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*Note: Australian
Western Australian
and national
data and rates
are incorrect*

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Contents

List of tables	iv
List of figures	v
Acknowledgments.....	v
Symbols and other usages	v
Main findings.....	vi
Introduction.....	1
Who are nurses?.....	1
Nursing and Midwifery Labour Force Census.....	2
Registered and enrolled nurses	3
Employed nurses	6
Registered and enrolled employed nurses.....	6
Age and sex	7
Qualifications and experience.....	8
Nursing role and clinical area of nursing.....	8
Work setting and sector.....	10
Working hours	11
Nursing supply	16
Geographic distribution.....	17
State and territory	17
Geographic region	19
Nurses not employed in nursing.....	20
Appendix A.....	22
Explanatory notes on the Nursing and Midwifery Labour Force Census.....	22
Appendix B	26
Additional tables available from the AIHW website	26
Glossary.....	27
References	30

List of tables

Table 1:	Nurses: labour force status and nursing role in main job, 1999 to 2004.....	4
Table 2:	Registered and enrolled nurses, 1999 to 2004.....	4
Table 3:	Registered and enrolled nurses: labour force status and state and territory, 2004.....	6
Table 4:	Employed registered and enrolled nurses: age and sex, 1999 and 2004.....	7
Table 5:	Employed registered and enrolled nurses: qualifications and experience, 2004.....	8
Table 6:	Employed nurses: nursing role in main job, selected characteristics, 2004.....	9
Table 7:	Employed nurses working in a clinical role in their main job: clinical area of nursing, selected characteristics, 2004.....	9
Table 8:	Employed nurses: work setting in main job and selected characteristics, 2004.....	10
Table 9:	Employed nurses: sector of main job and selected characteristics, 2004.....	11
Table 10:	Employed registered and enrolled nurses: average total weekly hours worked, proportion working part-time and 50 hours or more per week, 1999 to 2004.....	11
Table 11 :	Employed registered and enrolled nurses: per cent distribution of total hours worked per week, by age, 2004.....	12
Table 12:	Employed nurses: number and average weekly hours worked in main and second nursing job, 2004.....	13
Table 13:	Employed nurses: number and average weekly hours worked in main and second nursing job, nursing role, 2004.....	14
Table 14:	Employed nurses working in a clinical role in their main job: number and average weekly hours worked in main job, clinical area of nursing, 2004.....	14
Table 15:	Employed nurses: number and average weekly hours worked in main and second nursing job, work setting, 2004.....	15
Table 16:	Employed nurses: number and average weekly hours worked in main and second nursing job, work sector, 2004.....	16
Table 17:	Employed registered and enrolled nurses: nursing rate and FTE rate, 1999 to 2004.....	17
Table 18:	Employed nurses: selected characteristics, state or territory of main job, 2004.....	18
Table 19:	Employed registered and enrolled nurses: number per 100,000 population and FTE per 100,000 population, state or territory of main job, 1999 and 2004.....	18
Table 20:	Employed registered and enrolled nurses: selected characteristics and region of main job, 2004.....	19
Table 21:	Employed registered and enrolled nurses: number per 100,000 population and FTE per 100,000 population, region of main job, 1999 and 2004.....	20
Table 22:	Registered and enrolled nurses: labour force status: selected characteristics, 2004.....	21
Table 23:	Nursing and Midwifery Labour Force Census: estimated response rates, registered and enrolled nurses, 1999 to 2004.....	23

List of figures

Figure 1:	Registered and enrolled nurses: labour force status, nursing role in main job and clinical area of nursing in main job, Australia, 2004	5
Figure 2:	Employed registered and enrolled nurses by age, 1999 and 2004	7
Figure 3:	Employed registered and enrolled nurses: average total weekly hours worked, 1999 to 2004	12

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Most importantly, we also thank the nurses who took the time to complete the survey. Without their cooperation, it would not be possible to maintain this collection, which is used to inform the community about the nursing profession, and to form the basis of planning and policy decisions.

Symbols and other usages

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. Per cent distributions may not sum to 100 because of rounding.

Italics within a table denote a subtotal.

- 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.

Main findings

- The total number of nurses identified in 2004 by the Nursing and Midwifery Labour Force Census was 288,911, comprising 232,638 registered nurses and 56,273 enrolled nurses. This represents a 5.7% increase in the number of nurses on the previous year and a 12.5% increase from 1999 to 2004.
- The number of nurses actually employed in nursing increased by 11.0% from 1999, and 5.4% from 2003, to 249,458 in 2004.
- The increase over the five-year period from 1999 to 2004 was mainly due to an 11.8% increase in the number of employed registered nurses. The number of employed enrolled nurses also increased, but to a lesser extent (7.4%).
- The private sector experienced a stronger growth in nurse numbers over the five-year period (27.6%) than the public sector (3.8%).
- Nurses were working longer hours in 2004. The average weekly hours worked increased from 30.6 hours in 1999 to 32.8 hours in 2004. Over the same period, the proportion of nurses working part-time (less than 35 hours per week) declined from 52.7% to 49.6%.
- The increase in both the number and the average hours worked in 2004 resulted in an increase in the level of nursing supply. Overall, supply increased by 12.0% from 1,039 full-time equivalent (FTE) nurses per 100,000 population in 1999 to 1,164 FTE nurses per 100,000 population in 2004.
- The supply of registered nurses grew by 12.5% from 1999 to 2004, while the supply of enrolled nurses increased by 9.6%.
- There were increases in FTE nurses per 100,000 population between 1999 and 2004 in all jurisdictions except the Northern Territory.
- In 2004, South Australia (1,374 FTE nurses per 100,000 population) and Western Australia (1,325) had the highest levels of supply, while Queensland (998) had the lowest level.
- Across geographic regions in 2004, the level of supply was fairly even, ranging from 1,165 FTE employed nurses per 100,000 population in Remote areas and 1,162 in Very remote areas, to 1,090 in Outer regional areas.
- The nursing labour force is ageing. The average age of employed nurses increased from 41.2 years in 1999 to 43.3 years in 2004. Over the same period, the proportion of nurses aged 50 years and over increased from 21.5% to 29.8%.
- While still a female-dominated profession, the proportion of nurses who are male increased from 7.9% in 1999 to 8.7% in 2004. The increase was greater for enrolled nurses than registered nurses.

Introduction

This report provides an overview of the demographic and labour force characteristics of nurses and midwives in Australia in 2004, based on information collected in the 2004 Nursing and Midwifery Labour Force Census. Some data from the 1999, 2001 and 2003 surveys are also provided for comparison purposes and to provide an indication of trends in the nursing labour force over the previous 5 years. A more detailed analysis of results from these earlier nursing surveys, as well as those conducted prior to 1999, can be obtained from the Australian Institute of Health and Welfare (AIHW) web site.

Who are nurses?

Nurses play an essential role in promoting and achieving the health outcomes of the Australian community. Most nurses are clinicians who provide (or manage or supervise those who provide) direct patient care, treatment, diagnosis or advice. Others are administrators, teachers and educators, or researchers. Clinical areas of practice include community nursing, occupational health nursing, psychiatric nursing, midwifery, palliative care nursing, rural nursing and aged care nursing (Nurses Board of Victoria 2004).

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, the applicant is fit and competent to practise nursing, the applicant's state of health is such that they can practise nursing safely and that the applicant has sufficient command of the English language to ensure safe practice.

Mutual recognition legislation provides for persons registered to practise in any state or territory in Australia (or in New Zealand) to be eligible to register for the equivalent occupation in any other state in Australia. However, overseas-trained nurses are required to have their qualifications and experience individually assessed by the relevant state or territory nursing/midwifery board prior to registration or enrolment (Nurses and Midwives Board of New South Wales 2006).

In this report, the term 'nurse' includes all persons who were either registered or enrolled with a state and 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. Registered nurses make up the majority of the nursing workforce in Australia.

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 three-year bachelor or post-graduate degree in nursing, or the equivalent, is usually required. This degree includes both theoretical and clinical aspects. To register and practise as a midwife, a person must have appropriate qualifications in midwifery. Until relatively recently, 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 (for example, in some instances nurse practitioners may be permitted to prescribe certain medications). 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 vocational education and training course or equivalent, usually of one year's duration, which provides a theoretical base as well as supervised clinical experience.

In addition to having 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 them to obtain and retain registration or enrolment as a nurse in Australia (ANMC 2005). 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 to obtain the required clinical competencies to practise without supervision.

Nursing and Midwifery Labour Force Census

In 1990 the Australian Health Ministers' Advisory Council commissioned the AIHW to develop national health labour force statistics about the major registrable health professions. Data collections on nursing, medicine, dentistry, pharmacy, podiatry, optometry and physiotherapy were subsequently developed and published. A decision was made in 1997 that the national collection of labour force data on nurses would be undertaken biennially from that time, and collections were conducted in 1997, 1999, 2001 and 2003. The collection became an annual one in 2003. This report focuses on the data collected in the 2004 Nursing and Midwifery Labour Force Census, with additional data included from the 1999, 2001 and 2003 collections.

A detailed explanation of the Nursing and Midwifery Labour Force Census methodology and subsequent treatment of the data is provided in the Explanatory notes at the back of this report. The following provides a brief summary.

The Nursing and Midwifery Labour Force Census is undertaken by the government health authority in each state and territory, with the cooperation of the relevant nursing/midwifery registration board. Survey questionnaires are sent to all nurses renewing their registration/enrolment, usually along with their registration renewal forms, by the registration boards in each state and territory. The collection attempts to survey the complete population and therefore, is technically a census, although it is referred to as a 'survey' in the documentation, using that term in its generic sense to describe any collection in which the data are obtained directly from a population of interest. Responses to the survey are processed by, or on behalf of, the state/territory health departments and then sent to the AIHW for compilation into a national collection, analysis and publication.

Participation in the survey is voluntary, and not all nurses who receive a questionnaire respond to the survey. Moreover, nurses registering for the first time are not sent a survey form by the registration boards and therefore are unable to respond. 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. The response rate for the 2004 census is estimated to be 60.9% for registered nurses, 55.0% for enrolled nurses and 59.8% for all nurses (see Table 23 in the Explanatory notes). This varied considerably across jurisdictions, possibly reflecting variations in the way the survey was administered by registration boards in each state/territory and local issues.

As with many other ongoing survey programs, the Nursing and Midwifery Labour Force Census has experienced some decline in response rates over time (for example, in 1999 the estimated response rate for all nurses was 78.1%). 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 if there are other possible biases in the survey responses. As a result it must be assumed that, for the purpose of estimation, non-respondents do not differ from respondents within each age and sex category.

As is usual in surveys, some of the nurses who do return their questionnaires only partially complete them. Where the proportion of missing values is small (less than 5%), these are imputed from other known variables, where possible, based on the known distribution of survey responses to the variable.

Registered and enrolled nurses

In 2004 there was a total of 297,975 nursing registrations and enrolments in Australia (Table 1 and Figure 1). After taking account of the 9,065 multiple registrations/enrolments (that is, those nurses who were registered in more than one jurisdiction), the number of registered and enrolled nurses in Australia in 2004 was 288,911. This is an increase of 5.7% from the previous year and 12.5% from 1999. In 2004, registered nurses comprised 80.5% of registered and enrolled nurses, and their numbers were growing at a faster rate (up by 13.5% between 1999 and 2004) than those of enrolled nurses (up by 8.5%) (Table 2). There is some variation across states and territories in the composition of the nursing population, with the

proportion who were registered nurses ranging in 2004 from 73.1% in Victoria to 90.2% in the Northern Territory (Table 3).

In 2004 almost all registered and enrolled nurses were in the nursing labour force (89.8%); either employed in nursing (86.3%), on extended leave (1.8%) or looking for work in nursing (1.6%). The remaining 10% of registered and enrolled nurses were either working as a nurse overseas (1.6% in 2004) or not looking for work in nursing (8.6%) (Table 1). The proportion of registered and enrolled nurses who were in the labour force at the time of the survey varied from 82.3% in New South Wales to 96.3% in Tasmania (Table 3).

Table 1: Nurses: labour force status and nursing role in main job, 1999 to 2004

Labour force status/nursing role in main job	1999	2001	2003	2004	% change 1999–2004
Nursing labour force	233,738	236,562	245,531	259,312	10.9
<i>Employed in nursing</i>	224,822	228,230	236,645	249,458	11.0
Clinical nursing role					
Clinical nurse	191,405	191,731	195,975	208,060	8.7
Clinical nurse manager	8,814	10,023	11,476	11,904	35.1
Supervisor of new nurses ^(a)	n.a.	n.a.	1,799	2,891	n.a.
Non-clinical nursing role					
Administrator	12,497	13,718	14,060	12,953	3.6
Teacher/educator	5,949	6,352	5,339	4,930	-17.1
Researcher	1,763	1,839	2,056	2,130	20.8
Other	4,394	4,567	5,939	6,590	50.0
On extended leave	3,435	3,457	4,781	5,277	53.6
<i>Looking for work in nursing</i>	5,481	4,875	4,106	4,577	-16.5
Employed elsewhere	1,841	1,997	1,588	1,831	-0.5
Not employed	3,640	2,878	2,518	2,746	-24.6
Not in the nursing labour force	23,172	23,513	27,846	29,599	27.7
Overseas	4,071	4,336	4,476	4,621	13.5
<i>Not looking for work in nursing</i>	19,100	19,177	23,371	24,978	30.8
Employed elsewhere	8,980	10,194	12,010	12,495	39.1
Not employed	10,120	8,983	11,361	12,482	23.3
Total registered and enrolled nurses	256,909	260,075	273,378	288,911	12.5
Multiple registrations and enrolments	8,255	7,502	9,168	9,065	9.8
Total registrations and enrolments	265,164	267,577	282,546	297,975	12.4

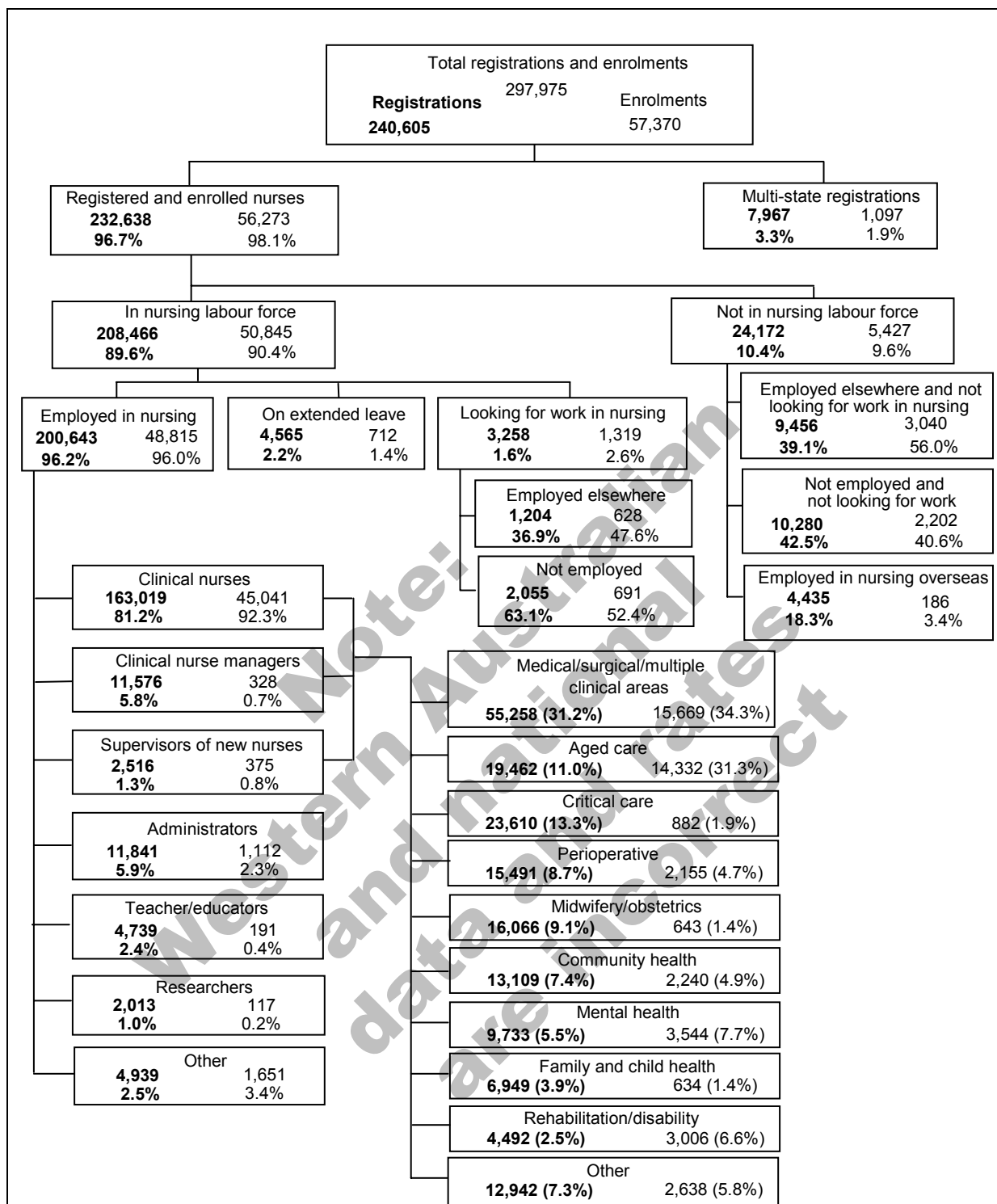
(a) In 2003 (in all states/territories except New South Wales) and 2004 (in all states/territories), 'supervisor of new nurses' was collected as a separate category in the survey. It is not known how nurses in this category reported their role in other years.

Sources: AIHW Nursing Labour Force Survey, 1999 and 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 and 2004.

Table 2: Registered and enrolled nurses, 1999 to 2004

	1999	2001	2003	2004	% change 1999–2004
Registered nurses	205,027	209,109	218,615	232,638	13.5
Enrolled nurses	51,882	50,966	54,762	56,273	8.5
All nurses	256,909	260,075	273,378	288,911	12.5

Sources: AIHW Nursing Labour Force Survey, 1999 and 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 and 2004.



Note: Numbers in bold print relate to registered nurses, and plain print to enrolled nurses. Nursing field and principal area of activity are based on main nursing job.

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

Figure 1: Registered and enrolled nurses: labour force status, nursing role in main job and clinical area of nursing in main job, Australia, 2004

Table 3: Registered and enrolled nurses: labour force status and state and territory, 2004

	NSW ^(a)	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Registered nurses									
Employed	63,371	49,898	34,901	24,429	17,427	5,273	3,230	2,113	200,643
On extended leave	1,250	1,516	729	417	397	103	82	71	4,565
Looking for work in nursing	1,555	531	475	359	184	40	52	62	3,258
Overseas	2,468	727	633	334	175	15	45	38	4,435
Not looking for work in nursing	11,853	2,625	2,122	1,801	687	194	263	192	19,736
Total	80,497	55,297	38,861	27,340	18,869	5,625	3,672	2,476	232,638
Enrolled nurses									
Employed	12,408	18,315	6,359	4,244	5,673	909	672	234	48,815
On extended leave	152	330	80	51	77	8	7	6	712
Looking for work in nursing	556	396	145	114	79	13	5	9	1,319
Overseas	54	45	29	41	10	0	7	0	186
Not looking for work in nursing	2,707	1,233	438	414	329	34	69	18	5,242
Total	15,877	20,320	7,052	4,864	6,168	964	759	268	56,273
All nurses									
Employed	75,779	68,213	41,260	28,674	23,099	6,182	3,903	2,347	249,458
On extended leave	1,402	1,846	810	468	474	111	89	77	5,277
Looking for work in nursing	2,112	927	620	473	263	53	57	72	4,577
Overseas	2,522	772	663	375	185	15	52	38	4,621
Not looking for work in nursing	14,559	3,859	2,560	2,215	1,016	228	331	211	24,978
Total	96,374	75,617	45,913	32,204	25,037	6,590	4,431	2,744	288,911

(a) Owing to the delayed extraction of data from the 2004 New South Wales registration files, the numbers of nurses registered in NSW in 2004 may have been inflated (NSW Health 2006).

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

Employed nurses

Registered and enrolled employed nurses

The number of registered and enrolled nurses employed in Australia increased by 11.0% from 224,822 in 1999 to 249,458 in 2004 (Table 1). The increase was mainly due to an 11.8% increase in the number of employed registered nurses over the period (Table 4). The number of employed enrolled nurses also increased, but to a lesser extent (7.4%).

In 2004, 80.4% of nurses employed in Australia were registered nurses. This proportion varied across the states and territories from 73.2% in Victoria to 90.0% in the Northern Territory (Table 3).

Age and sex

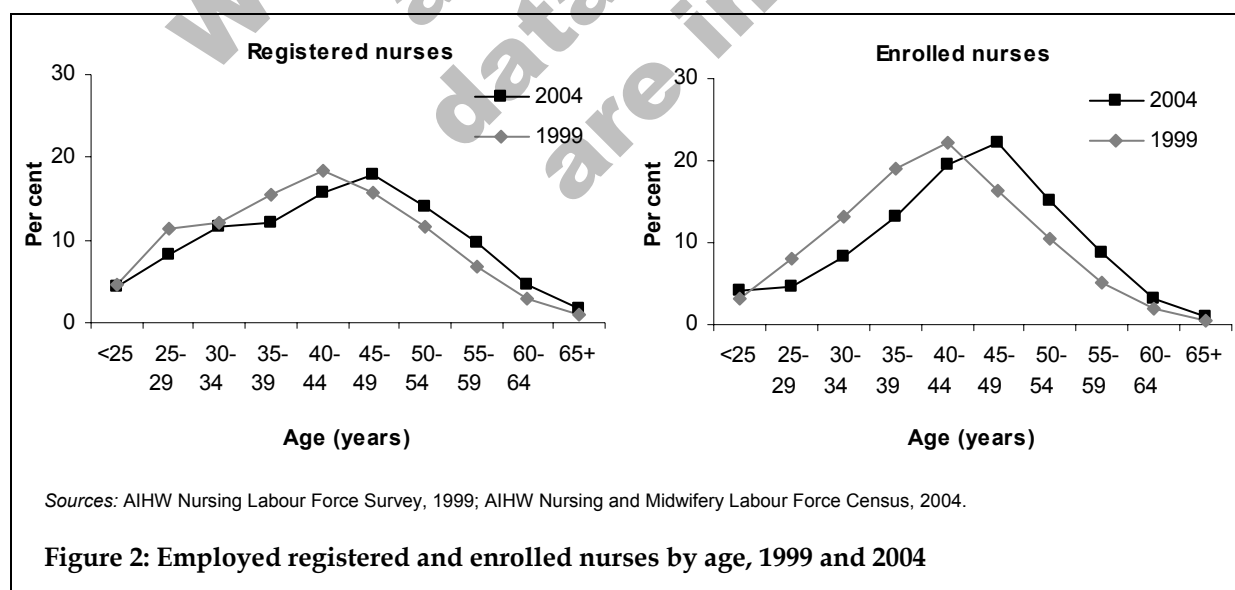
Nursing continues to be a female-dominated profession, with males comprising 8.7% of employed nurses in 2004 (up from 7.9% in 1999). The proportion of enrolled nurses who were male increased from 6.7% in 1999 to 9.1% in 2004, while for registered nurses the increase was smaller (8.2% to 8.6%) (Table 4).

The population of both registered and enrolled employed nurses became older, on average, between 1999 and 2004. In 1999 the average age of employed nurses was 41.2 years (41.2 years for registered and 41.1 years for enrolled nurses). In 2004 the average age was 43.3 years (43.2 years for registered and 43.6 years for enrolled nurses). The proportion of nurses who were over 50 years of age also increased, from 21.5% to 29.8% over the same period (Table 4).

Table 4: Employed registered and enrolled nurses: age and sex, 1999 and 2004

	Registered nurses	Enrolled nurses	All nurses
1999			
Number	179,389	45,432	224,822
% male	8.2	6.7	7.9
Average age	41.2	41.1	41.2
% over 50	22.4	18.1	21.5
2004			
Number	200,643	48,815	249,458
% male	8.6	9.1	8.7
Average age	43.2	43.6	43.3
% over 50	30.2	28.0	29.8

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.



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 1999 to the 45–49 year age group in 2004.

Qualifications and experience

Most employed nurses in 2004 were Australian citizens (93.0%) and obtained their first qualification in Australia (87.2%) (Table 5). Registered nurses were less likely to have obtained their initial qualification in Australia than enrolled nurses (85.3% compared with 95.1%). Over 40% of registered nurses had completed a post-registration course of study in nursing and 10.7% were studying at the time of the survey in 2004. This includes those nurses who gained their initial qualifications in a hospital and later undertook an undergraduate university qualification, as well as midwives and other specialist nurses. In 2004, 16.9% of enrolled nurses had completed some form of post-enrolment course and 9.2% were studying in 2004.

On average, registered nurses had 16.4 years of nursing experience in Australia and enrolled nurses 15.4 years.

Table 5: Employed registered and enrolled nurses: qualifications and experience, 2004

	Registered nurses	Enrolled nurses	All nurses
Average length of time nursing in Australia (years) ^(a)	16.4	15.4	16.2
% first nursing qualification obtained in Australia	85.3	95.1	87.2
% Australian citizens	92.7	94.4	93.0
% completed post-registration/enrolment course of study in nursing ^(b)	41.2	16.9	36.4
% undertaking post-registration/enrolment course in nursing ^(b)	10.7	9.2	10.4

(a) Average years working either full-time or part-time as a nurse in Australia excluding time spent not working as a nurse or on unpaid leave.

(b) Nurses may have completed a course AND be studying and therefore included in both. Includes hospital-based certificates and tertiary qualifications in nursing management or clinical nursing.

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

Nursing role and clinical area of nursing

The Nursing and Midwifery Labour Force Census gathers information on both the main job (that is, the job in which the most number of hours were worked per week) and second nursing job (if any) of employed nurses. In the 2004 census, 9.1% of employed nurses (9.3% of registered and 8.5% of enrolled employed nurses) reported working in two nursing jobs.

The following provides an outline of the characteristics of employed nurses according to the role, clinical area, setting and sector of their main nursing job. The number of, and hours worked by, nurses in both first and second jobs are outlined in a later section.

In 2004, 89.3% of employed nurses worked in a clinical role in their main job, either as a clinical nurse, a clinical nurse manager or a supervisor of new nurses (Table 6). The remainder were employed as administrators (5.2%), teachers/educators (2.0%), researchers (0.9%) or in another nursing role (2.6%). Clinicians were generally younger than nurses

working in other roles, with an average age of 43.0 years, while administrators were the oldest on average (47.2 years). Nursing administrators and educators/teachers were more likely to be male than clinicians (11.3%, 12.6% and 8.5% respectively) and these two groups along with researchers had higher proportions who were registered nurses (Table 6).

Table 6: Employed nurses: nursing role in main job, selected characteristics, 2004

Nursing role in main job	Number	% distribution	Average age (years)	% male	% registered nurses
<i>Clinical nursing role^(a)</i>	222,855	89.3	43.0	8.5	79.5
Clinical nurse	208,060	83.4	42.9	8.1	78.4
Clinical nurse manager	11,904	4.8	44.5	14.1	97.2
Supervisor of new nurses	2,891	1.2	43.5	8.5	87.0
<i>Non-clinical nursing role</i>					
Nurse administrator	12,953	5.2	47.2	11.3	91.4
Teacher/educator	4,930	2.0	43.9	12.6	96.1
Researcher	2,130	0.9	43.3	7.8	94.5
Other	6,590	2.6	45.8	8.1	74.9
Total	249,458	100.0	43.3	8.7	80.4

(a) Clinical nursing includes 'clinical nurse', 'clinical nurse manager' and 'supervisor of new nurses'.

Source: AIHW Nursing and Midwifery Labour Force Census, 2004

Table 7: Employed nurses working in a clinical role in their main job: clinical area of nursing, selected characteristics, 2004

Clinical area of nursing in main job^(a)	Number	% distribution	Average age (years)	% male	% registered nurses
<i>Medical and surgical nursing areas</i>					
Medical	37,293	16.7	41.8	7.6	76.1
Surgical	23,155	10.4	39.5	6.6	82.6
Mixed medical and surgical/multiple clinical areas	10,478	4.7	42.0	5.1	74.0
<i>Other areas of nursing activity</i>					
Aged care	33,794	15.2	47.8	5.2	57.6
Critical care	24,492	11.0	38.4	12.3	96.4
Perioperative	17,646	7.9	41.8	7.0	87.8
Midwifery/obstetrics	16,709	7.5	43.8	1.0	96.2
Community health	15,349	6.9	45.4	4.4	85.4
Mental health	13,277	6.0	44.9	33.7	73.3
Family and child health	7,583	3.4	42.2	3.0	91.6
Rehabilitation/disability	7,498	3.4	44.9	12.4	59.9
Other	15,579	7.0	45.0	9.8	83.1
Total clinical nursing	222,855	100.0	43.0	8.5	79.5

(a) Information on clinical area of nursing applies only to those nurses who were in a clinical role in their main nursing job (i.e. 'clinical nurse', 'clinical nurse manager' and 'supervisor of new nurses').

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

Of nurses working in a clinical role, clinical nurse managers were more likely to be older (44.5 years), male (14.1%) and registered (97.1%) than the average (43.0 years, 8.5% male and 79.5% registered) (Table 6). Nurses in a clinical role worked across a range of areas of nursing activity. In 2004, 31.8% of nurses in a clinical role worked in a medical/surgical area in their main nursing job. The remainder worked in areas such as aged care (15.2%), critical care (11.0%), perioperative (7.9%) and midwifery (7.5%) (Table 7).

The demographic characteristics of the nursing workforce differ considerably across these areas. For example, a third of those in the mental health area in 2004 were males, compared with 8.5% for all nurses in a clinical role. Other areas with a relatively high proportion of males were rehabilitation/disability (12.4%) and critical care (12.3%). In contrast, midwifery and family and child health had very low proportions of male nurses (1.0% and 3.0% respectively). Clinical nurses working in aged care were, on average, older than the average clinical nurse (47.8 compared with 43.0 years), while those working in critical care and surgery were younger (38.4 and 39.5 years). Clinical nurses working in critical care and midwifery were almost all registered nurses (96.4% and 96.2% respectively). In comparison, less than 60% of clinical nurses working in aged care rehabilitation/disability were registered nurses (Table 7).

Work setting and sector

Just over half (50.2%) of employed nurses worked in hospitals in their main job in 2004, and a further 13.4% in residential aged care services (Table 8). While nurses working in hospitals were, on average, younger than all employed nurses (40.8 years compared with 43.3 years), those in residential aged care services were older (48.2 years). Doctors' rooms and schools

Table 8: Employed nurses: work setting in main job and selected characteristics, 2004

Work setting of main job	Number	% distribution	Average age (years)	% male	% registered nurses
Hospital (including psychiatric hospital)	125,177	50.2	40.8	9.1	85.7
Residential aged care service	33,359	13.4	48.2	5.5	60.7
Rural hospital and health service/multipurpose service	19,005	7.6	43.8	7.1	74.4
Community health centre	17,074	6.8	46.1	7.0	89.8
Doctors' rooms/medical practice	8,479	3.4	45.9	1.6	78.6
Day procedure centre	6,913	2.8	43.8	4.1	82.7
Mental health facility	6,345	2.5	44.8	33.5	72.1
Tertiary education institution	3,344	1.3	45.5	10.9	94.6
Developmental disability service	2,259	0.9	46.3	27.7	66.4
School	1,298	0.5	46.3	3.3	91.7
Hospice	1,293	0.5	46.7	7.8	77.1
Other	9,384	3.8	45.0	10.9	79.7
Not stated	15,526	6.2	45.3	7.3	80.0
Total	249,458	100.0	43.3	8.7	80.4

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

had lower than average proportions of employed nurses who were male while mental health facilities and development disability services had much higher proportions. Registered nurses made up above-average proportions of employed nurses in tertiary education institutions, schools, hospitals and community health centres and a lower than average proportion in residential aged care facilities and developmental disability services.

In 2004, almost two-thirds (65.5%) of nurses worked in the public sector in their main nursing job (Table 9). Nurses in the public sector were more likely to be male (10.3%), more likely to be registered (81.4%) and were younger on average (42.4 years) than their private sector counterparts (5.7%, 78.5% and 45.1 years respectively). The private sector experienced stronger growth in nurse numbers over the five-year period from 1999 to 2004 (27.6%) than the public sector (3.8%). Growth in the private sector occurred across all work settings.

Table 9: Employed nurses: sector of main job and selected characteristics, 2004

Sector of main job	Number	% distribution	% change between 1999 and 2004	Average age (years)	% male	% registered nurses
Public	163,286	65.5	3.8	42.4	10.3	81.4
Private	86,172	34.5	27.6	45.1	5.7	78.5
Total	249,458	100.0	11.0	43.3	8.7	80.4

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

Working hours

Total 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.

Table 10: Employed registered and enrolled nurses: average total weekly hours worked, proportion working part-time and 50 hours or more per week, 1999 to 2004

Year	Registered nurses			Enrolled nurses			All nurses		
	Average weekly hours	% working part-time	% working 50+ hours	Average weekly hours	% working part-time	% working 50+ hours	Average weekly hours	% working part-time	% working 50+ hours
1999	31.0	50.6	1.8	29.1	61.2	1.9	30.6	52.7	1.8
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	33.1	48.1	6.2	31.5	55.7	4.7	32.8	49.6	5.9

Note: There were some changes to the wording of the question on hours worked from 1999 to 2004 (see Glossary).

Sources: AIHW Nursing Labour Force Survey, 1999 to 2001; AIHW Nursing and Midwifery Labour Force Census, 2003 and 2004.

The average number of hours worked by all nurses rose from 30.6 hours in 1999 to 32.8 hours in 2004 and there were increases for both registered and enrolled nurses (Table 10 and Figure 3). The proportion of nurses working 50 hours or more also rose, from 1.8% to 5.9%, while the proportion working part-time fell, from 52.7% to 49.6%.

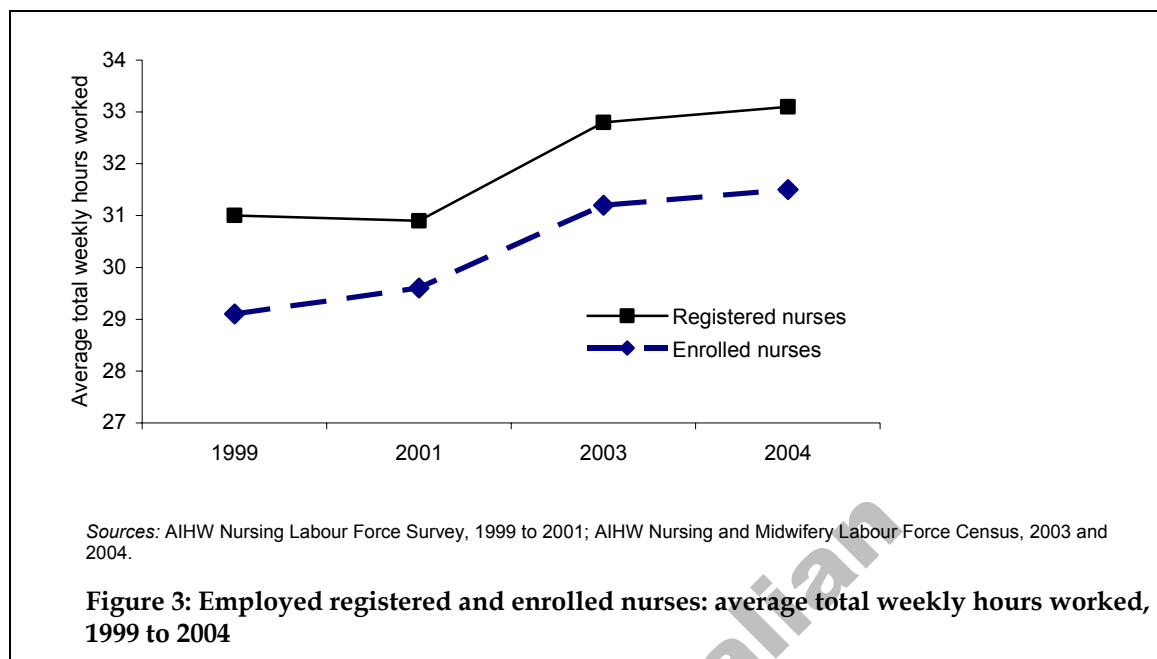


Table 11 : Employed registered and enrolled nurses: per cent distribution of total hours worked per week, by age, 2004

Age	Total hours worked per week (per cent)				Total	Total number of nurses
	<20	20–34	35–49	50+		
Registered nurses						
<25	1.5	15.2	78.2	5.1	100.0	8,517
25–34	13.6	27.0	53.4	6.1	100.0	39,708
35–44	19.7	37.5	37.3	5.4	100.0	55,904
45–54	9.6	37.3	45.9	7.2	100.0	64,081
55+	13.8	38.7	41.6	5.9	100.0	32,433
Total	13.6	34.6	45.7	6.2	100.0	200,643
Enrolled nurses						
<25	14.7	33.2	47.2	4.8	100.0	2,061
25–34	18.0	36.8	39.5	5.7	100.0	6,265
35–44	20.2	42.4	33.1	4.3	100.0	15,949
45–54	10.8	41.1	43.3	4.8	100.0	18,276
55+	12.4	40.2	43.0	4.3	100.0	6,264
Total	15.2	40.5	39.6	4.7	100.0	48,815
All nurses						
<25	4.1	18.7	72.2	5.1	100.0	10,579
25–34	14.2	28.3	51.5	6.0	100.0	45,973
35–44	19.8	38.6	36.4	5.2	100.0	71,853
45–54	9.9	38.1	45.3	6.7	100.0	82,357
55+	13.5	38.9	41.8	5.7	100.0	38,697
Total	13.9	35.7	44.5	5.9	100.0	249,458

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

The trend was similar for both registered and enrolled nurses (Table 10). Enrolled nurses, however, worked slightly fewer average hours per week than registered nurses. In 2004 registered nurses worked an average of 33.1 hours per week in total, compared with 31.5 hours worked by enrolled nurses. Enrolled nurses were also more likely than registered nurses to be working part-time (55.7% compared with 48.1%) and less likely to be working 50 hours or more (4.7% compared with 6.2%).

The hours worked by nurses not only differed by registration/enrolment status, but also by age (Table 11). In 2004, 78.2% of registered nurses aged under 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 (i.e. part-time). In comparison, 57.2% of registered nurses aged 35–44 years and 52.5% 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, probably associated with child rearing.

For enrolled nurses, the hours worked per week did not differ as much with age as for registered nurses, with enrolled nurses of all ages more likely to be working part-time than registered nurses.

Hours worked in main and second jobs

In 2004, 22,784 employed nurses (9.1%) reported having more than one nursing job (Table 12). While information on both the main and second job is sought in the Nursing and Midwifery Labour Force Census, respondents provide full details regarding their second job less often than they do about their main job. This results in higher proportions of missing or 'not stated' values for aspects of the second job, particularly the principal clinical area of nursing.

Overall, nurses worked an average of 32.8 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 (27.8 hours) than those with only one job but an additional 12.6 hours on average per week in their second job.

Table 12: Employed nurses: number and average weekly hours worked in main and second nursing job, 2004

	Number	Average hours worked in main job	Average hours worked in second job ^(a)	Total average weekly hours worked ^(a)
Main job only	226,674	32.1	..	32.1
Main and second job	22,784	27.8	12.6	..
Total	249,458	31.7	..	32.8

(a) The average hours in second job is calculated based only on those nurses who had a second job. Total average weekly hours is 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, 2004.

In 2004 the most common nursing role for a second job was as a clinical nurse (Table 13). The most common settings for a second job were hospitals and residential aged care services (Table 15), and a second job in the private sector was more common than in the public sector (Table 16).

Tables 13, 14, 15 and 16 show the average weekly hours worked in both the main and second nursing job by nurses in different roles, areas of activity, work settings and sectors in 2004. In interpreting the tables it should be noted that the second nursing job may be in a different role, setting and sector from the main job.

Table 13: Employed nurses: number and average weekly hours worked in main and second nursing job, nursing role, 2004

Nursing role	Main nursing job		Second nursing job	
	Number	Average weekly hours	Number	Average weekly hours
<i>Clinical nursing role^(a)</i>	222,855	31.2	17,124	12.1
Clinical nurse	208,060	30.7	16,496	12.0
Clinical nurse manager	11,904	38.2	334	14.0
Supervisor of new nurses	2,891	34.9	294	14.0
<i>Non-clinical nursing role</i>				
Nurse administrator	12,953	38.6	456	13.9
Teacher/educator	4,930	34.2	917	11.2
Researcher	2,130	32.4	12	10.2
Other	6,590	32.0	657	12.0
Not stated	—	—	3,617	12.9
Total	249,458	31.7	22,784	12.6

(a) Clinical nursing includes 'clinical nurse', 'clinical nurse manager' and 'supervisor of new nurses'.

Source: AIHW Nursing and Midwifery Labour Force Census, 2004

Table 14: Employed nurses working in a clinical role in their main job: number and average weekly hours worked in main job, clinical area of nursing, 2004

Clinical area of nursing in main job ^(a)	Number	Average weekly hours worked in main job ^(b)
<i>Medical and surgical nursing areas</i>		
Medical	37,293	31.5
Surgical	23,155	31.1
Mixed medical and surgical/multiple clinical areas	10,478	29.6
<i>Other areas of nursing activity</i>		
Aged care	33,794	29.7
Critical care	24,492	32.4
Perioperative	17,646	32.0
Midwifery	16,709	28.7
Community health	15,349	28.5
Mental health	13,277	35.9
Family & child health	7,583	30.4
Rehabilitation/disability	7,498	31.9
Other	15,579	33.8
Total clinical nursing	222,855	31.2

(a) Information on clinical area of nursing applies only to those nurses who were in a clinical role in their main nursing job (i.e. 'clinical nurse', 'clinical nurse manager' and 'supervisor of new nurses').

(b) Information on hours worked in the second job by clinical area is not published due to concerns about the quality of the data in 2004. There was a large number of missing values for the clinical area of nursing of the second job in nursing.

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

In 2004, in their main nursing job, nurse administrators worked the highest average number of hours per week of all nurses (38.6 hours). The average for clinicians in their main job was 31.2 hours and for all nurses, 31.7 hours (Table 13). Nurse administrators in their second job also worked more hours, on average, than all nurses (13.9 hours compared with 12.6 hours). The average working hours of clinical nurse managers (38.2 in the main job and 14.0 in the second job) were similar to the hours worked by nurse administrators, and higher than other nurses in a clinical nursing role (Table 13).

Of nurses in a clinical role, those employed in the mental health area worked the most hours per week in their main job (35.9 hours) while those in community health and midwifery/obstetrics worked the least (28.5 hours and 28.7 hours respectively) (Table 14).

Nurses working in mental health facilities and developmental disability services reported the highest number of hours worked on average – 36.3 and 35.3 hours respectively for the main job and 14.0 hours and 14.5 hours for the second job (Table 15). Nurses in doctors' rooms/medical practices worked the lowest average hours (25.6 hours in the main job and 10.6 hours in the second job).

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 (29.8) hours (Table 16). Those with a second job worked similar hours in both the public and private sector in that job.

Table 15: Employed nurses: number and average weekly hours worked in main and second nursing job, work setting, 2004

Work setting	Main nursing job		Second nursing job	
	Number	Average weekly hours	Number	Average weekly hours
Hospital (including psychiatric hospital)	125,177	32.0	8,553	12.2
Residential aged care service	33,359	30.6	3,779	13.8
Rural hospital and health service/multipurpose service	19,005	32.5	949	12.7
Community health centre	17,074	31.5	1,578	11.3
Doctors' rooms/medical practice	8,479	25.6	1,778	10.6
Day procedure centre	6,913	29.6	745	11.1
Mental health facility	6,345	36.3	288	14.0
Tertiary education institution	3,344	34.8	774	11.5
Developmental disability service	2,259	35.3	196	14.5
School	1,298	30.1	199	12.2
Hospice	1,293	31.1	117	12.1
Other	9,384	33.3	1,354	12.1
Not stated	15,526	31.2	2,475	11.9
Total	249,458	31.7	22,784	12.6

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

Table 16: Employed nurses: number and average weekly hours worked in main and second nursing job, work sector, 2004

Work sector	Main nursing job		Second nursing job	
	Number	Average weekly hours	Number	Average weekly hours
Public	163,286	32.7	8,065	12.3
Private	86,172	29.8	12,228	12.1
Not stated	—	—	2,491	12.8
Total	249,458	31.7	22,784	12.6

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

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 they do not take into consideration the relatively high proportion of part-time workers. For this reason, it is more appropriate to assess the supply of labour through the numbers of full-time equivalent (FTE) nurses, a measure which takes into account both the number of employed nurses and the hours that they worked. The FTE is calculated by dividing the total hours worked by all employed nurses in all their nursing jobs in a week, by 35 hours (the standard of 35 hours being consistent with the Australian Bureau of Statistics (ABS) cut-off for part-time work). The FTE measures how many 35-hour-week workloads are being worked by nurses. For nurses, the FTE number of nurses is lower than the raw number of nurses as the average number of hours worked per week is less than 35 hours (32.8 hours) (Table 10). The usefulness of the FTE measure can be further enhanced by standardising it to the relevant population (that is, by calculating FTE per 100,000 population). This (referred to as the 'FTE rate') allows meaningful comparisons across geographic regions, jurisdictions, and time to be made.

Overall, nursing supply increased by 12.0% between 1999 and 2004, from 1,039 FTE nurses per 100,000 to 1,164 FTE per 100,000 (Table 17). This was due to both an 11.0% increase in the number of employed nurses and a 7.2% increase in the average hours they worked. The supply of registered nurses, as measured by the FTE rate, grew by 12.5% from 1999 to 2004, while the supply of enrolled nurses increased by 9.6%. The greater growth in the supply of registered nurses was due to their relatively large increase in numbers compared with enrolled nurses (11.8% compared with 7.4%), which offset a smaller relative increase in average hours worked by registered nurses (6.8% compared with 8.2% for enrolled nurses) (Table 17).

Table 17: Employed registered and enrolled nurses: nursing rate and FTE rate, 1999 to 2004

	1999	2001	2003	2004	% change 1999–2004
Registered nurses					
Number of nurses	179,389	183,224	189,071	200,643	11.8
Average weekly total hours	31.0	30.9	32.8	33.1	6.8
FTE nurses	158,887	161,760	177,186	189,751	19.4
Nurses per 100,000 population	948	944	951	999	5.4
FTE nurses per 100,000 population	840	833	892	944	12.5
Enrolled nurses					
Number of nurses	45,432	45,006	47,574	48,815	7.4
Average weekly total hours	29.1	29.6	31.2	31.5	8.2
FTE nurses	37,774	38,062	42,409	43,934	16.3
Nurses per 100,000 population	240	232	239	243	1.2
FTE nurses per 100,000 population	200	196	213	219	9.6
All nurses					
Number of nurses	224,822	228,230	236,645	249,458	11.0
Average weekly total hours	30.6	30.7	32.5	32.8	7.2
FTE nurses	196,558	200,190	219,741	233,778	18.9
Nurses per 100,000 population	1,188	1,176	1,191	1,242	4.5
FTE nurses per 100,000 population	1,039	1,031	1,106	1,164	12.0

Sources: AIHW Nursing Labour Force Survey, 1999 to 2001; AIHW Nursing and Midwifery Labour Force Census, 2004; estimated resident population data provided by ABS.

Geographic distribution

State and territory

The characteristics and supply of nurses varies across jurisdictions (tables 18 and 19). Employed nurses in Tasmania were, on average, the oldest in Australia in 2004 (45.5 years) while those in the Northern Territory were the youngest (42.0 years). The Northern Territory also had the highest proportion of nurses who are male (10.9%), the highest proportion who are registered (90%) and the highest average total weekly working hours (37.6 hours). Victoria had the lowest proportion of employed nurses who are registered (73.1%) and the lowest average hours worked per week (31.8 hours) (Table 18).

In 2004 there were 1,242 nurses and 1,164 FTE nurses per 100,000 population in Australia (Table 19). Supply of nurses, as measured in FTE per 100,000 population, was highest in South Australia (1,374) and Western Australia (1,325) in 2004, and lowest in Queensland (998). For registered nurses the FTE rate in 2004 was highest in Western Australia (1,136) and lowest in Queensland (846). For enrolled nurses supply was highest in Victoria (322 FTE per 100,000) and lowest in the Northern Territory (121 FTE per 100,000).

Between 1999 and 2004, the supply of nurses in Australia increased by 12.0%, from 1,039 FTE per 100,000 to 1,164 FTE per 100,000 (Table 19). Because of increases in both the number of nurses and the average hours worked, supply rose in all jurisdictions except the Northern

Territory. The largest increase was in South Australia, where the FTE rate rose by 30.9% from 1999 to 2004. Tasmania and Western Australia also experienced relatively large increases in the nursing supply over the five-year period (22.0% and 22.1% respectively).

Table 18: Employed nurses: selected characteristics, state or territory of main job, 2004

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number	75,779	68,214	41,260	28,674	23,099	6,182	3,903	2,347	249,458
Average age (years)	42.7	42.5	44.4	45.1	43.1	45.5	45.0	42.0	43.3
% male	9.6	8.7	9.1	5.7	9.1	7.4	6.2	10.9	8.7
% registered nurses	83.6	73.1	84.6	85.2	75.4	85.3	82.8	90.0	80.4
% clinical nurses ^(a)	88.0	90.2	90.4	89.1	89.5	91.2	89.5	84.9	89.3
Average time nursing in Australia (years) ^(b)	15.5	15.6	17.1	17.0	16.7	19.2	17.5	16.1	16.2
Average total weekly hours worked	34.1	31.8	32.9	32.0	31.9	33.1	34.1	37.6	32.8

(a) Clinical nursing includes 'clinical nurse', 'clinical nurse manager' and 'supervisor of new nurses'.

(b) Average years working either full-time or part-time as a nurse in Australia excluding time spent not working as a nurse or on unpaid leave.

Source: AIHW Nursing and Midwifery Labour Force Census, 2004.

Table 19: Employed registered and enrolled nurses: number per 100,000 population and FTE per 100,000 population, state or territory of main job, 1999 and 2004

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Registered nurses									
1999									
Nurses per 100,000	905	987	891	975	1,067	990	915	1,255	948
FTE nurses per 100,000	832	848	804	869	826	851	818	1,324	840
2004									
Nurses per 100,000	943	1,005	898	1,235	1,137	1,094	997	1,057	999
FTE nurses per 100,000	924	925	846	1,136	1,049	1,031	968	1,139	944
Enrolled nurses									
1999									
Nurses per 100,000	196	322	182	256	319	172	221	195	240
FTE nurses per 100,000	176	258	155	216	225	140	197	182	200
2004									
Nurses per 100,000	185	369	164	215	370	189	207	117	243
FTE nurses per 100,000	174	322	150	189	321	180	207	121	219
All nurses									
1999									
Nurses per 100,000	1,101	1,309	1,073	1,231	1,386	1,162	1,135	1,450	1,188
FTE nurses per 100,000	1,009	1,107	960	1,086	1,049	993	1,015	1,504	1,039
2004									
Nurses per 100,000	1,128	1,374	1,061	1,450	1,507	1,282	1,204	1,175	1,242
FTE nurses per 100,000	1,099	1,249	998	1,325	1,374	1,212	1,173	1,262	1,164

Sources: AIHW Nursing Labour Force Survey, 1999; AIHW Nursing and Midwifery Labour Force Census, 2004; estimated resident population data provided by ABS.

Geographic region

The distribution of nurses across broad geographic regions is very similar to the distribution of the Australian population. In 2004, an estimated 87.6% of nurses were working in Major cities or Inner regional areas of Australia in their main job, 10.0% in Outer regional areas and the remaining 2.4% in Remote and Very remote areas (Table 20). The comparable figures for the Australian resident population in the same year are 87.3%, 10.2% and 2.5% (ABS 2004).

Nurses in Major cities in 2004 were younger on average than other nurses (42.7 years compared to 43.3 years for Australia) and had a higher proportion registered (83.7% compared to 80.4%). Nurses in Remote and Very remote areas worked longer hours per week than other nurses (an average 33.8 hours per week in Remote areas and 37.7 hours in Very remote areas compared with the average for Australia of 32.8 hours) (Table 20).

The supply of nurses in 2004, as measured by FTE per 100,000 population, was highest in the Remote and Very remote regions of Australia (1,165 and 1,162 FTE per 100,000 respectively) and lowest in Outer regional areas (1,090) (Table 21). All areas experienced an increase in nursing supply from 1999 to 2004, due to an increase in both the number of nurses employed and the average total hours worked in all regions. The largest growth was in the Very remote (18.9%) and the Outer regional areas (18.1%). Major cities had the smallest growth in supply between 1999 and 2004 (14.7%).

Table 20: Employed registered and enrolled nurses: selected characteristics and region of main job, 2004

	Major cities	Inner regional	Outer regional	Remote	Very remote	Not stated	Australia
Number	158,431	50,749	23,917	3,894	1,930	10,535	249,458
Average age (years)	42.7	44.3	44.5	44.2	43.8	44.1	43.3
% male	8.9	8.8	6.3	6.5	9.1	10.4	8.7
% registered nurses	83.7	75.4	72.9	74.2	79.4	74.8	80.4
% clinical nurses ^(a)	89.0	90.1	89.7	88.3	89.5	90.0	89.3
Average time nursing in Australia (years) ^(b)	15.6	17.5	17.6	17.1	16.7	16.2	16.2
Average total weekly hours worked	33.0	32.1	32.7	33.8	37.7	31.6	32.8
% distribution nurses ^(c)	66.3	21.2	10.0	1.6	0.8	n.a.	100.0
% distribution population	66.3	21.0	10.2	1.6	0.9	n.a.	100.0

(a) Clinical nursing includes 'clinical nurse', 'clinical nurse manager' and 'supervisor of new nurses'.

(b) Average years working either full-time or part-time as a nurse in Australia excluding time spent not working as a nurse or on unpaid leave.

(c) Distribution is calculated excluding 'not stated' values for ASGC region of main job.

Sources: AIHW Nursing and Midwifery Labour Force Census, 2004; estimated resident population data provided by ABS.

Table 21: Employed registered and enrolled nurses: number per 100,000 population and FTE per 100,000 population, region of main job, 1999 and 2004

	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
Registered nurses						
1999						
Nurses per 100,000	920	822	766	806	781	948
FTE nurses per 100,000	820	709	670	735	790	840
2004						
Nurses per 100,000	996	906	851	895	857	999
FTE nurses per 100,000	948	841	807	887	940	944
Enrolled nurses						
1999						
Nurses per 100,000	184	278	307	337	208	240
FTE nurses per 100,000	155	226	253	276	186	200
2004						
Nurses per 100,000	194	296	316	311	222	243
FTE nurses per 100,000	176	260	284	275	223	219
All nurses						
1999						
Nurses per 100,000	1,104	1,100	1,074	1,143	988	1,188
FTE nurses per 100,000	978	936	923	1,012	977	1,039
2004						
Nurses per 100,000	1,190	1,202	1,167	1,206	1,079	1,242
FTE nurses per 100,000	1,122	1,102	1,090	1,165	1,162	1,164

Note: The figures for Australia include nurses with a 'not stated' ASGC region for their main job (see Table 20 for the number who did not state the region of their main job).

Sources: AIHW Nursing Labour Force Survey, 1999; AIHW Nursing and Midwifery Labour Force Census, 2004; estimated resident population data provided by ABS.

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 2004, there were an estimated 39,453 (13.7%) registered and enrolled nurses who were not employed as a nurse in Australia (Table 22). Of these, almost two-thirds (63.3%) were not looking for work in nursing, about half of these being employed elsewhere. A further 13.4% were on extended leave and 11.7% were working as a nurse overseas. The remaining 11.6% 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 (2.7% and 3.6%) compared with other nurses (8.7% of employed nurses were male). In comparison, nurses working overseas and those employed elsewhere and not looking for work in nursing had higher proportions who were male (12.8% and 10.9% respectively). Nurses on extended leave and overseas were, on

average, younger than other nurses (37.8 and 38.7 years), while those who were 'not employed and not looking for work in nursing' were older (46.6 years). Those working overseas also had the lowest average number of years working in Australia as a nurse (7.7 years). While almost all of the nurses working overseas were registered nurses (96.0%), those looking for work in nursing were less likely to be registered (71.2%). Of those working overseas, roughly half had gained their initial qualification in Australia, a much lower proportion than for all employed nurses and for other nurses not employed in nursing.

Table 22: Registered and enrolled nurses: labour force status: selected characteristics, 2004

Labour force status	Number	% male	Average age (years)	% registered nurse	% metropolitan residence ^(a)	% initial qualification in Australia	Average time nursing in Australia (years)
Nurses not employed in nursing in Australia							
On extended leave	5,277	2.7	37.8	86.5	85.0	93.1	12.6
Looking for work in nursing	4,577	7.1	44.0	71.2	84.1	88.0	13.4
Employed elsewhere	1,831	8.9	43.1	65.7	82.7	91.4	12.2
Not employed	2,746	5.8	44.6	74.8	85.1	85.6	14.2
Overseas	4,621	12.8	38.7	96.0	37.3	50.8	7.7
Not looking for work in nursing	24,978	7.2	45.5	79.0	85.4	91.3	14.6
Employed elsewhere	12,495	10.9	44.5	75.7	86.7	92.3	13.3
Not employed	12,482	3.6	46.6	82.4	84.1	90.4	15.9
All employed nurses	249,458	8.7	43.3	80.4	87.4	87.2	16.2

(a) '% metropolitan residence' is based on postcode of home residence concorded to ASGC regions. Metropolitan includes Major cities and Inner regional areas. The percentage is calculated excluding 'not stated' values for ASGC region of home residence.

Sources: AIHW Nursing and Midwifery Labour Force Census, 2004.

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 also 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 and 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. The results of the 2004 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' below.)

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 the 12 months prior to the survey. 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. Nurses who registered for the first time in the preceding 12 months did not receive a questionnaire, as they were not yet required to renew their registration. 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' below.)

Response rate

Response to the Nursing and Midwifery Labour Force Census in 2004 represented 59.8% of the nursing registrations and enrolments in all jurisdictions (Table 23). The response rate was lower for enrolled nurses (55.0%) than for registered nurses (60.9%). 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 23: Nursing and Midwifery Labour Force Census: estimated response rates, registered and enrolled nurses, 1999 to 2004 (per cent)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Registered nurses									
1999	79.0	77.8	94.3	67.6	79.4	78.8	39.0	53.9	79.1
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 ^(a)	69.1	59.9	56.5	37.4	72.2	67.0	73.1	34.9	60.9
Enrolled nurses									
1999	76.2	72.5	91.8	70.5	65.3	66.5	19.5	58.4	74.4
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
All nurses									
1999	78.5	76.5	93.9	68.2	76.1	77.0	36.0	54.5	78.1
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 ^(a)	67.6	57.4	56.2	37.7	71.2	65.9	71.1	35.1	59.8

(a) Owing to the delayed extraction of data from the 2004 New South Wales registration files, the numbers of nurses registered in NSW in 2004 may have been inflated (NSW Health 2006). The effect of this would have been to artificially lower the 2004 response rates for registered and all nurses in New South Wales and Australia.

Response to the census varied considerably across jurisdictions (Table 23). This reflects variations in the way the survey was administered within each jurisdiction and, possibly, variations in the nursing population. In 2004, the response rate for all nurses ranged from 35.1% in the Northern Territory to 71.2% in South Australia.

Response rates for the Nursing and Midwifery Labour Force Census are falling. At a national level, the response rate for all nurses declined 18.3 percentage points over the five-year period from 1999 to 2004 (from 78.1% to 59.8%). For registered nurses, the decline was 18.2 percentage points and for enrolled nurses, 19.4 percentage points. Declining response rates were experienced in all jurisdictions except the Australian Capital Territory (which had a particularly low response rate in 1999). Queensland and Western Australia had the largest falls (37.7 and 30.5 percentage points respectively).

Estimation procedures for non-response

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.

Imputation: estimation for item non-response

For item non-response, initially the processes involve a qualitative examination of all information that has been provided by a respondent. Where possible, this is followed by an assumption about any missing information for that respondent, based on other information

the respondent has provided. 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. Therefore, 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.

The process begins with imputation of any missing values for type of nurse (registered or enrolled), sex and age, within each state and territory. Age and sex need to be imputed first, to enable 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.) In 2004, 0.6% of records received an imputed type of nurse, 0.5% an imputed sex and 2.2% an imputed age group value.

After age and sex, other variables deemed suitable for this process are imputed. In 2004, these variables were 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. Based on the distribution of survey responses, the probabilities of particular responses occurring are used to assign a response category value to each record, using a random number generator.

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). 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 Census, 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 random, standard errors are not a suitable means of gauging variability.

The weight for each record is based on particular characteristics that are known for the whole population. The population benchmark data are 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 2004, 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 the 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.

**Note:
Western Australian
and national
data and rates
are incorrect**

Appendix B

Additional tables available from the AIHW website

In addition to the tables in this publication, more detailed tabulations (see below) from the 2004 Nursing and Midwifery Labour Force Census are published on the AIHW website <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 three sets of tables:

Demographic overview

Twelve 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 clinical area of nursing of main job (total of 12 tables).

Measures of nursing supply

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

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, rehabilitation/disability and other.

Employed

An employed nurse is one who:

- worked for a total of one 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.

In estimating the number of employed 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.

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 actual 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 35-hour-week 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.

FTE is calculated as: *'the number of employed nurses in a particular category' multiplied by 'the average hours worked by employed nurses in the category' divided by '35' (the standard of 35 hours being consistent with the ABS cut-off for part-time work).*

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 1999 and 2001 Nursing and Midwifery Labour Force Surveys, nurses were asked to provide information on the hours 'usually/normally worked per week'. In 2003, all jurisdictions, except New South Wales, changed this to hours 'worked last week'. In 2004 all jurisdictions collected hours 'worked last week'.

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 this publication, midwives are included in 'registered nurses'. 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. In addition, 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.

Nursing and midwifery labour force

The nursing and midwifery labour force in each state and territory includes:

- 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 for more than 3 months.

Nursing role

The function of the nursing work undertaken by a person with nursing qualifications. The roles are:

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), clinical nurse managers (managing clinical nurses/midwives), and supervisors/supporters of new nurses/midwives).

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

- *Administrator*: A person mainly employed in nursing administration.
- *Teacher/educator*: 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.

Unless otherwise stated in this publication, the role of the nurse refers to the main role (that is, the 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).

Region

The Remoteness Area Structure within the Australian Standard Geographical Classification (ASGC), produced by the Australian Bureau of Statistics (ABS), 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; 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.

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 three-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).

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Notes:
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