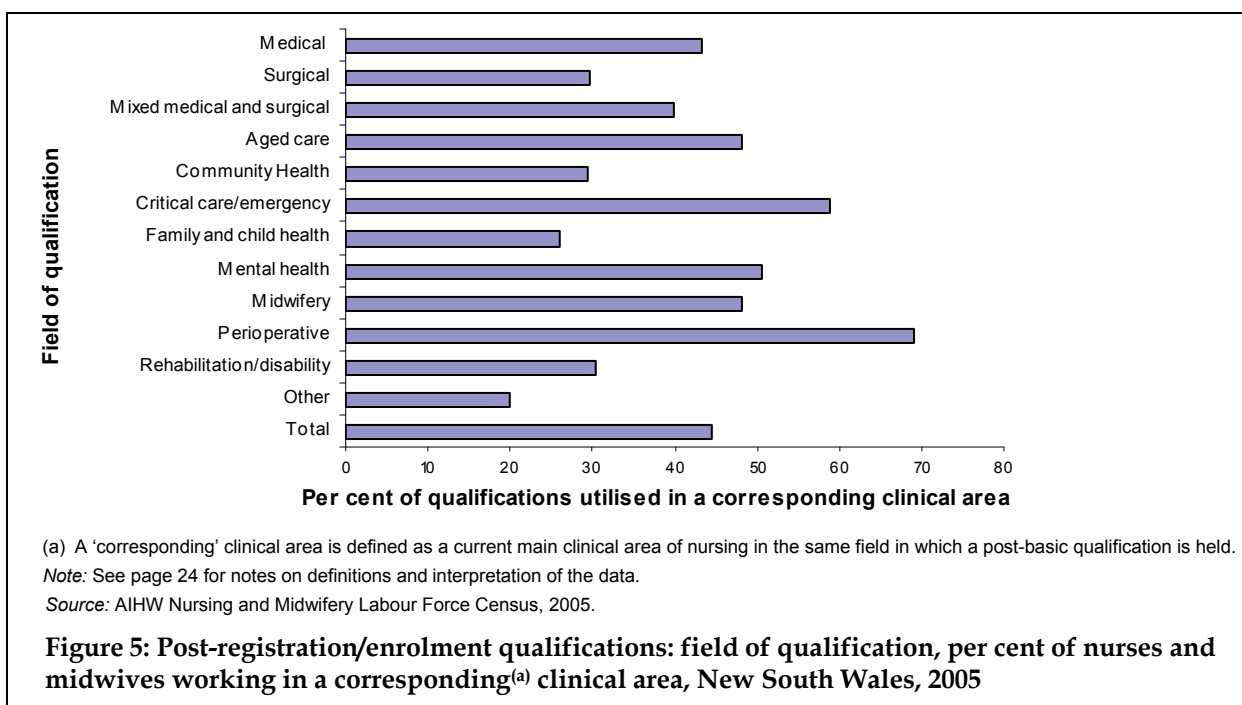
Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in New South Wales, 46.2% reported having post-registration/enrolment qualifications and 17.6% held a qualification in a field that corresponded with the clinical area of their job (Table 22 and Figure 4). For example, 32.1% of nurses working in Critical care/emergency areas held qualifications in the field of Critical care/emergency (Figure 4).



Of all the relevant qualifications held by employed nurses in New South Wales, 44.6% were being utilised in a corresponding clinical area. For example, 69.1% of qualifications in the field of Perioperative care were held by nurses working in Perioperative areas (Figure 5).



# Victoria

Area: 227,010 sq km

Population: 5,022,346

Number of nurses: 69,036

FTE rate of nursing supply: 1,249



ASGC Remoteness Areas

- Very remote
- Remote
- Outer regional
- Inner regional
- Major city

In Victoria in 2005, the largest proportion of nurses worked in the clinical area of Aged care (19.4% or 13,386 nurses) (Table 23). On average, these nurses were older and were less likely to be registered nurses than their colleagues in other clinical areas (49.0 years compared with the state average of 45.8 years, and 44.8% registered compared with 76.5% for the state).

Nurses working in Midwifery worked shorter hours (29.3 hours, on average) followed closely by nurses in Mixed medical/surgical areas (30.0 hours) and nurses in Community health (30.1 hours). Correspondingly, nurses in midwifery were most likely to be working part-time (66.2%).

## Clinical area of nursing and nurse characteristics

Table 23: Employed nurses by clinical area: selected characteristics, Victoria, 2005

| Clinical area <sup>(a)</sup>      | Number        | Average age (years) | Per cent male | Per cent registered | Average weekly hours worked | Per cent part-time | Per cent with post-registration/enrolment qualifications |
|-----------------------------------|---------------|---------------------|---------------|---------------------|-----------------------------|--------------------|--|
| <i>Medical and surgical areas</i> |               |                     |               |                     |                             |                    |  |
| Medical                           | 7,993         | 44.6                | 6.0           | 76.7                | 31.9                        | 55.9               | 39.5   |
| Surgical                          | 5,150         | 42.7                | 4.3           | 84.6                | 31.6                        | 55.1               | 36.3   |
| Mixed medical and surgical        | 6,446         | 44.8                | 4.6           | 77.5                | 30.0                        | 64.1               | 33.0   |
| <i>Other clinical areas</i>       |               |                     |               |                     |                             |                    |  |
| Aged care                         | 13,386        | 49.0                | 5.5           | 44.8                | 31.1                        | 61.2               | 26.8   |
| Community health                  | 4,012         | 46.7                | 4.8           | 87.8                | 30.1                        | 59.5               | 48.5   |
| Critical care/emergency           | 8,222         | 41.9                | 9.4           | 92.4                | 32.9                        | 51.1               | 69.9   |
| Family and child health           | 1,316         | 46.8                | 2.8           | 88.8                | 31.3                        | 57.5               | 62.3   |
| Mental health                     | 3,869         | 46.3                | 29.1          | 75.7                | 36.4                        | 34.5               | 50.7   |
| Midwifery                         | 6,424         | 47.3                | 0.8           | 95.9                | 29.3                        | 66.2               | 56.4   |
| Perioperative                     | 4,499         | 45.3                | 5.4           | 91.9                | 32.3                        | 50.6               | 61.6   |
| Rehabilitation/disability         | 2,602         | 47.8                | 9.3           | 63.1                | 31.9                        | 56.6               | 31.8   |
| Other <sup>(b)</sup>              | 5,117         | 46.8                | 6.4           | 82.0                | 34.2                        | 45.1               | 61.5   |
| <b>Total</b>                      | <b>69,036</b> | <b>45.8</b>         | <b>6.8</b>    | <b>76.5</b>         | <b>31.8</b>                 | <b>55.9</b>        | <b>46.0</b>  |

(a) Updates to the clinical categories comprising these clinical areas were introduced in the 2005 questionnaire, resulting in these categories not being directly comparable with those used in previous years.

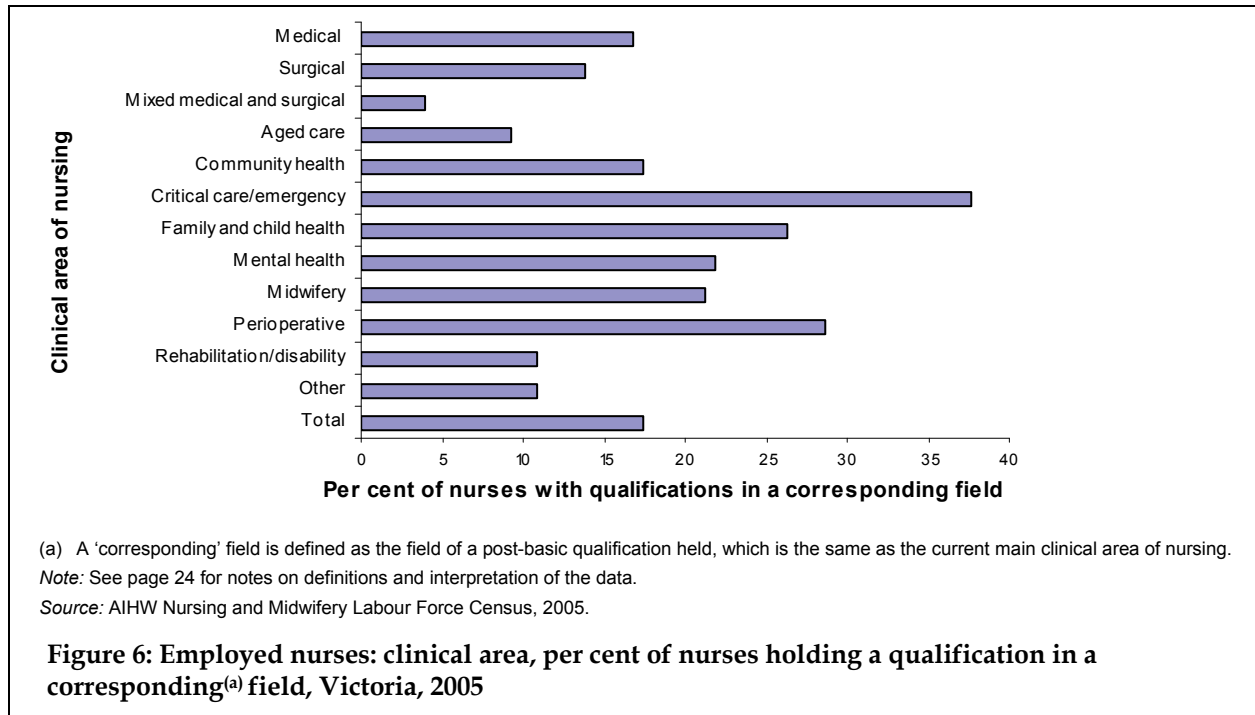
(b) Includes non-clinicians (i.e. administrators, teachers/educators and researchers).

Note: Because survey data for Victoria were not available in 2005, the 2006 Victorian survey responses were weighted to 2005 benchmarks (see Appendix A for weighting procedures). Therefore, care should be taken when comparing these data for Victoria with earlier years and in making comparisons with other states and territories in 2005.

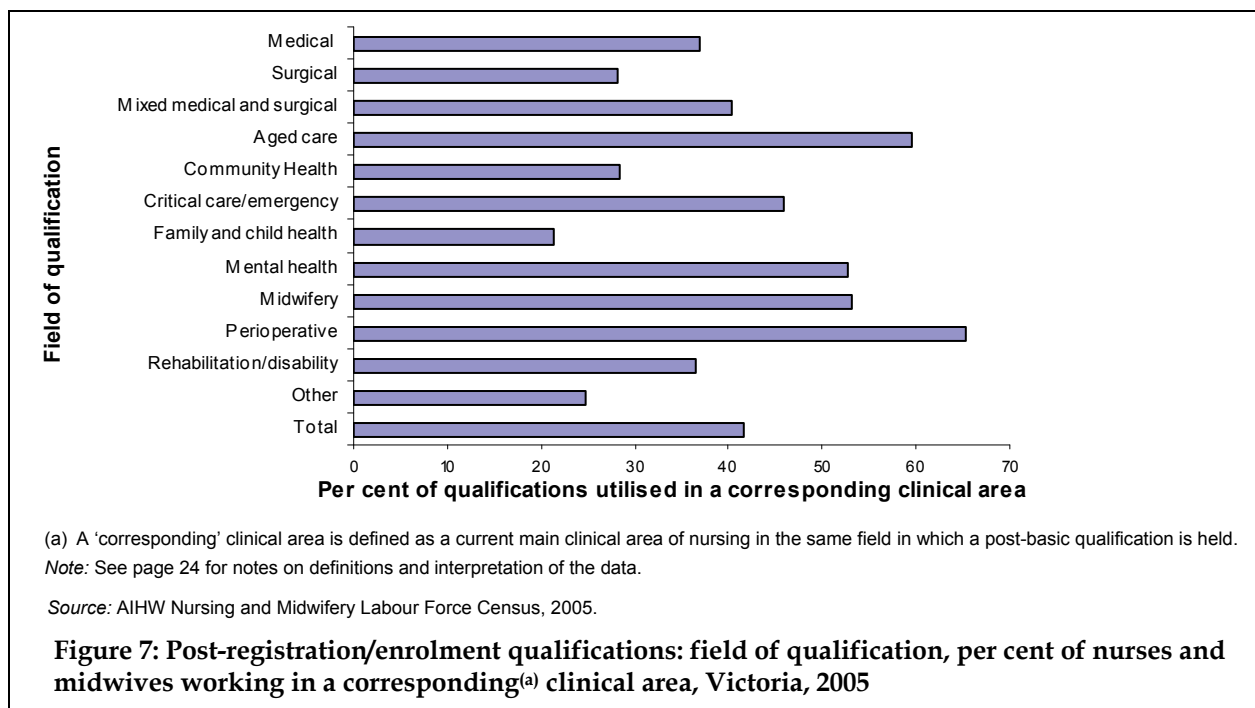
Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Victoria, 46.0% reported having post-registration/enrolment qualifications and 17.4% held a qualification in a field that corresponded with the clinical area of their job (Table 23 and Figure 6). For example, 9.3% of all nurses working in Aged care held qualifications in Aged care (Figure 6).



Of the collective qualifications held, overall, by employed nurses in Victoria, 41.7% were being utilised in a corresponding clinical area. For example, 52.7% of nurses' qualifications in the field of Mental health were held by nurses working in Mental health areas (Figure 7).



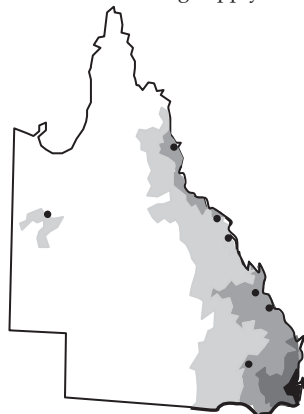
# Queensland

Area: 1,723,936 sq km

Population: 3,963,968

Number of nurses: 41,373

FTE rate of nursing supply: 999



ASGC Remoteness Areas

- Very remote
- Remote
- Outer regional
- Inner regional
- Major city

In Queensland in 2005, there were 5,894 nurses (14.2%) working in the area of Critical care/emergency and 5,883 nurses (also 14.2%) working in Aged care. These were followed closely in size by Medical nursing areas, where 5,642 of the state's nurses (13.6%) were working (Table 24).

Surgical nurses and Critical care/emergency nurses were younger, on average, than other nurses (43.3 years and 43.8 years, respectively, compared with the state average of 46.5 years).

Just under two thirds of nurses in Midwifery areas (62.4%) worked part-time compared with around half (49.7%) for the state, overall.

Rehabilitation/disability areas had the lowest proportion of registered nurses (64.2%).

## Clinical area of nursing and nurse characteristics

Table 24: Employed nurses by clinical area: selected characteristics, Queensland, 2005

| Clinical area <sup>(a)</sup>      | Number        | Average age (years) | Per cent male | Per cent registered | Average weekly hours worked | Per cent part-time | Per cent with post-registration/enrolment qualifications |
|-----------------------------------|---------------|---------------------|---------------|---------------------|-----------------------------|--------------------|--|
| <i>Medical and surgical areas</i> |               |                     |               |                     |                             |                    |  |
| Medical                           | 5,642         | 45.5                | 5.1           | 79.1                | 33.5                        | 49.8               | 37.2   |
| Surgical                          | 3,712         | 43.3                | 4.5           | 84.0                | 33.2                        | 51.6               | 30.2   |
| Mixed medical and surgical        | 3,792         | 45.4                | 3.8           | 73.4                | 31.7                        | 58.0               | 29.5   |
| <i>Other clinical areas</i>       |               |                     |               |                     |                             |                    |  |
| Aged care                         | 5,883         | 52.1                | 3.9           | 78.7                | 33.4                        | 51.4               | 26.7   |
| Community health                  | 2,851         | 47.4                | 5.1           | 92.0                | 32.9                        | 50.7               | 41.6   |
| Critical care/emergency           | 5,894         | 43.8                | 9.0           | 91.4                | 34.2                        | 48.4               | 57.6   |
| Family and child health           | 1,050         | 46.8                | 2.2           | 98.4                | 33.2                        | 45.4               | 69.4   |
| Mental health                     | 2,317         | 48.2                | 31.8          | 85.7                | 37.0                        | 29.9               | 50.1   |
| Midwifery                         | 3,537         | 46.3                | 1.1           | 98.8                | 31.2                        | 62.4               | 57.5   |
| Perioperative                     | 3,111         | 45.1                | 5.6           | 86.3                | 33.6                        | 48.0               | 45.4   |
| Rehabilitation/disability         | 739           | 48.6                | 7.9           | 64.3                | 34.1                        | 47.7               | 30.1   |
| Other <sup>(b)</sup>              | 2,846         | 47.0                | 5.5           | 83.7                | 35.6                        | 39.1               | 57.7   |
| <b>Total</b>                      | <b>41,373</b> | <b>46.5</b>         | <b>6.5</b>    | <b>84.7</b>         | <b>33.5</b>                 | <b>49.7</b>        | <b>42.9</b>  |

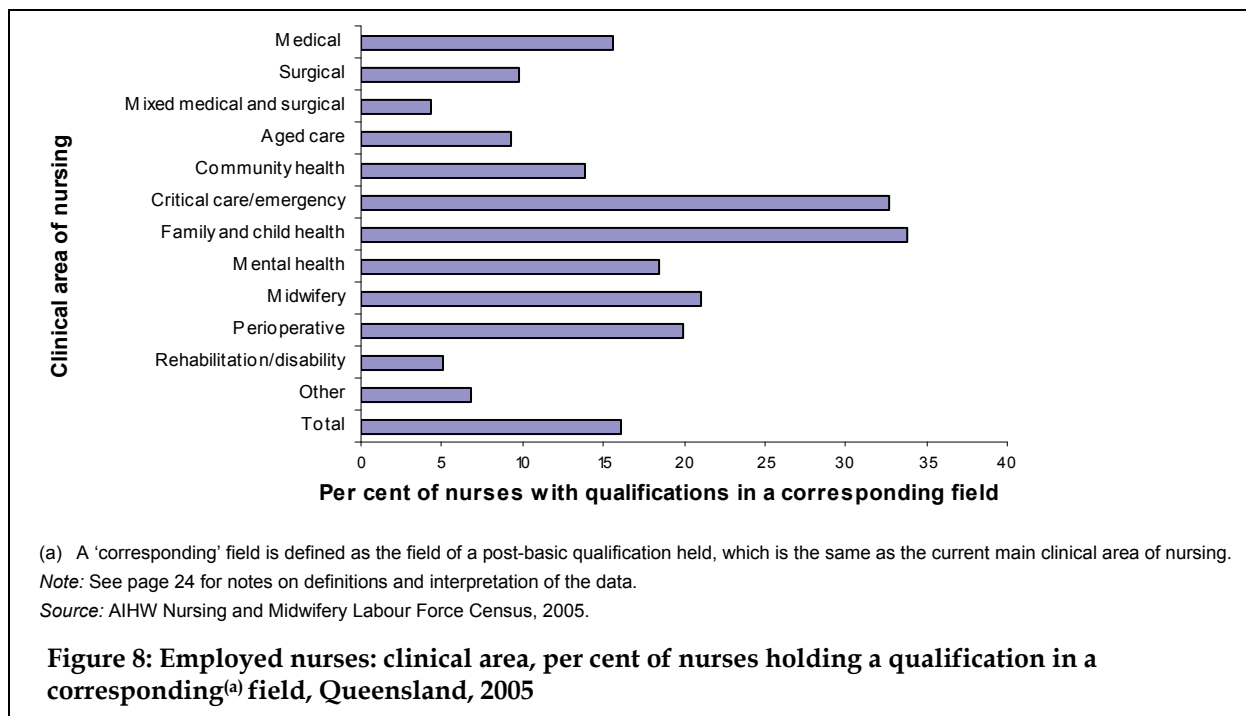
(a) Updates to the clinical categories comprising these clinical areas were introduced in the 2005 questionnaire, resulting in these categories not being directly comparable with those used in previous years.

(b) Includes non-clinicians (i.e. administrators, teachers/educators and researchers).

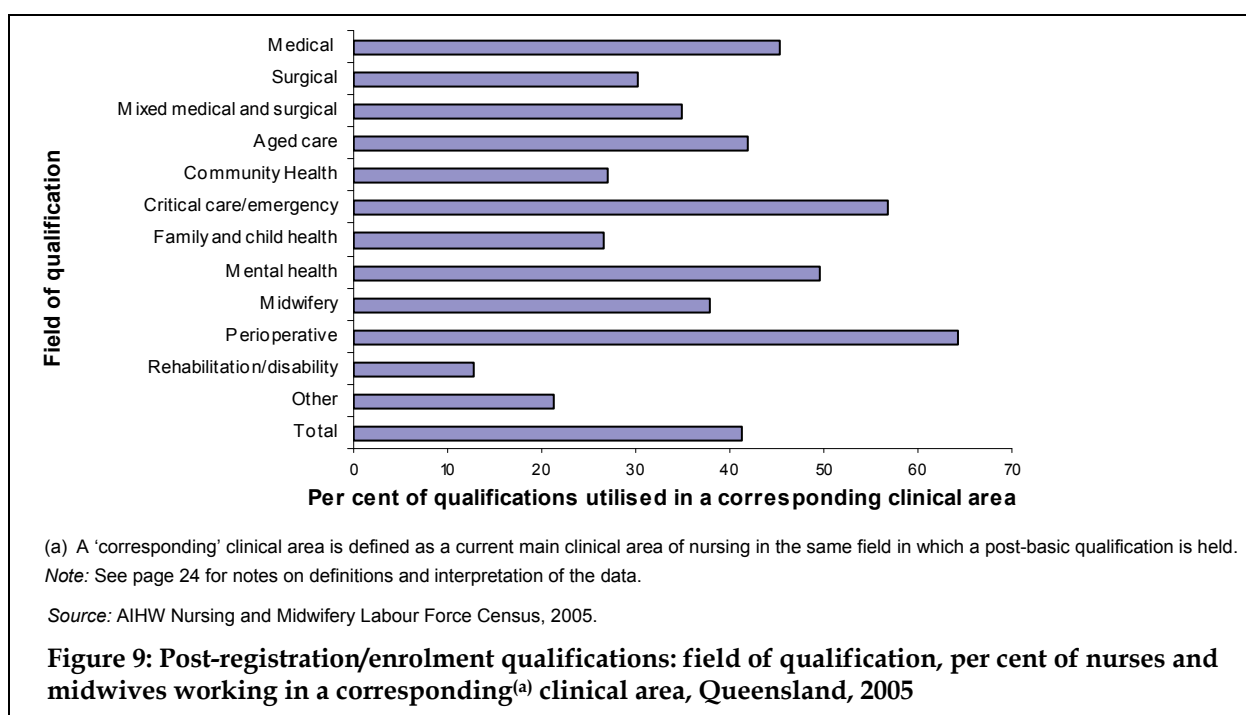
Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Queensland, 42.9% reported having post-registration/enrolment qualifications and 16.1% held a qualification in a field that corresponded with the clinical area of their job (Table 24 and Figure 8). For example, 33.8% of nurses working in Family and child health, held qualifications in Family and child health (Figure 8).



Of the collective qualifications held, overall, by employed nurses in Queensland, 41.3% were being utilised in a corresponding clinical area. For example, 64.3% of qualifications in the field of Perioperative care were held by nurses working in Perioperative areas (Figure 9).





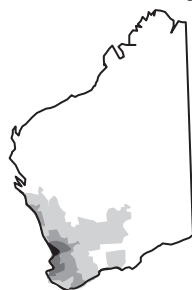
# Western Australia

Area: 2,526,786 sq km

Population: 2,010,113

Number of nurses: 22,904

FTE rate of nursing supply: 1,035



ASGC Remoteness Areas

- Very remote
- Remote
- Outer regional
- Inner regional
- Major city

In Western Australia in 2005, the largest proportion of nurses worked in the area of Critical care/emergency (14.2% or 3,253 nurses), followed by Medical nursing areas (13.5% or 3,084 nurses) (Table 25).

Surgical nurses and Critical care/emergency nurses were younger, on average, than other nurses (43.7 years, compared with the state average of 46.7 years).

Nurses in Community health worked shorter hours, on average (30.4 hours), followed closely by nurses in Mixed medical/surgical areas and Aged care (30.8 hours in both areas). Nurses in Mental health, Other and Critical care emergency were the least likely to work part-time.

Some 29.9% of nurses in Mental health areas were male, compared with 5.2% for the state. In Midwifery areas almost all nurses were registered (98.0%).

## Clinical area of nursing and nurse characteristics

Table 25: Employed nurses by clinical area: selected characteristics, Western Australia, 2005

| Clinical area <sup>(a)</sup>      | Number        | Average age (years) | Per cent male | Per cent registered | Average weekly hours worked | Per cent part-time | Per cent with post-registration/enrolment qualifications |
|-----------------------------------|---------------|---------------------|---------------|---------------------|-----------------------------|--------------------|--|
| <i>Medical and surgical areas</i> |               |                     |               |                     |                             |                    |  |
| Medical                           | 3,084         | 46.9                | 3.5           | 78.0                | 31.7                        | 53.4               | 43.4   |
| Surgical                          | 2,204         | 43.7                | 4.9           | 81.2                | 31.3                        | 53.1               | 36.7   |
| Mixed medical and surgical        | 2,703         | 45.9                | 2.7           | 75.5                | 30.8                        | 56.1               | 41.0   |
| <i>Other clinical areas</i>       |               |                     |               |                     |                             |                    |  |
| Aged care                         | 2,543         | 52.3                | 2.9           | 68.1                | 30.8                        | 58.1               | 35.0   |
| Community health                  | 1,422         | 48.2                | 6.1           | 87.6                | 30.4                        | 57.5               | 45.4   |
| Critical care/emergency           | 3,253         | 43.7                | 6.0           | 91.2                | 33.0                        | 48.3               | 57.3   |
| Family and child health           | 822           | 46.8                | 1.8           | 96.8                | 31.1                        | 52.0               | 72.9   |
| Mental health                     | 1,037         | 46.8                | 30.1          | 83.0                | 36.5                        | 31.1               | 41.9   |
| Midwifery                         | 2,236         | 46.8                | 1.5           | 98.0                | 30.7                        | 60.5               | 64.8   |
| Perioperative                     | 1,699         | 47.0                | 4.2           | 88.3                | 31.5                        | 52.4               | 49.4   |
| Rehabilitation/disability         | 509           | 49.3                | 5.7           | 63.6                | 32.9                        | 52.8               | 40.7   |
| Other <sup>(b)</sup>              | 1,393         | 46.3                | 6.0           | 90.2                | 34.5                        | 41.7               | 62.2   |
| <b>Total</b>                      | <b>22,904</b> | <b>46.7</b>         | <b>5.2</b>    | <b>83.4</b>         | <b>31.8</b>                 | <b>52.6</b>        | <b>48.4</b>  |

(a) Updates to the clinical categories comprising these clinical areas were introduced in the 2005 questionnaire, resulting in these categories not being directly comparable with those used in previous years.

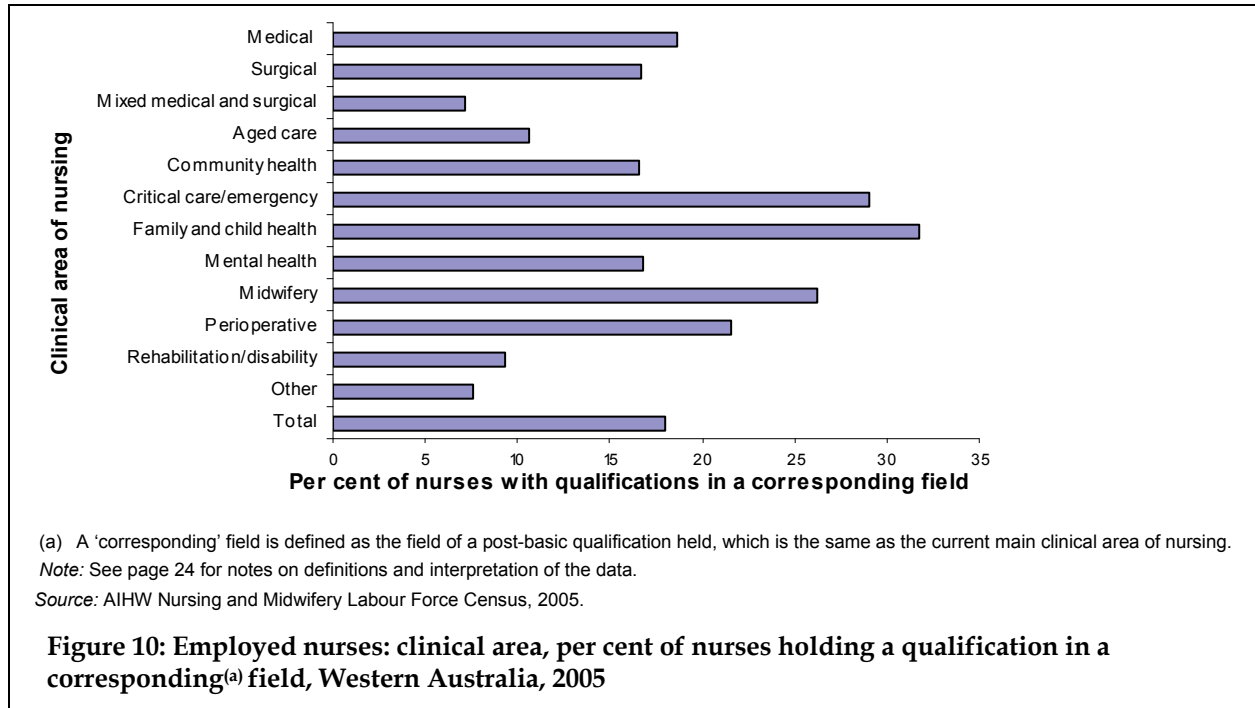
(b) Includes non-clinicians (i.e. administrators, teachers/educators and researchers).

Note: Care should be taken in interpreting the estimates for WA due to the low response rate (26.9%) to the census in 2005.

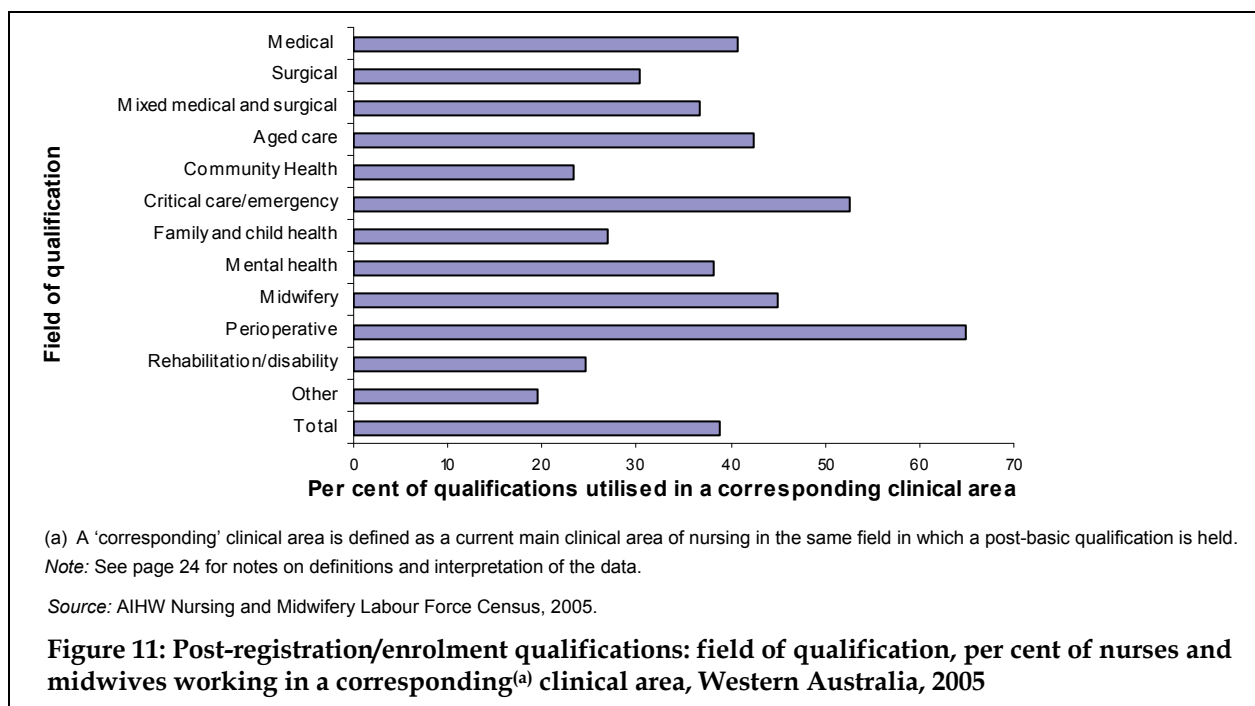
Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Western Australia, 48.4% reported having post-registration/enrolment qualifications and 18.0% held a qualification in a field which corresponded with the clinical area of their job (Table 25 and Figure 10). For example, 26.3% of nurses working in Midwifery held qualifications in Midwifery (Figure 10).



Of the collective qualifications held, overall, by employed nurses in Western Australia, 38.8% were being utilised in a corresponding clinical area. For example, 42.4% of the qualifications in Aged care, were held by nurses working in Aged care areas (Figure 11).



# South Australia

Area: 978,810 sq km

Population: 1,542,033

Number of nurses: 23,651

FTE rate of nursing supply: 1,398



ASGC Remoteness Areas

- Very remote
- Remote
- Outer regional
- Inner regional
- Major city

In South Australia in 2005, the largest proportion of nurses (apart from the combined area of Medical/Surgical) worked in the area of Aged care (15.5% or 3,666 nurses (Table 26).

Aged care nurses and Mental health nurses were older, on average, than other nurses (47.7 and 48.2 years, respectively, compared with the state average of 44.0 years).

In Mental health, nurses worked 36.8 hours, on average, per week, and almost one-third of them (32.2%) were male. By comparison, nurses in Midwifery worked 28.6 hours, on average, per week and 1.6% were male.

The lowest proportion of registered nurses was in the area of Mental health (61.2%).

## Clinical area of nursing and nurse characteristics

Table 26: Employed nurses by clinical area<sup>(a)</sup>: selected characteristics, South Australia, 2005

| Clinical area <sup>(a)</sup>              | Number        | Average age (years) | Per cent male | Per cent registered | Average weekly hours worked | Per cent part-time | Per cent with post-registration/enrolment qualifications |
|---|---------------|---------------------|---------------|---------------------|-----------------------------|--------------------|--|
| Medical and surgical areas <sup>(b)</sup> | 6,537         | 41.6                | 7.3           | 70.9                | 31.0                        | 59.4               | 25.5   |
| <i>Other clinical areas</i>               |               |                     |               |                     |                             |                    |  |
| Aged care                                 | 3,666         | 47.7                | 5.2           | 54.9                | 31.5                        | 60.1               | 22.8   |
| Community health                          | 2,280         | 44.9                | 5.3           | 78.0                | 30.7                        | 58.4               | 31.5   |
| Critical care/emergency                   | 2,191         | 39.4                | 14.4          | 92.2                | 32.7                        | 52.0               | 51.3   |
| Family and child health                   | 611           | 43.0                | 2.8           | 92.3                | 30.7                        | 59.3               | 45.5   |
| Mental health                             | 1,153         | 48.2                | 32.2          | 80.6                | 36.8                        | 28.2               | 46.6   |
| Midwifery                                 | 1,332         | 44.3                | 1.6           | 97.0                | 28.6                        | 72.1               | 54.3   |
| Perioperative                             | 1,618         | 42.7                | 8.5           | 81.5                | 31.8                        | 53.2               | 45.2   |
| Rehabilitation/disability                 | 651           | 46.4                | 19.7          | 61.2                | 33.2                        | 47.1               | 25.9   |
| Management and administration             | 905           | 46.7                | 14.9          | 95.2                | 39.0                        | 24.2               | 59.9   |
| Other <sup>(c)</sup>                      | 1,179         | 45.0                | 9.5           | 82.5                | 33.3                        | 48.3               | 45.5   |
| Not stated                                | 1,529         | 46.3                | 8.7           | 69.4                | 31.9                        | 53.6               | 25.8   |
| <b>Total</b>                              | <b>23,651</b> | <b>44.0</b>         | <b>9.1</b>    | <b>75.4</b>         | <b>31.9</b>                 | <b>54.9</b>        | <b>34.9</b>  |

(a) In addition to being different from other jurisdictions in 2005, the categories comprising these clinical areas were different in earlier years, resulting in these categories not being directly comparable with those used in previous years in SA.

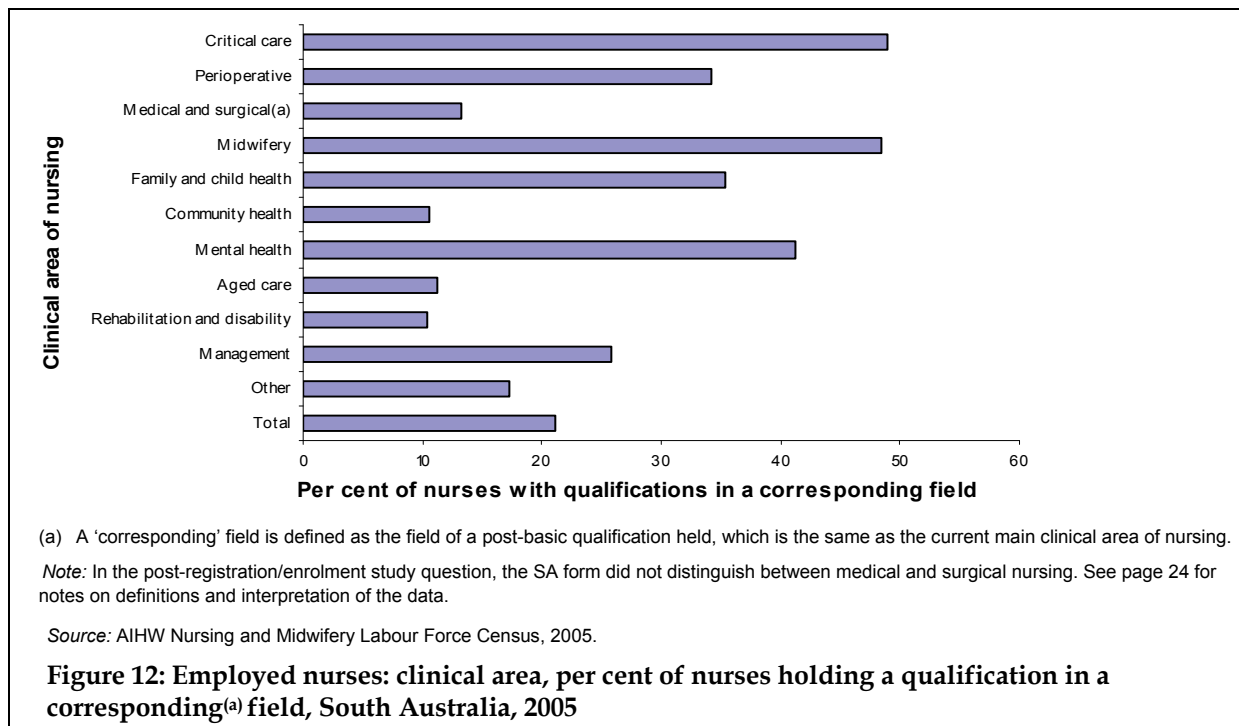
(b) Medical and Surgical areas have been combined to align with the categories used in figures 12 and 13.

(c) Includes non-clinicians (i.e. administrators, teachers/educators and researchers).

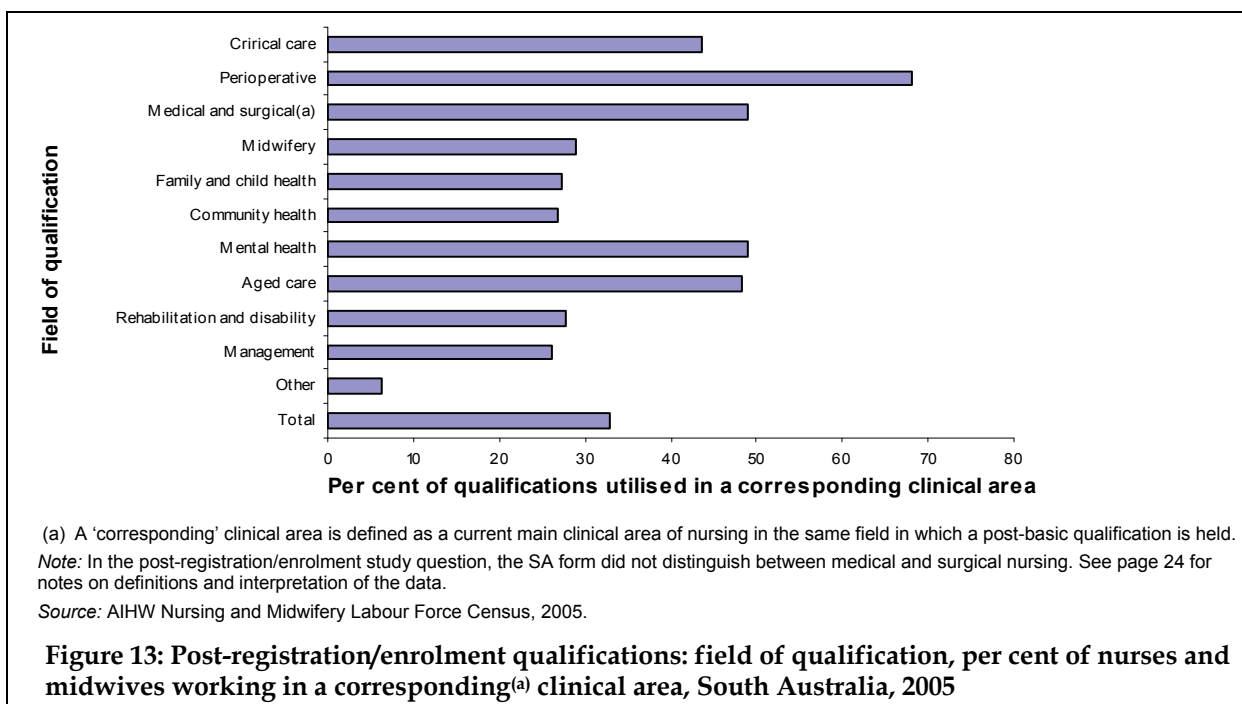
Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in South Australia, 34.9% reported having post-registration/enrolment qualifications and 21.1% held a qualification in a field which corresponded with the clinical area of their job (Table 26 and Figure 12). Note: corresponding qualification and clinical area is not clear-cut for South Australia because the two sets of categories do not align exactly (figures 12 and 13).



Of the collective qualifications held, overall, by employed nurses in South Australia, 33.0% of the qualifications were being utilised in a corresponding clinical area. For example, 29.0% of the qualifications in Midwifery, (a study field which does align with clinical area for South Australia) were held by nurses working in Midwifery areas (Figure 13).



# Tasmania

Area: 64,519 sq km

Population: 485,263

Number of nurses: 6,645

FTE rate of nursing supply: 1,295



ASGC Remoteness Areas

- Very remote
- Remote
- Outer regional
- Inner regional
- Major city

In Tasmania in 2005, the largest proportion of nurses worked in the area of Aged care (16.8% or 1,118 nurses), followed by Medical nursing areas (14.8% or 982 nurses) (Table 27).

Aged care nurses and Mental health nurses were older, on average, than other nurses (49.7 years and 48.1 years, respectively, compared with the state average of 45.2 years).

Nurses in Surgical areas worked 32.8 hours, on average, per week and almost one in ten of them (9.7%) was male. By comparison, nurses in Mental health worked 37.6 hours, on average, per week and one in three (34.8%) was male.

The lowest proportion of registered nurses was in the area of Aged care (65.6%) and the lowest proportion part-time was in Mental health (28.1%).

## Clinical area of nursing and nurse characteristics

Table 27: Employed nurses by clinical area: selected characteristics, Tasmania, 2005

| Clinical area <sup>(a)</sup>      | Number       | Average age (years) | Per cent male | Per cent registered | Average weekly hours worked | Per cent part-time | Per cent with post-registration/enrolment qualifications |
|-----------------------------------|--------------|---------------------|---------------|---------------------|-----------------------------|--------------------|--|
| <i>Medical and surgical areas</i> |              |                     |               |                     |                             |                    |  |
| Medical                           | 982          | 44.0                | 10.4          | 83.1                | 32.7                        | 53.4               | 36.9   |
| Surgical                          | 669          | 41.0                | 9.7           | 89.1                | 32.8                        | 48.6               | 27.4   |
| Mixed medical and surgical        | 537          | 44.7                | 8.1           | 81.1                | 31.7                        | 53.8               | 32.9   |
| <i>Other clinical areas</i>       |              |                     |               |                     |                             |                    |  |
| Aged care                         | 1,118        | 49.7                | 8.5           | 65.6                | 33.2                        | 54.6               | 25.4   |
| Community health                  | 550          | 46.9                | 5.4           | 86.3                | 31.7                        | 56.1               | 44.1   |
| Critical care/emergency           | 843          | 41.5                | 13.5          | 95.7                | 33.8                        | 49.1               | 60.9   |
| Family and child health           | 180          | 46.8                | 8.6           | 100.0               | 32.5                        | 55.7               | 75.4   |
| Mental health                     | 343          | 48.1                | 34.8          | 85.6                | 37.6                        | 28.1               | 49.1   |
| Midwifery                         | 513          | 46.6                | 3.2           | 99.3                | 30.7                        | 67.8               | 60.1   |
| Perioperative                     | 456          | 43.6                | 9.3           | 96.1                | 34.1                        | 46.6               | 45.0   |
| Rehabilitation/disability         | 139          | 46.4                | 19.2          | 72.0                | 34.4                        | 49.6               | 26.9   |
| Other <sup>(b)</sup>              | 316          | 46.3                | 9.0           | 97.8                | 35.3                        | 38.7               | 67.4   |
| <b>Total</b>                      | <b>6,645</b> | <b>45.2</b>         | <b>10.5</b>   | <b>85.7</b>         | <b>33.1</b>                 | <b>51.4</b>        | <b>42.7</b>  |

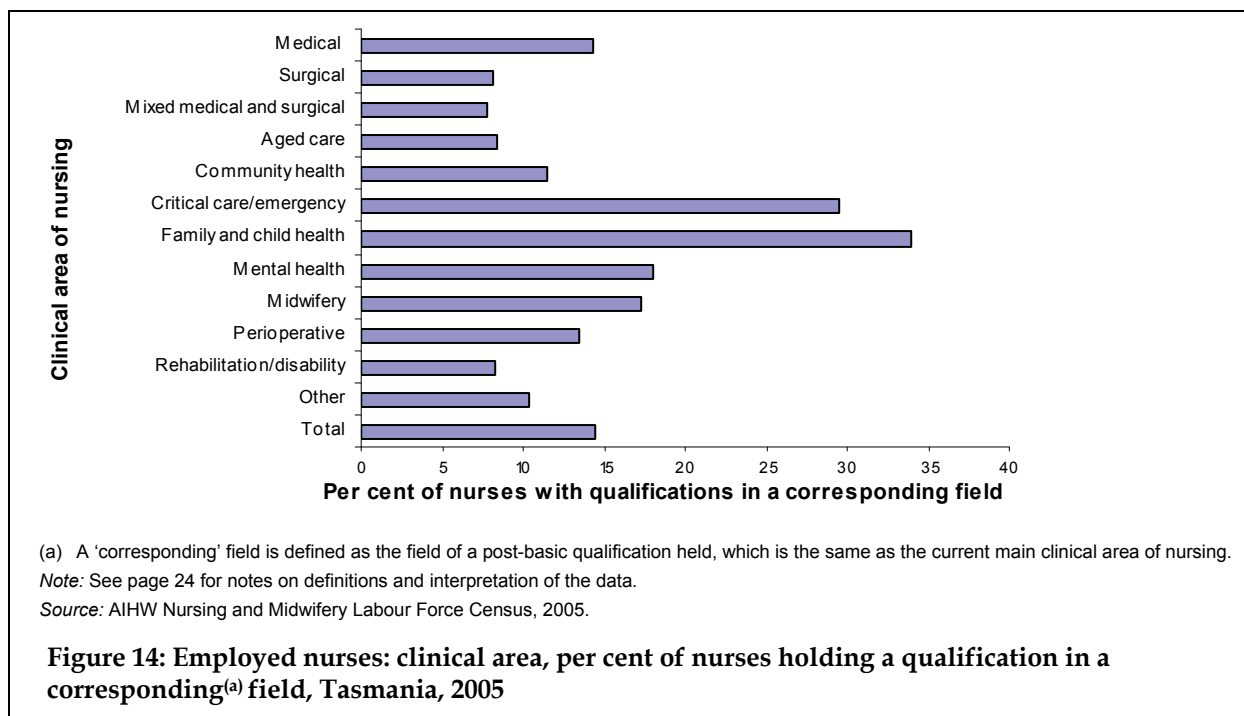
(a) Updates to the clinical categories comprising these clinical areas were introduced in the 2005 questionnaire, resulting in these categories not being directly comparable with those used in previous years.

(b) Includes non-clinicians (i.e. administrators, teachers/educators and researchers).

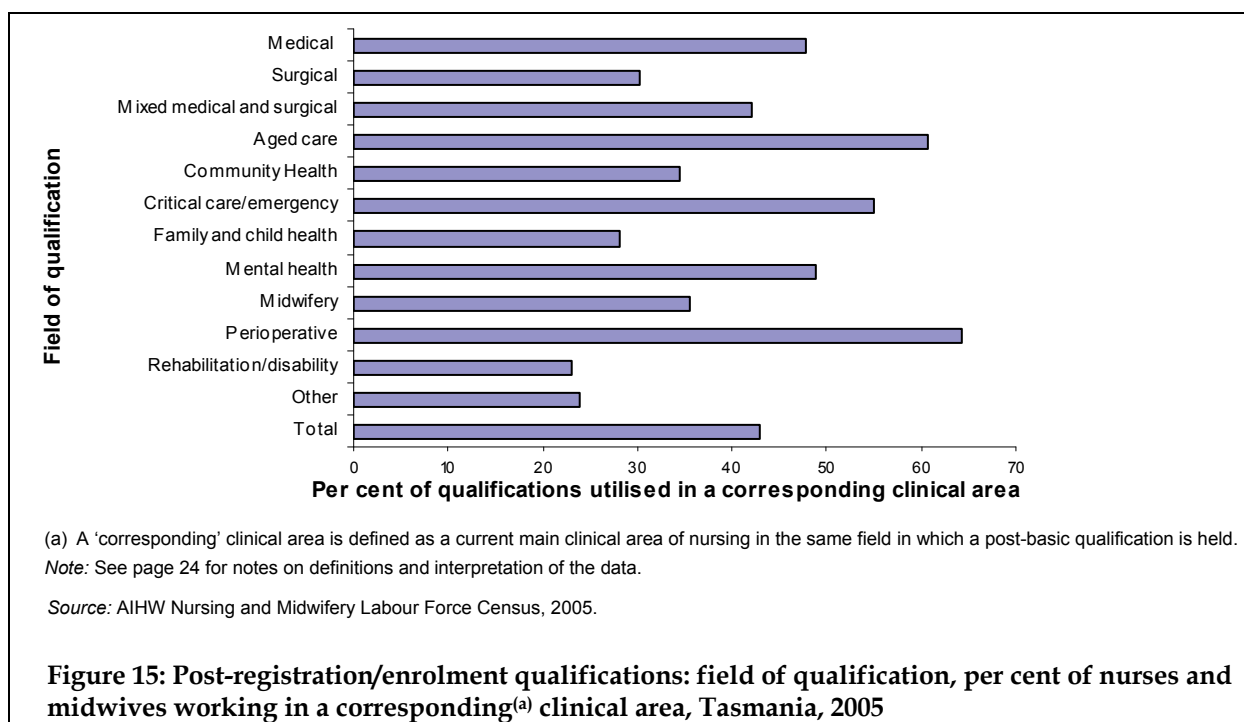
Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Tasmania, 42.7% reported having post-registration/enrolment qualifications and 14.5% held a qualification in a field which corresponded with the clinical area of their job (Table 27 and Figure 14). For example, 29.5% of nurses working in Critical care/emergency held qualifications in Critical care/emergency (Figure 14).



Of the collective qualifications held, overall, by employed nurses in Tasmania, 42.8% were being utilised in a corresponding clinical area. For example, 64.2% of the qualifications in Perioperative care were held by nurses working in Perioperative areas (Figure 15).



# Australian Capital Territory

Area: 2,358 sq km

Population: 325,161

Number of nurses: 4,108

FTE rate of nursing supply: 1,242



ASGC Remoteness Areas

- Very remote
- Remote
- Outer regional
- Inner regional
- Major city

In the Australian Capital Territory in 2005, the largest proportion of nurses worked in Critical care/emergency (16.3% or 668 nurses), followed by Medical nursing (12.3% or 504 nurses) (Table 28).

Just over one-quarter (28.5%) of nurses working in Mental health areas were male compared with 7.2% for the territory, overall, and a similar proportion (32.2%) of these nurses were working part-time, compared with 44.4% for the territory.

Nurses working in Midwifery worked shorter hours, on average, whereas those in Perioperative care worked longer hours (30.6 hours and 36.0 hours, respectively, compared with 34.4 hours for the territory, overall).

Mixed medical/surgical areas had the lowest proportion of registered nurses (64.3%), followed by Aged care (66.5%).

## Clinical area of nursing and nurse characteristics

Table 28: Employed nurses by clinical area: selected characteristics, Australian Capital Territory, 2005

| Clinical area <sup>(a)</sup>      | Number       | Average age (years) | Per cent male | Per cent registered | Average weekly hours worked | Per cent part-time | Per cent with post-registration/enrolment qualifications |
|-----------------------------------|--------------|---------------------|---------------|---------------------|-----------------------------|--------------------|--|
| <i>Medical and surgical areas</i> |              |                     |               |                     |                             |                    |  |
| Medical                           | 504          | 45.2                | 6.8           | 77.1                | 34.5                        | 44.8               | 39.2   |
| Surgical                          | 378          | 41.4                | 8.1           | 72.6                | 34.4                        | 45.8               | 35.5   |
| Mixed medical and surgical        | 344          | 43.3                | 4.6           | 64.3                | 32.3                        | 53.5               | 32.9   |
| <i>Other clinical areas</i>       |              |                     |               |                     |                             |                    |  |
| Aged care                         | 349          | 51.6                | 3.0           | 66.5                | 35.3                        | 42.9               | 33.2   |
| Community health                  | 284          | 48.2                | 5.2           | 87.2                | 33.6                        | 45.7               | 47.0   |
| Critical care/emergency           | 668          | 41.4                | 11.5          | 93.4                | 35.2                        | 41.4               | 60.4   |
| Family and child health           | 143          | 47.9                | 1.1           | 96.0                | 35.3                        | 41.9               | 74.9   |
| Mental health                     | 221          | 48.4                | 28.5          | 85.2                | 37.1                        | 32.2               | 59.0   |
| Midwifery                         | 426          | 47.0                | 2.6           | 98.2                | 30.6                        | 64.4               | 57.9   |
| Perioperative                     | 342          | 43.6                | 4.6           | 86.0                | 36.0                        | 34.1               | 51.5   |
| Rehabilitation/disability         | 63           | 48.1                | 2.5           | 69.7                | 33.5                        | 47.5               | 30.4   |
| Other <sup>(b)</sup>              | 386          | 46.8                | 4.9           | 92.0                | 35.9                        | 34.4               | 60.3   |
| <b>Total</b>                      | <b>4,108</b> | <b>45.4</b>         | <b>7.2</b>    | <b>83.4</b>         | <b>34.4</b>                 | <b>44.4</b>        | <b>49.0</b>  |

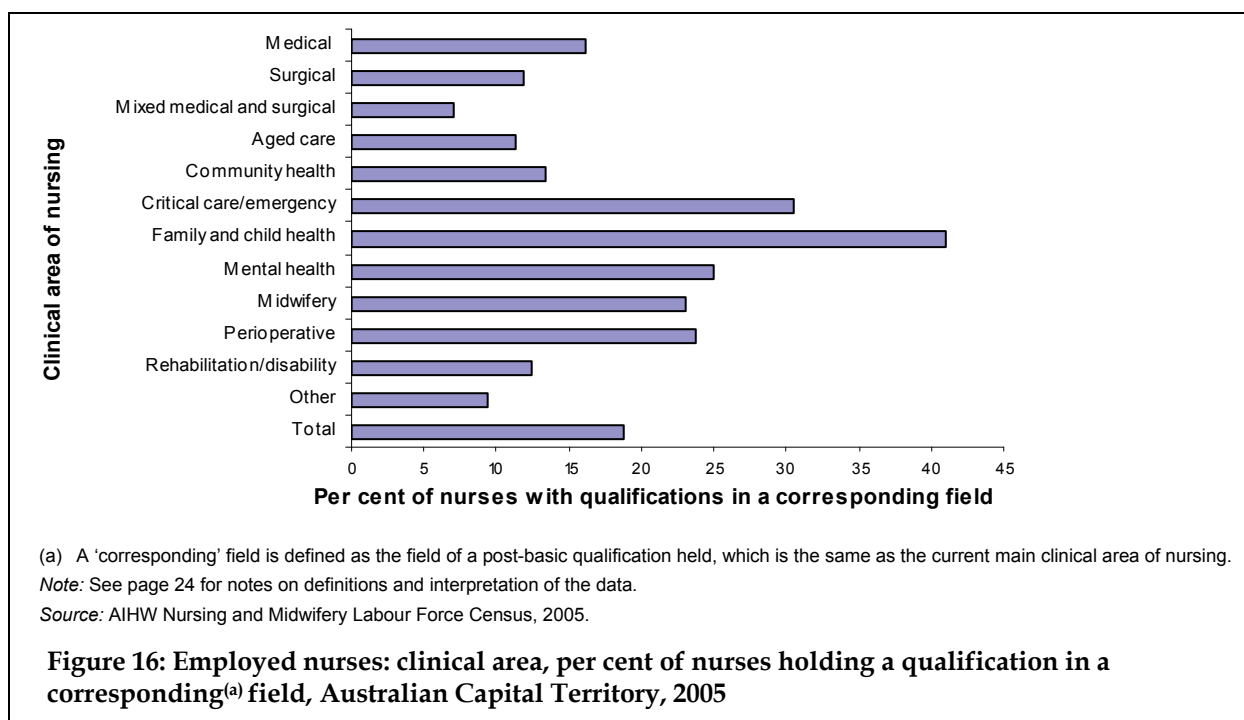
(a) Updates to the clinical categories comprising these clinical areas were introduced in the 2005 questionnaire, resulting in these categories not being directly comparable with those used in previous years.

(b) Includes non-clinicians (i.e. administrators, teachers/educators and researchers).

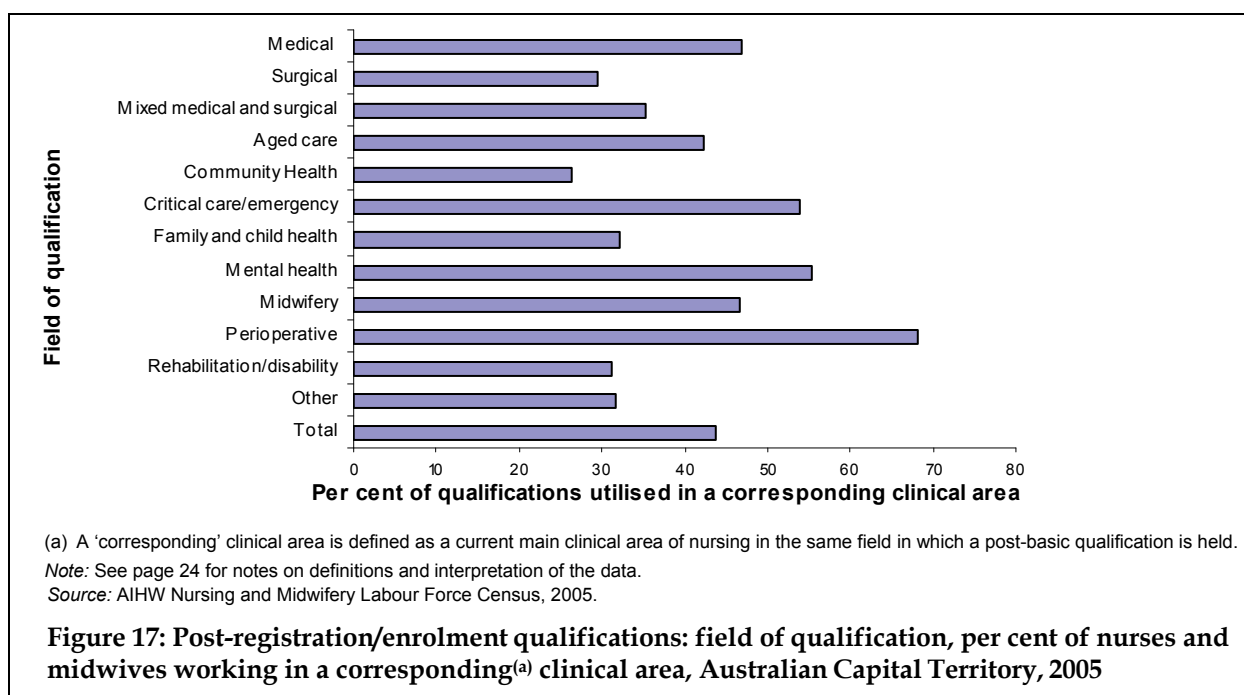
Source: AIHW Nursing and Midwifery Labour Force Census, 2005.

## Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in the Australian Capital Territory, 49.0% reported having post-registration/enrolment qualifications and 18.7%, held a qualification in a field which corresponded with the clinical area of their job (Table 28 and Figure 16). For example, 41.1% of nurses working in Family and child health held qualifications in Family and child health (Figure 16).



Of the collective qualifications held, overall, by employed nurses in the Australian Capital Territory, 43.7% were being utilised in a corresponding clinical area. For example, 46.8% of the qualifications in Medical nursing were held by nurses working in Medical areas (Figure 17).



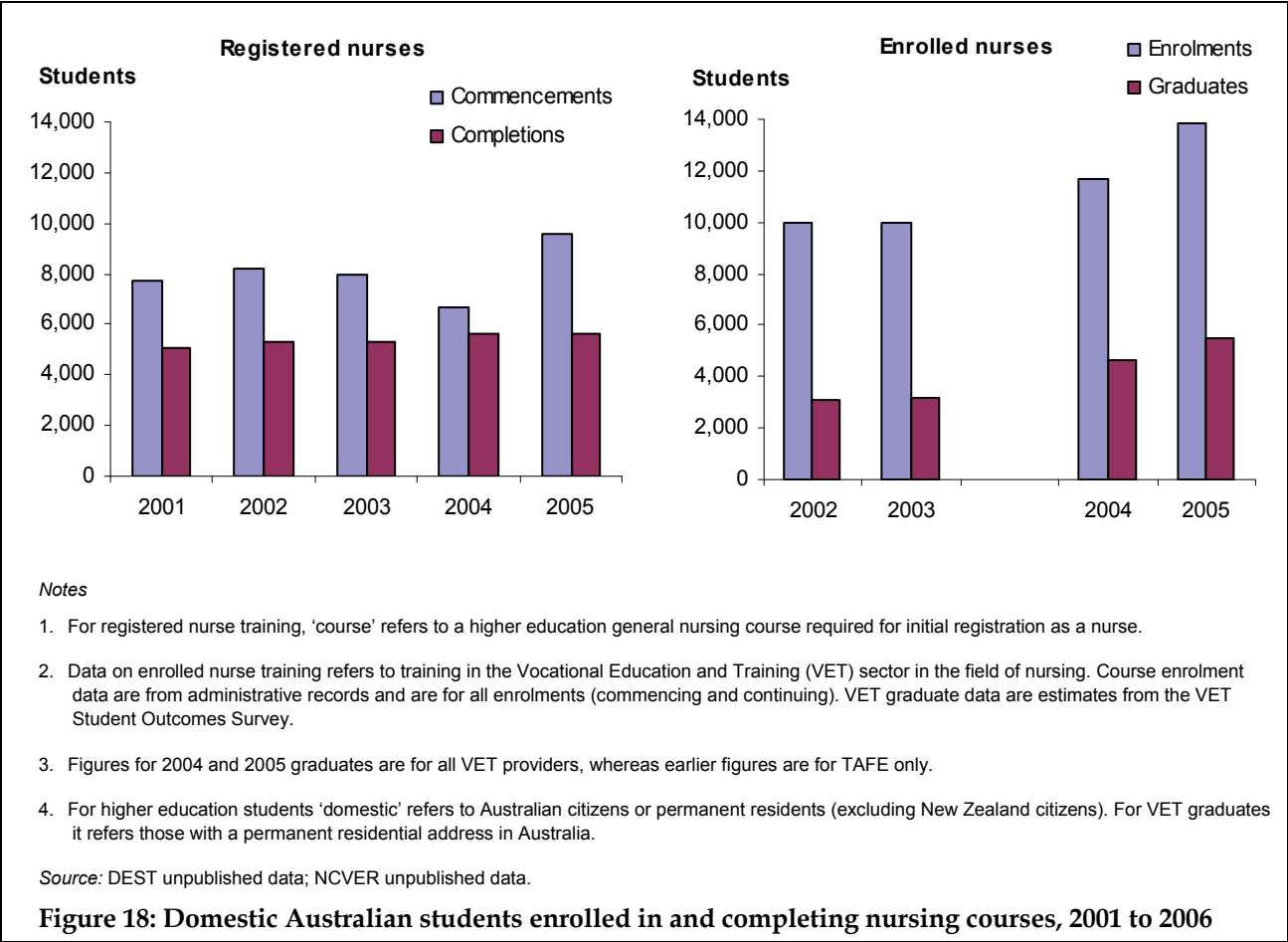


# 6 Sources of new entrants and re-entrants to the nurse labour force

There are three sources of recruits to the nursing labour force. The main source of nurses is via the training of new graduates. The time required for students to complete training and enter the workforce is such that any acute change in the demand for nurses cannot be met by this group. An alternative short-term option is to recruit nurses from overseas. In addition, the pool of nurses who have maintained their registration/enrolment but who are not employed in nursing has been periodically considered for its potential to increase the number of nurses. The following sections discuss data relevant to these three sources.

## Nurse training

Basic training for nursing is provided by two sources: universities for registered nurses and vocational education and training (VET) institutions for enrolled nurses. Information on nursing student commencements and completions of higher education (university) courses are derived from data provided by the Department of Education, Science and Training (DEST). Data on enrolled nurse training have been sourced from the National Centre for Vocational Education Research (NCVER).



Enrolled nurses can upgrade their qualifications to become registered nurses and this has been encouraged over the last decade through more varied training pathways, such as training packages which focus on competencies that can be achieved either in a clinical setting or in the classroom (ANMC 2005b). This should be considered when looking at the slowing growth rate of enrolled nurse numbers compared with registered nurse numbers (Table 2) because some of the change is a result of enrolled nurses upgrading their qualifications.

University-level general nursing courses required for initial registration as a nurse are usually of 3 or 4 years duration when taken full-time. The level of commencements in these courses was stable between 2001 and 2003 at around 8,000 students per year, as was the level of completions at around two-thirds of the level of commencements (Figure 18). There was a decline in commencements in 2004, although completions flowing through from earlier course intakes continued to increase. Commencements in 2005 increased markedly, to 9,578, while the number of completions, 5,632, was similar to 2004.

The basic training for an enrolled nurse is shorter in duration than for registered nurses. Enrolled nurse training varies across jurisdictions, although there is a national set of competencies (ANMC 2005b). Enrolled nurse courses are generally Certificate III or Certificate IV level training programs and can take between 1 and 2 years to complete, depending on the level of theory mixed with clinical experience. In 2005, there were 13,815 students enrolled in VET nursing courses, and 5,473 students completed their course in that year (Figure 18).

## Nurse migration

Another source of new entrants to the nurse workforce is the immigration of nurses. At the same time, however, some nurses leave Australia. Persons arriving in, or departing from, Australia provide information on passenger cards and visa applications. These serve as a source for statistics of overseas arrivals and departures which are produced by the ABS.

In 2004–05, 6,619 nurses entered Australia and 4,199 left it for stays of 12 months or more (defined as ‘long-term’) – a net gain of 2,420 nurses (Table 29). However, these movements are not all for employment reasons, and therefore do not equate precisely to additions and losses from the nurse labour force. Data on ‘reason for journey’ are available only for long-term visitor arrivals and long-term resident departures; 60.1% of nurses in the first of these groups and 52.8% of those in the latter gave ‘employment’ as their reason for moving in 2004–05.

**Table 29: Movement of nurses: overseas arrivals and departures, 2001–02 and 2004–05**

| Year     | Arrivals            |                    |                    |                | Departures          |                     |                    |                  |
|----------|---------------------|--------------------|--------------------|----------------|---------------------|---------------------|--------------------|------------------|
|          | Long-term residents | Permanent settlers | Long-term visitors | Total arrivals | Long-term residents | Permanent residents | Long-term visitors | Total departures |
| 2001–02  | 1,831               | 1,091              | 1,962              | 4,884          | 2,066               | 804                 | 921                | 3,791            |
| 2004–05  | 1,895               | 1,833              | 2,891              | 6,619          | 1,873               | 987                 | 1,339              | 4,199            |
| % change | 3.5                 | 68.0               | 47.3               | 35.5           | –9.3                | 22.8                | 45.4               | 10.8             |

*Note:* This table includes all movements, including movements of Australian citizens, regardless of the purpose (i.e. employment, holiday, etc.) but excludes short-term movements (i.e. less than 12 months).

*Source:* Unpublished data from ABS Overseas Arrivals and Departures database.

## Nurses not employed in nursing

The Nursing and Midwifery Labour Force Census collects some basic information on those nurses who are registered or enrolled but who are not employed in nursing in Australia, that is, registered and enrolled nurses on extended leave, working in nursing overseas, employed elsewhere or not employed. This does not include nurses who are not registered or enrolled at the time of the census.

In 2005, there were an estimated 41,260 (16.9%) registered and enrolled nurses who were not employed as a nurse in Australia (Table 30). Of these, over two-thirds (69.3%) were not looking for work in nursing, about half of whom (51.0%) were employed elsewhere. A further 18.1% were on extended leave and 5.0% were working as a nurse overseas. The remaining 7.5% stated that they were looking for work in nursing.

Registered and enrolled nurses 'on extended leave' and 'not employed and not looking for work in nursing' were less likely to be male (2.8% and 3.9%) compared with other nurses (7.9% of employed nurses were male). In comparison, nurses working overseas and those 'employed elsewhere and not looking for work in nursing' were more likely to be male (10.3% and 10.5% respectively). Nurses on extended leave and overseas were, on average, younger than other nurses (39.1 years and 40.2 years), while those who were 'not employed and not looking for work in nursing' were older (48.9 years).

While almost all of the nurses working overseas were registered nurses (92.5%), those looking for work in nursing were less likely to be registered (67.1%). Of those working overseas, 61.4% had gained their initial qualification in Australia, a lower proportion than for all employed nurses (85.9%) and for other nurses not employed in nursing in Australia (86.8% for those looking for work 90.1% for those not looking for work).

**Table 30: Registered and enrolled nurses: labour force status: selected characteristics, 2005**

| Labour force status                         | Number         | Per cent male | Average age (years) | Per cent registered nurse | Per cent metropolitan residence <sup>(a)</sup> | Per cent initial qualification in Australia |
|---|----------------|---------------|---------------------|---------------------------|--|---|
| <b>Not employed in nursing in Australia</b> |                |               |                     |                           |  |   |
| On extended leave                           | 7,488          | 2.8           | 39.1                | 86.4                      | 87.4   | 90.6  |
| Looking for work in nursing                 | 3,108          | 8.3           | 44.7                | 67.1                      | 86.1   | 86.8  |
| Employed elsewhere                          | 1,094          | 9.0           | 44.0                | 61.6                      | 90.6   | 91.7  |
| Not employed                                | 2,014          | 8.0           | 45.1                | 70.1                      | 81.4   | 84.2  |
| Overseas                                    | 2,081          | 10.3          | 40.2                | 92.5                      | 87.3   | 61.4  |
| Not looking for work in nursing             | 28,582         | 7.3           | 47.4                | 76.2                      | 85.7   | 90.1  |
| Employed elsewhere                          | 14,579         | 10.5          | 46.0                | 72.9                      | 86.7   | 91.6  |
| Not employed                                | 14,003         | 3.9           | 48.9                | 79.6                      | 83.4   | 88.7  |
| <b>Total</b>                                | <b>41,260</b>  | <b>6.7</b>    | <b>45.3</b>         | <b>78.2</b>               | <b>86.9</b>                                    | <b>88.5</b>                                 |
| <b>All employed nurses</b>                  | <b>244,360</b> | <b>7.9</b>    | <b>45.1</b>         | <b>81.2</b>               | <b>87.2</b>                                    | <b>85.9</b>                                 |

(a) 'Per cent metropolitan' is based on postcode of home residence concorded to ASGC regions. See Glossary. Percentage calculations exclude 'not stated' values for ASGC region of home residence.

Sources: AIHW Nursing and Midwifery Labour Force Census, 2005.

# Appendix A Explanatory notes on the Nursing and Midwifery Labour Force Census

## Background

All nurses must be registered with a state or territory nursing/midwifery registration board to practise in that state or territory. The registers contain information such as the name, contact details, age, sex and qualifications of nurses who are registered or enrolled to practise in that jurisdiction. The registration boards manage the annual process of renewing the registration and enrolment of nurses who are qualified and eligible to practise.

## Method

The population for the survey is registered and enrolled nurses and is drawn from the registration/enrolment files maintained by each state and territory registration board. Each nursing/midwifery board conducts an annual renewal of registration and enrolment. As part of this process, questionnaires are sent to nurses on renewal of their registration in all jurisdictions. In the Northern Territory in 2005, questionnaires were despatched by the health authority, as a separate exercise (rather than by the registration board). The results of the 2005 survey relate to the period when renewal notices and the survey were sent out in that year, with timing dependent on the licence renewal procedure operating in each state/territory.

Returned questionnaires were processed by, or on behalf of, the respective health authority. Each state and territory then forwarded a data file of de-identified responses to the AIHW for further cleaning, final coding, collation into a national data set, application of national range and edit checks, estimation for item and population non-response, and finally, analysis. (See 'Estimation procedures for non-response to the AIHW Nursing and Midwifery Labour Force Census', below.)

Note: survey data for Victoria were unavailable in 2005 and, in order to provide broad level estimates for 2005, the 2006 Victorian survey responses were weighted to their 2005 registration/enrolment figures (see 'Estimation procedures...' below). Therefore, care should be taken when using averages, making comparisons over time for Victoria and making state comparisons.

## Scope and coverage

The scope of the survey is all nurses who were registered or enrolled with the nursing/midwifery board in each state or territory at the time of the survey. Coverage excludes nurses who registered or enrolled for the first time in year prior to the survey and who were not required to renew their registration. This is because the survey questionnaire is distributed as part of the registration renewal process and only those who were renewing their registration/enrolment received a questionnaire. To ensure that the survey provides estimates of the total population of registered and enrolled nurses, the 'new'

registrants/enrolments are treated in the same way as survey non-respondents in the weighting process. (See 'Estimation procedures for non-response to the AIHW labour force survey', below.)

## Response rate

Response to the Nursing and Midwifery Labour Force Census in 2005 represented 55.0% of the nursing registrations and enrolments in all jurisdictions (Table 31). The response rate was lower for enrolled nurses (50.8%) than for registered nurses (55.9%). The overall response rate is an approximation because some nurses were registered or enrolled in more than one state or territory and may have completed a questionnaire in just one state or territory. It is not known how often this occurred because it is not possible to match survey records across jurisdictions. However, the number registered or enrolled in more than one jurisdiction is estimated based on responses to specific questions in the questionnaire.

**Table 31: Nursing and Midwifery Labour Force Census: estimated response rates, registered and enrolled nurses, 2001 to 2005**

|                          | NSW  | Vic <sup>(a)</sup> | Qld  | WA   | SA   | Tas  | ACT  | NT   | Australia           |
|--------------------------|------|--------------------|------|------|------|------|------|------|---------------------|
| <b>Registered nurses</b> |      |                    |      |      |      |      |      |      |                     |
| 2001                     | 71.0 | 79.4               | 93.7 | 65.7 | 81.4 | 75.0 | 80.0 | 58.9 | 77.5                |
| 2003                     | 74.0 | 63.7               | 61.5 | 20.0 | 74.3 | 62.0 | 74.2 | 31.1 | 63.7                |
| 2004                     | 69.1 | 59.9               | 56.5 | 37.4 | 72.2 | 67.0 | 73.1 | 34.9 | 60.9                |
| 2005                     | 64.6 | n.a.               | 48.2 | 27.8 | 70.6 | 64.0 | 63.3 | 14.4 | 55.9 <sup>(b)</sup> |
| <b>Enrolled nurses</b>   |      |                    |      |      |      |      |      |      |                     |
| 2001                     | 72.2 | 76.3               | 92.3 | 61.2 | 81.8 | 70.5 | 57.8 | 48.9 | 75.8                |
| 2003                     | 74.9 | 54.1               | 60.4 | 15.0 | 68.4 | 52.7 | 59.4 | 31.0 | 58.8                |
| 2004                     | 60.2 | 50.4               | 54.9 | 39.4 | 68.4 | 59.1 | 61.0 | 37.7 | 55.0                |
| 2005                     | 56.3 | n.a.               | 46.6 | 22.7 | 63.8 | 53.9 | 52.1 | 8.7  | 50.8 <sup>(b)</sup> |
| <b>All nurses</b>        |      |                    |      |      |      |      |      |      |                     |
| 2001                     | 71.2 | 78.7               | 93.5 | 64.8 | 81.5 | 74.3 | 76.4 | 57.5 | 77.2                |
| 2003                     | 74.2 | 61.2               | 61.3 | 19.0 | 72.9 | 60.7 | 71.8 | 31.1 | 62.7                |
| 2004                     | 67.6 | 57.4               | 56.2 | 37.7 | 71.2 | 65.9 | 71.1 | 35.1 | 59.8                |
| 2005                     | 63.2 | n.a.               | 48.0 | 26.9 | 68.9 | 62.5 | 61.5 | 13.7 | 55.0 <sup>(b)</sup> |

(a) Survey data for Victoria were unavailable in 2005. See 'Method' above.

(b) Excluding Victoria.

Sources: AIHW Nursing Labour Force Survey, 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 to 2005.

Actual response rates are not able to be calculated as the AIHW is not provided with detailed information on who was sent a questionnaire and who responded. Instead, the AIHW receives de-identified survey data for each respondent and aggregate total registration numbers. Response rates are estimated based on this information. Response to the census varied considerably across jurisdictions (Table 31), possibly reflecting variations in the way the survey was administered by registration boards in each state/territory and local issues.

The Nursing and Midwifery Labour Force Census has experienced some decline in response rates over time (for example, in 2001 the estimated response rate for all nurses was 77.2%). Due to the lack of detailed information available from registration boards on non-respondents (and without a follow-up of some kind) the exact reasons for the decline, and the impact of an increase in non-response on the accuracy of the estimates, are unclear.

To obtain estimates that are as representative as possible of the total nursing population in Australia, the AIHW adjusts survey responses from each state/territory to the total number of registered/enrolled nurses in that state/territory, through weighting. The weights are calculated for each state and territory, for registered and enrolled nurses separately, using figures provided or published by each registration board as a benchmark. Where possible, age group and sex are also taken into account in the weighting calculation, but this is dependent on whether age group and sex information is provided by registration boards.

Producing estimates for the nursing population in this way adjusts for any age and sex bias in the responding sample. As no other detailed information is available about the total population of registered/enrolled nurses it is not possible to determine whether there are other possible biases in the responses. Therefore, for the purpose of estimation, it is assumed that non-respondents do not differ from respondents within each age and sex category (see Estimation procedures for non-response to the AIHW labour force census, below).

### **Estimation procedures for non-response to the AIHW labour force census**

The figures produced from the census are estimates because not all nurses who are sent a questionnaire respond (population non-response) and some return partially completed questionnaires (item non-response). A separate estimation procedure is used for each. Both of these procedures are described in more detail below.

#### ***Imputation: estimation for item non-response***

For item non-response, initially the processes involve a qualitative examination of all information which has been provided by a respondent. This is followed by, where possible, an assumption about any missing information for that respondent, based on other information provided by that respondent. For example, if a respondent provides information on hours worked and the area in which they work, but leaves the labour force question blank, it is reasonable to assume that they were, in fact, employed.

Missing values remaining after this process are considered for their suitability for imputation, with suitability based on the level of non-response to that item (5% or less).

Imputation is based on the distribution of responses occurring in the responding sample. Fundamental to estimating missing values for survey respondents who returned partially completed questionnaires is the assumption that respondents who answer various questions are similar to those who do not. This is because the only characteristics of the nursing population known to the AIHW are the state of registration and, for most states and territories, the type of nurse (registered or enrolled), age and sex. Without having any other characteristics for the *whole* population of interest, the survey data become the basis for imputing missing values.

First, any missing values for type of nurse (registered or enrolled), sex and age are imputed, within each state and territory. This enables records missing these items to subsequently undergo the weighting process. Where age was missing for a record, an 'age group' was imputed. This age group was used in tables showing age in ranges, whereas for mean age calculations, 'age' in single years was used and only respondents who reported their age were included.

Probabilities are used to assign a response category *value* to each record. These are based on the distribution of survey responses and a random number generator. In the Nursing and Midwifery Labour Force Census, missing values are imputed for the following variables (if less than 5%): (in addition to type of nurse, age and sex), place of work of main job, sector of

main job, nursing role of main job, principal clinical area of nursing in main job, and looking for work.

### ***Weighting: estimation for population non-response***

For population non-response, each responding record is assigned a weight which is calibrated to align with independent data on the population of interest, referred to as 'benchmarks' (for nurses, the benchmarks are all registered and enrolled nurses in each state and territory, plus age and/or sex where provided). In principle, this weight is based on the population number divided by the number in the sample. The resulting fraction becomes the expansion factor applied to the record, providing an estimate of the population when aggregate output is generated.

The calculation of weights is usually part of the data processing for a sample survey in which the sample is selected before the survey is conducted. In the nursing and midwifery labour force survey, all nurses renewing their registration or enrolment, not a sample, are sent a questionnaire when registration or enrolment renewal is due. This is therefore, technically, a census. However, because not all nurses respond, the result is a data set based on a very large 'self-selecting sample' of the population and this is how the data are treated for the weighting process. Because the group of respondents in the data set is not a random sample, standard errors are not a suitable means of gauging the accuracy of estimates.

The weight for each record is based on particular characteristics which are known for the whole population. The population benchmark data is provided to the AIHW by nursing/midwifery registration boards from their administrative records, with the only breakdown being (at a maximum) by state of registration, 'type of nurse' (registered or enrolled), age group and sex. In 2005, benchmark data by 'type of nurse' was provided by all jurisdictions except the Northern Territory. Data on age group and sex were provided by New South Wales, Victoria, Queensland, South Australia and Northern Territory. For Western Australia, Tasmania, and the Australian Capital Territory, data on neither age group nor sex of registered and enrolled nurses were provided by the registration boards.

Producing estimates for the population by weighting the data from respondents does adjust for bias in the responding group of practitioners, but only for *known* population characteristics ('type of nurse', age and sex, where provided). If information for a variable is not known for the whole population, the variable cannot be used in the calculation of weights.

For variables not used in the calculation of weights (that is, all variables *other* than state and territory, 'type of nurse', age and sex), the assumption is that respondents and non-respondents have the same characteristics. If the assumption is incorrect, and non-respondents are different from respondents, then the estimates will have some bias. The extent of this cannot be measured without more detailed information about non-respondents (for example, follow-up interviews of non-respondents). This type of follow-up is not undertaken by the registration boards.

## **Accounting for multi-state registrations**

Nurses and midwives may be registered and practice in more than one state or territory. To minimise double-counting of these nurses and midwives, those who responded in the survey that they were working mainly or only in another state in the survey (referred to as 'multi-state registrations and enrolments' in Figure 1) are not included in the count of total

registered medical practitioners (as it is assumed that they will be counted in the registration figures of the jurisdiction in which they 'mainly or only' work).

Only those nurses and midwives who responded in the survey that they were working mainly or only in the state or territory of registration are included as employed nurses and midwives.



## Appendix B Additional tables available from the AIHW website

In addition to the tables in this publication, more detailed tabulations (see below) from the 2005 Nursing and Midwifery Labour Force Census are published on the AIHW website: <[www.aihw.gov.au](http://www.aihw.gov.au)>.

Similar tables are also available for previous years from the AIHW website.

### **Registered and enrolled nurses, Registered nurses, Enrolled nurses:**

For each of the above groups, there are four sets of tables:

**Demographic overview:** 12 tables of demographic characteristics (age, sex, labour force status, nursing role, hours worked per week, Australian residency status, Indigenous status, tenure status (permanent, casual, fixed term, own business), whether employed by an agency) by state/territory and by geographic location of main job.

**Work setting by selected characteristics:** Five tables of work setting and sector of main job by state/territory, geographic location of main job, nursing role, age and hours worked per week; one table for each state and territory of selected characteristics (age, sex, hours worked) by work setting and sector of main job (total of 13 tables).

**Clinical area by selected characteristics:** Four tables of clinical area by state/territory, geographic location of main job, age and hours worked; one table for each state and territory of selected characteristics (age, sex, hours worked) by principal area of clinical activity of main job (total of 12 tables).

**Measures of nursing supply:** There are six tables of measures of supply (employed nurses per 100,000 population and FTE nurses per 100,000 population) by state/territory and geographic location of main job.

# Glossary

## Clinical area of nursing activity

The area where nurses in a clinical role were working the most hours, in the week prior to the survey. The major categories include medical, surgical, mixed medical/surgical, perioperative, midwifery/obstetrics, critical care, family and child health, community health, aged care, mental health and rehabilitation/disability.

## Employed

An employed nurse is one who:

- worked for a total of 1 hour or more in the week prior to the survey in a job or business for pay, commission, payment in kind or profit; mainly/only in a particular state/territory; or
- usually worked, but was away on leave (with some pay) for less than 3 months, on strike or locked out, or rostered off.

## Enrolled nurse

A nurse who is on the roll maintained by the nursing/midwifery registration board in each state and territory. The minimum educational requirement for an enrolled nurse is a 1-year diploma from a Vocational Education and Training provider, or equivalent from a recognised hospital-based program. To maintain enrolment nurses must have practised for a specified minimum period in the previous 5 years (this is referred to as 'recency of practice', with the requirements depending on the registration board). Enrolled nurses include mothercraft and dental nurses where the educational course requirements are less than a 3-year degree course or equivalent. Enrolled nurses usually work with registered nurses to provide patients with basic nursing care, undertaking less complex procedures than registered nurses.

## Full-time equivalent (FTE)

FTE measures the number of standard-hour workloads worked by employed nurses. This provides a useful measure of supply as it takes into account both the number of nurses who are working, and the hours that they work.

In this report, FTE is calculated using two options for 'standard' working weeks. A 35-hour week is used in most of the tables, consistent with earlier publications. A 38-hour week FTE is also calculated in Tables 19 and 21, to more closely align with FTE estimates produced by states and territories.

FTE is calculated by: *'the number of employed nurses in a particular category' multiplied by 'the average hours worked by employed nurses in the category' divided by 'the standard working week hours (35 or 38)'*.

## Full-time equivalent (FTE) rate

The FTE rate (the number of FTE nurses per 100,000 population) is a measure of supply. By defining supply in terms of the FTE rate, meaningful comparisons of supply can be made across geographic areas and over time. FTE rate is calculated as: *'the number of FTE nurses' divided by 'the relevant population count' multiplied by '100,000'*.

## Hours worked

The total number of weekly hours worked is self-reported by nurses and relates to the number of hours worked in nursing jobs in the week prior to the survey. Hours worked in the main and second nursing job are collected separately in the survey. Total hours worked includes paid regular hours, paid overtime hours and unpaid extra hours.

In the 2001 Nursing and midwifery labour force survey, nurses were asked to provide information on the hours 'usually/normally worked per week'. In 2003, all jurisdictions, except NSW, changed this to hours 'worked last week'. From 2004, all jurisdictions collected hours 'worked last week'. In addition, more detailed information on hours worked was sought in 2003 compared to 2001, and again in 2005 compared to 2003. This change in question is likely to have had an impact on the number of hours worked reported by respondents.

In this publication the ABS definition has been used for the cut-off for full-time and part-time work:

- *full-time work*: 35 hours or more per week
- *part-time work*: less than 35 hours per week.

Average weekly hours are calculated only where hours are greater than zero. That is, employed respondents with 'not stated' hours worked are excluded from the calculation.

## Midwife

In some jurisdictions, midwives are now recognised as a separate profession. To register and practise as a midwife, a person must have appropriate qualifications in midwifery. There are two paths to these qualifications. Traditionally (and still most commonly) midwives first qualify as a registered nurse, and then undertake additional midwifery training to qualify and register as a midwife. Also, midwives may now qualify through direct entry midwifery undergraduate programs (that is, they are not required to first qualify as a registered nurse). Direct entry midwives (DEMs), as with other midwives, must be registered with a nursing/midwifery board to practise. DEMs are restricted to practising midwifery only whereas other midwives are also able to practise general nursing.

In this publication, midwives are included in 'registered nurses', irrespective of the training path they have followed.

## Multiple registrations

In estimating the number of nurses in a state/territory, only those who report that they worked mainly or only in that particular state/territory are included. Nurses who report that they worked mainly or only in another state/territory are assumed to be registered/enrolled in another state/territory and to have completed the census in more than one state/territory.

## Nursing and midwifery labour force

The nursing and midwifery labour force is defined for this report as:

- registered/enrolled nurses employed in nursing/midwifery in the week prior to the survey
- registered/enrolled nurses not employed in nursing/midwifery but looking for work in nursing in the week prior to the survey
- registered/enrolled nurses who, at the time of the survey, were on maternity or other extended leave.

That is, those working overseas and those not working in nursing but not looking for work in nursing in the week prior to the survey are excluded.

## **Nursing role**

Unless otherwise stated in this publication, the role of the nurse refers to the main role (that is, the core nursing role with the most number of hours worked in the week prior to the survey) in the nurse's main job (that is, the job with the most number of hours worked in the week prior to the survey). Core nursing roles are divided into two main groups, with several categories in each group, as follows:

*Clinical role:* A registered or enrolled nurse who is mainly involved in the care and treatment of patients, as well as the supervision and management of clinical nurses. Categories include clinical nurses (direct patient care) and clinical nurse managers and or administrators (managing clinical nurses/midwives).

*Non-clinical role:* A registered or enrolled nurse other than a clinician. This includes:

- *Administrator:* A person mainly employed in nursing administration.
- *Lecturing, nurse/midwifery educator, supervisors of new nurses/midwives:* A person who teaches or trains persons in nursing for their initial qualification or in advanced skills after initial qualification.
- *Researcher:* A person engaged in nursing research.
- *Other:* A job function in nursing which is not one of the above – for example, industrial relations or public health activities in nursing.

In the 2004 edition of this report, clinical role included 'clinical nurse', 'clinical nurse manager', and 'supervisor of new nurses'. Due to form changes, clinical role now includes 'clinical nursing' and 'clinical nurse manager/administrator'. 'Supervisor of new nurses' is now included in the non-clinical role category, because it is difficult to distinguish this role from 'lecturer, teacher and educator'.

## **Post-registration/enrolment qualifications**

Refers to courses of study relevant to nursing completed by registered/enrolled nurses in addition to the basic requirement for registration/enrolment. The questionnaire asks respondents to report courses by clinical area and instructs them to:

- *include:* hospital-based certificates and tertiary qualifications in nurse management or clinical practice
- *exclude:* in-service/continuing education sessions, refresher and re-entry courses or courses of less than 6 months duration.

## **Registered nurse**

A nurse/midwife who is on the register maintained by the state or territory nurses and midwives board or council in each state or territory. The minimum educational requirement for a registered nurse or midwife is a 3-year degree from a higher education institution or equivalent from a recognised hospital-based program. To maintain registration, nurses must have practised for a specified minimum period in the previous 5 years (this is referred to as 'recency of practice', with the actual requirements depending on the registration board).

**Remoteness areas**

The Remoteness Area Structure within the Australian Standard Geographical Classification (ASGC), produced by the Australian Bureau of Statistics (ABS 2002), has been used in this publication to present regional data.

The Remoteness Area Structure of the ASGC is based on the Accessibility/Remoteness Index of Australia (ARIA+), where the remoteness index value of a point is based on the physical road distance to the nearest town or service in each of five population size classes based on the 2001 Census of Population and Housing (ABS 2002 and AIHW 2004). These classes are:

- Major cities of Australia
  - Inner regional Australia
  - Outer regional Australia
  - Remote Australia
  - Very remote Australia
- } Described as ‘metropolitan’ in this report.
- } Described as ‘non-metropolitan’ in this report.

The ASGC accorded to the respondent is based on the postcode of the respondent’s main job or the postcode of their residence, as specified in the particular tables.

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# List of tables

|           |   |    |
|-----------|---|----|
| Table 1:  | Nurses: labour force status and nursing role in main job, 2001 to 2005 <sup>(a)</sup> .....   | 5  |
| Table 2:  | Registered and enrolled nurses, 2001 to 2005.....   | 7  |
| Table 3:  | Registered and enrolled nurses: labour force status and state and territory, 2005.....  | 8  |
| Table 4:  | Registered and enrolled nurses authorised as a midwife, 2005.....   | 8  |
| Table 5:  | Employed registered and enrolled nurses: age and sex, 2001 and 2005.....  | 9  |
| Table 6:  | Employed registered and enrolled nurses: selected characteristics, states and territories, 2001 and 2005.....   | 11 |
| Table 7:  | Employed registered and enrolled nurses: selected characteristics, region of main job, 2001 and 2005.....   | 12 |
| Table 8:  | Employed registered and enrolled nurses: average total weekly hours worked <sup>(a)</sup> , proportion working part-time and 50 hours or more per week, 2001 to 2005..... | 13 |
| Table 9:  | Employed registered and enrolled nurses: percent distribution of total weekly hours worked, by age, 2005.....   | 14 |
| Table 10: | Employed registered and enrolled nurses: average total weekly hours worked <sup>(a)</sup> , states and territories, 2001 and 2005.....                                    | 15 |
| Table 11: | Employed registered and enrolled nurses: average total weekly hours worked, region of main job, 2001 and 2005.....  | 16 |
| Table 12: | All employed nurses: selected characteristics, employment sector of main job, 2003 to 2005.....   | 16 |
| Table 13: | Employed nurses: number and average weekly hours worked in main and second nursing job, 2005.....   | 17 |
| Table 14: | Employed nurses: number and average weekly hours worked in main and second nursing job, nursing role, 2005.....   | 17 |
| Table 15: | Employed nurses: number and average weekly hours worked in main and second nursing job, employment sector, 2005.....  | 18 |
| Table 16: | Employed nurses: per cent distribution of weekly hours worked <sup>(a)</sup> in main and second nursing jobs, work setting, 2005.....                                     | 19 |
| Table 17: | Employed nurses: number, average hours, FTE nurses <sup>(a)</sup> and FTE rate <sup>(b)</sup> , 2001 to 2005.....   | 20 |
| Table 18: | Registered and enrolled nurses: FTE rate <sup>(a)</sup> , based on a 35-hour standard working week, states and territories, 2001, 2004 and 2005.....                      | 21 |
| Table 19: | Registered and enrolled nurses: FTE rate <sup>(a)</sup> , based on a 38-hour standard working week, states and territories, 2001, 2004 and 2005.....                      | 21 |
| Table 20: | Employed registered and enrolled nurses: FTE rate <sup>(a)</sup> , based on a 35-hour standard working week, geographic region of main job, 2001, 2004 and 2005.....      | 22 |
| Table 21: | Employed registered and enrolled nurses: FTE rate <sup>(a)</sup> , based on a 38-hour standard working week, geographic region of main job, 2001, 2004 and 2005.....      | 23 |
| Table 22: | Employed nurses by clinical area: selected characteristics, New South Wales, 2005.....  | 25 |
| Table 23: | Employed nurses by clinical area: selected characteristics, Victoria, 2005.....   | 27 |
| Table 24: | Employed nurses by clinical area: selected characteristics, Queensland, 2005.....   | 29 |
| Table 25: | Employed nurses by clinical area: selected characteristics, Western Australia, 2005.....  | 31 |

|  |    |
|--|----|
| Table 26: Employed nurses by clinical area <sup>(a)</sup> : selected characteristics, South Australia, 2005 .....                    | 33 |
| Table 27: Employed nurses by clinical area: selected characteristics, Tasmania, 2005.....  | 35 |
| Table 28: Employed nurses by clinical area: selected characteristics, Australian Capital Territory,<br>2005.....                     | 37 |
| Table 29: Movement of nurses: overseas arrivals and departures, 2001–02 and 2004–05.....   | 40 |
| Table 30: Registered and enrolled nurses: labour force status: selected characteristics, 2005.....                                   | 41 |
| Table 31: Nursing and Midwifery Labour Force Census: estimated response rates, registered and<br>enrolled nurses, 2001 to 2005 ..... | 43 |



# List of figures

|  |    |
|--|----|
| Figure 1: Registered and enrolled nurses, labour force status, nursing role in main job, Australia, 2005 .....   | 6  |
| Figure 2: Employed registered and enrolled nurses by age group, 2001 and 2005 .....  | 10 |
| Figure 3: Employed registered and enrolled nurses: average total weekly hours worked, 2001 to 2005 .....   | 13 |
| Figure 4: Employed nurses: clinical area, per cent of nurses holding a qualification in a corresponding <sup>(a)</sup> field, New South Wales, 2005 .....  | 26 |
| Figure 5: Post-registration/enrolment qualifications: field of qualification, per cent of nurses and midwives working in a corresponding <sup>(a)</sup> clinical area, New South Wales, 2005 .....               | 26 |
| Figure 6: Employed nurses: clinical area, per cent of nurses holding a qualification in a corresponding <sup>(a)</sup> field, Victoria, 2005.....  | 28 |
| Figure 7: Post-registration/enrolment qualifications: field of qualification, per cent of nurses and midwives working in a corresponding <sup>(a)</sup> clinical area, Victoria, 2005.....                       | 28 |
| Figure 8: Employed nurses: clinical area, per cent of nurses holding a qualification in a corresponding <sup>(a)</sup> field, Queensland, 2005 .....   | 30 |
| Figure 9: Post-registration/enrolment qualifications: field of qualification, per cent of nurses and midwives working in a corresponding <sup>(a)</sup> clinical area, Queensland, 2005.....                     | 30 |
| Figure 10: Employed nurses: clinical area, per cent of nurses holding a qualification in a corresponding <sup>(a)</sup> field, Western Australia, 2005.....  | 32 |
| Figure 11: Post-registration/enrolment qualifications: field of qualification, per cent of nurses and midwives working in a corresponding <sup>(a)</sup> clinical area, Western Australia, 2005.....             | 32 |
| Figure 12: Employed nurses: clinical area, per cent of nurses holding a qualification in a corresponding <sup>(a)</sup> field, South Australia, 2005 .....   | 34 |
| Figure 13: Post-registration/enrolment qualifications: field of qualification, per cent of nurses and midwives working in a corresponding <sup>(a)</sup> clinical area, South Australia, 2005 .....              | 34 |
| Figure 14: Employed nurses: clinical area, per cent of nurses holding a qualification in a corresponding <sup>(a)</sup> field, Tasmania, 2005.....   | 36 |
| Figure 15: Post-registration/enrolment qualifications: field of qualification, per cent of nurses and midwives working in a corresponding <sup>(a)</sup> clinical area, Tasmania, 2005.....                      | 36 |
| Figure 16: Employed nurses: clinical area, per cent of nurses holding a qualification in a corresponding <sup>(a)</sup> field, Australian Capital Territory, 2005 .....  | 38 |
| Figure 17: Post-registration/enrolment qualifications: field of qualification, per cent of nurses and midwives working in a corresponding <sup>(a)</sup> clinical area, Australian Capital Territory, 2005 ..... | 38 |
| Figure 18: Domestic Australian students enrolled in and completing nursing courses, 2001 to 2006 .....   | 39 |