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Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
FTE	full-time equivalent
NCVER	National Centre for Vocational Education Research
VET	vocational educational and training

Notes and symbols

Throughout this publication, data from the AIHW Nursing and Midwifery Labour Force Survey may not add to the totals shown due to the estimation process for non-response (see *Appendix A*). 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.

<	less than
–	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 2007 Australian Institute of Health and Welfare (AIHW) Nursing and Midwifery Labour Force Survey. This survey 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. It should be noted that the figures in this report are estimates, and should be interpreted carefully due to declining response rates and changes to the survey form over time.

The main findings of the report are as follows:

- Overall, nursing supply increased by 7.6% between 2003 and 2007, from 1,017 full-time equivalent nurses per 100,000 population to 1,095 full-time equivalent nurses per 100,000 population based on a 38-hour week. This was mainly a result of both an 11.3% increase in the number of employed nurses and a 2.5% increase in the average hours they worked over this period.
- In 2007, the total number of nurses identified by the Nursing and Midwifery Labour Force Survey (after adjusting for multiple registrations) was estimated to be 305,834, comprising 245,491 registered nurses and 60,343 enrolled nurses.
- The number of registered and enrolled nurses increased by 11.9% between 2003 and 2007.
- Between 2003 and 2007, the number of nurses actually employed in nursing increased by 11.3%, from 236,645 to 263,331.
- The average weekly hours worked by employed nurses and midwives increased from 32.5 hours in 2003 to 33.3 hours in 2007. Over the same period, the proportion of nurses working part-time (less than 35 hours per week) declined from 50.1% to 48.1%.
- Nursing supply across regions ranged from 1,028 full-time equivalent nurses per 100,000 population in *Major cities* to 1,115 in *Remote* areas based on a 38-hour week.
- The nursing workforce continued to age. Between 2003 and 2007, the proportion of nurses aged 50 years or over increased from 28.2% to 33.0%.
- Nursing continued to be a female-dominated profession, with females comprising 90.4% of employed nurses in 2007 (down from 91.4% in 2003).
- The overall response rate to the 2007 survey was estimated to be 49.6%; however, there was considerable variation in response rates across the states and territories.

Estimates in this report may vary from workforce estimates produced by individual jurisdictions, as the AIHW removes nurses and midwives who work mainly or only in another jurisdiction from state and territory estimates, and due to 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 2007, based on information collected in the 2007 Nursing and Midwifery Labour Force Survey. Some data from the 2003, 2004 and 2005 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 Survey collections, additional data are included on higher education from the Department of Education, Employment and Workplace Relations, on vocational education and training (VET) from the National Centre for Vocational Education Research (NCVER) and on migration and long-term arrivals and departures from the Australian Bureau of Statistics (ABS).

1.1 Nurses and midwives in Australia

In this report, the term 'nurse' includes all persons who were either registered or enrolled with a state or territory nursing and midwifery registration board at the time the Nursing and Midwifery Labour Force Survey 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.

To practise, all nurses in Australia must be either registered or enrolled with the appropriate state or territory nursing and midwifery board. 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 he or she can practise safely, and has sufficient command of the English language to ensure safe practise.

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

The qualifications and skill level required for registration or 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 postgraduate degree in nursing, or the equivalent, is usually required. This degree includes both theoretical and clinical aspects.

Midwives are now recognised as a separate profession in most jurisdictions. 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 do additional education and training in midwifery. However, universities now offer direct entry midwifery undergraduate programs. Direct entry midwives, as with other midwives, must be registered with a nursing and midwifery board to practise, but 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, authorised nurse

practitioners may perform some specified functions traditionally done by a medical practitioner, such as prescribing some medications, ordering diagnostic tests and making referrals when operating within approved guidelines (ANPA 2008). Nurse practitioners are currently a small group, numbering 238 in 2007 (AUSPRAC 2008). All states and territories have now introduced nurse practitioner registration status. States and territories have introduced 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, doing less complex procedures than registered nurses. Enrolled nurses must have completed an appropriate vocational education and training course or equivalent, lasting between 1 and 2 years, 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 on recency of practice. National Competency Standards, which are agreed 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 or him to obtain and retain registration or enrolment as a nurse in Australia (ANMC 2002, 2006). Nurses wishing to re-register who have not had sufficient nursing practice in the preceding 5 years are required to do 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.

1.2 Data sources

This report focuses on data from the Nursing and Midwifery Labour Force Survey conducted by the states and territories, supplemented with higher education data from the Department of Education, Employment and Workplace Relations, vocational education and training data from the NCVET, and migration and long-term arrivals and departures 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 Survey method and treatment of the data is provided in *Appendix A*.

The Nursing and Midwifery Labour Force Survey

The Nursing and Midwifery Labour Force Survey 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 and midwives, and is drawn from the registration files maintained by each state and territory nursing and midwifery registration board or council.

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

Participation in the survey is voluntary, and not all nurses who receive a questionnaire respond. To account for survey non-response, the data are weighted up to the relevant registration and enrolment figures supplied by the nursing and midwifery boards. Also, some nurses and midwives return partially completed questionnaires. Where the proportion of missing values is small (usually 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*.

The overall response rate to the 2007 Nursing and Midwifery Labour Force Survey was 49.6%, with rates below 40% in Victoria (39.9%), Queensland (33.9%), Western Australia (36.7%) and the Northern Territory (28.7%). While the response rate in the Northern Territory was low, it was over twice the response rate received for the Northern Territory in 2005. The response rates for the other jurisdictions continue to remain higher at about 60 to 65%. Further discussion on the survey response rate is provided in *Appendix A*.

Education data

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

Data for enrolled nurses are from the NCVER's statistical series on vocational education and training. Administrative records are maintained by VET providers and sent to the NCVER, where statistical reports on enrolments and completions are produced. In this publication, enrolment and graduate data are for Certificate IV and Diploma level enrolled nurse training courses (that is, those courses which lead to an enrolled nurse qualification) taken from the administrative collection.

Migration data

People 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 serve as a source of statistics for 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 and midwifery labour force. Data on 'reason for journey', which includes 'employment' are available only for long-term visitor arrivals and long-term resident departures.

1.3 Additional information

An electronic version of this report is available from the AIHW website at www.aihw.gov.au/labourforce/publications.cfm (select link to *Nursing and Midwifery labour force 2007*). Additional tables, containing more detailed data from the AIHW Nursing and Midwifery Labour Force Survey, are also available on the website.

2 Registered and enrolled nurses

In 2007 there were 317,618 nursing registrations and enrolments in Australia (Table 1 and Figure 1). After taking account of the 11,783 apparent multiple registrations and enrolments (that is, nurses who were registered in more than one jurisdiction), the number of registered and enrolled nurses in Australia in 2007 was estimated as 305,834. This is a rise of 11.9% from 2003 (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 12.9%, while the number employed in nursing increased by 11.3%. The number working as a clinical nurse or clinical manager increased by 8.7% over the period. The proportion of the nursing labour force looking for work in nursing remained roughly stable at 1.7% in 2003 and 1.5% in 2007. The substantial increase in nurses categorised under 'Other' nursing role between 2004 and 2005 is due in part to changes in the nursing role survey question during this period.

Table 1: Nurses: labour force status and nursing role in main job, 2003 to 2007

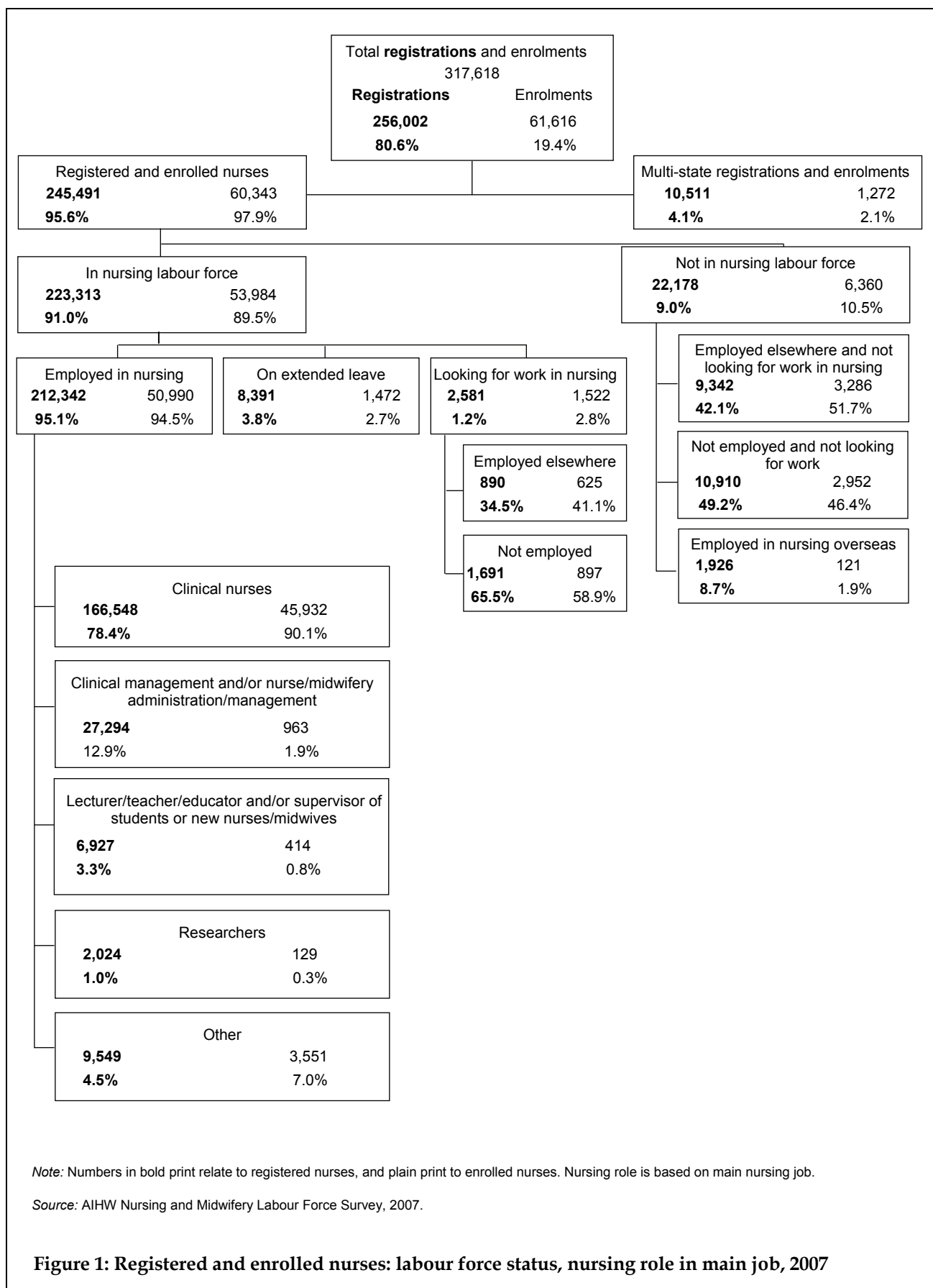
Labour force status/ nursing role in main job	2003	2004 ^(a)	2005	2007	Change between 2003 and 2007 (per cent)
In the nursing labour force	245,531	253,592	254,956	277,297	12.9
<i>Employed in nursing</i>	236,645	243,916	244,360	263,331	11.3
Clinical nurse	195,975	203,517	196,998	212,480	8.4
Clinical management and/or nursing/midwifery administration	25,536	24,314	25,976	28,258	10.7
Lecturer/teacher/educator and/or supervisor of new nurses ^(b)	7,138	7,579	7,226	7,341	2.8
Researcher	2,056	2,069	1,976	2,153	4.7
Other	5,939	6,437	12,183	13,100	120.6
On extended leave	4,781	5,183	7,488	9,863	106.3
<i>Looking for work in nursing</i>	4,106	4,493	3,108	4,103	-0.1
Employed elsewhere	1,588	1,814	1,094	1,515	-4.6
Not employed	2,518	2,678	2,014	2,588	2.8
Not in the nursing labour force	27,846	29,110	30,663	28,537	2.5
Overseas	4,476	4,546	2,081	2,047	-54.3
<i>Not looking for work in nursing</i>	23,371	24,564	28,582	26,490	13.3
Employed elsewhere	12,010	12,370	14,579	12,628	5.1
Not employed	11,361	12,194	14,003	13,862	22.0
Total registered and enrolled nurses	273,378	282,702	285,619	305,834	11.9
Multiple registrations and enrolments ^(c)	9,168	8,928	9,145	11,783	28.5
Total registrations and enrolments	282,546	291,630	294,764	317,618	12.4

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

(b) In 2003 (in all states/territories except New South Wales) 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.

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

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003, 2004, 2005 and 2007.



In 2007, most registered and enrolled nurses were in the nursing labour force (90.7%), either employed in nursing (86.1%), on extended leave (3.2%) or looking for work in nursing (1.3%). The remaining registered and enrolled nurses were either working as a nurse overseas (0.7% in 2007) or not looking for work in nursing (8.7%). The number of nurses on extended leave showed a large proportional increase between 2003 and 2007, representing 1.7% and 3.2%, respectively, of all registered and enrolled nurses. The proportion of registered and enrolled nurses overseas dropped from 1.6% to 0.7% over the period (Table 1).

Registered nurses comprised 80.3% of all nurses in 2007, and their numbers showed a slightly greater proportional increase between 2003 and 2007 (up by 12.3%) than those of enrolled nurses (up by 10.2%) (Table 2). The proportion of all nurses who were registered nurses ranged from 75.5% in Victoria to 86.3% in the Northern Territory (Table 3).

Table 2: Registered and enrolled nurses, 2003 to 2007

	2003	2004 ^(a)	2005	2007	Change between 2003 and 2007 (per cent)
Registered nurses	218,615	226,702	230,577	245,491	12.3
Enrolled nurses	54,762	56,000	55,042	60,343	10.2
All nurses	273,378	282,702	285,619	305,834	11.9

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

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003, 2004, 2005 and 2007.

The average growth in numbers of registered and enrolled nurses (after accounting for multiple registrations) between 2005 and 2007 was above the national average of 7.1% in Queensland (18.3%), Victoria (9.1%), and Tasmania (7.3%), whereas the Australian Capital Territory had relatively low growth of 1.7% (Table 3). Rates of growth compared with changes in state population figures are discussed in Chapter 4.

The survey form asked nurses 'Are you registered/endorsed/authorised by your board to practise as a midwife?'. Under one-fifth (17.1%) of all nurses indicated they had such authorisation (Table 4). A small proportion of registered midwives were direct entry midwives (5.4%). See the section on 'Midwives' in the *Glossary* for an explanation of the differing training pathways.

In 2007, the estimated number of nurses employed in nursing was 263,331 or 86.1% 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^(a), 2007

	NSW	Vic ^(b)	Qld	WA ^(c)	SA	Tas	ACT	NT ^{(a)(c)}	Australia ^(d)
Registered nurses									
Employed	64,384	57,253	41,412	18,975	18,120	6,051	3,505	2,642	212,342
On extended leave	2,478	2,721	1,487	651	601	187	131	134	8,391
Looking for work in nursing	1,127	420	508	198	172	43	66	47	2,581
Overseas	1,249	199	258	37	84	24	53	22	1,926
Not looking for work in nursing	11,219	2,904	2,580	1,831	973	221	263	261	20,252
Total	80,456	63,497	46,245	21,693	19,951	6,525	4,018	3,106	245,491
Enrolled nurses									
Employed	12,651	17,818	7,723	4,994	5,793	990	686	334	50,990
On extended leave	487	534	164	115	122	18	17	15	1,472
Looking for work in nursing	480	533	141	113	143	41	8	62	1,522
Overseas	76	33	5	n.p.	6	–	–	–	121
Not looking for work in nursing	2,634	1,633	681	705	358	84	63	80	6,238
Total	16,327	20,550	8,714	5,928	6,423	1,134	777	491	60,343
All nurses									
Employed	77,034	75,071	49,135	23,969	23,913	7,041	4,192	2,976	263,331
On extended leave	2,965	3,256	1,651	767	723	205	148	149	9,863
Looking for work in nursing	1,607	953	650	311	315	84	74	109	4,103
Overseas	1,325	231	263	37	91	24	55	22	2,047
Not looking for work in nursing	13,852	4,537	3,260	2,537	1,331	305	327	341	26,490
Total 2007	96,783	84,047	54,959	27,620	26,374	7,658	4,796	3,597	305,834
Total 2005	94,624	77,062	46,464	26,547	25,521	7,135	4,714	n.p.	285,619
Change between 2005 and 2007 (per cent)	2.3	9.1	18.3	4.0	3.3	7.3	1.7	n.p.	7.1

(a) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information.

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

(c) Estimates for Western Australia for 2005 should be treated with caution due to the low response rate (26.9%) in the 2005 survey. Estimates for the Northern Territory for 2005 are not separately published due to the very low response rate to the survey in that jurisdiction (13.7%).

(d) In 2005, the total for Australia includes estimates for the Northern Territory and Western Australia. In 2007, the total for Australia includes estimates for the Northern Territory. Due to the relative size of the nursing and midwifery workforces in these jurisdictions, any biases in estimates are unlikely to have a significant effect on the accuracy of the national figures.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2005 and 2007.

Table 4: Registered and enrolled nurses authorised to practise as midwives^(a), 2007

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(b)	Australia
<i>Registered midwives</i>	17,116	13,311	11,374	3,594	3,986	779	993	881	52,032
Direct entry midwives	1,639	493	391	5	185	48	32	15	2,808
<i>Enrolled nurses</i>	56	119	43	33	79	4	5	3	342
Mothercraft nurses ^(c)	191	n.a.	97	19	15	5	13	13	353
Total number authorised as midwife	17,172	13,430	11,416	3,627	4,065	782	999	883	52,374
Total registrations/enrolments	96,783	84,047	54,959	27,620	26,374	7,658	4,796	3,597	305,834
Per cent authorised as midwife	17.7	16.0	20.8	13.1	15.4	10.2	20.8	24.5	17.1

(a) Based on respondents' indication that they are 'registered/endorsed/authorised' to practise as midwives, and may therefore include non-current registration/authorisation.

(b) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information.

(c) Based on respondents' indication as to whether they are mothercraft nurses. May contain either registered and/or enrolled nurses, depending upon the jurisdiction. Victoria did not include a question to identify mothercraft nurses in 2007.

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

3 Employed nurses

Between 2003 and 2007, the number of registered and enrolled nurses employed as nurses in Australia was estimated to have increased by 11.3%, from 236,645 to 263,331. This was mainly a result of a 12.3% increase in the number of employed registered nurses over the 5-year period (Table 5). The number of employed enrolled nurses also increased, but to a lesser extent (7.2%).

3.1 Age and sex

Nursing continued to be a female-dominated profession, with females comprising 90.4% of employed nurses in 2007 (down from 91.4% in 2003). The proportion of registered nurses who were male (9.6%) increased between 2003 and 2007 (up from 8.6% in 2003), as did the proportion of male enrolled nurses (8.8% in 2003 and 9.5% in 2007) (Table 5).

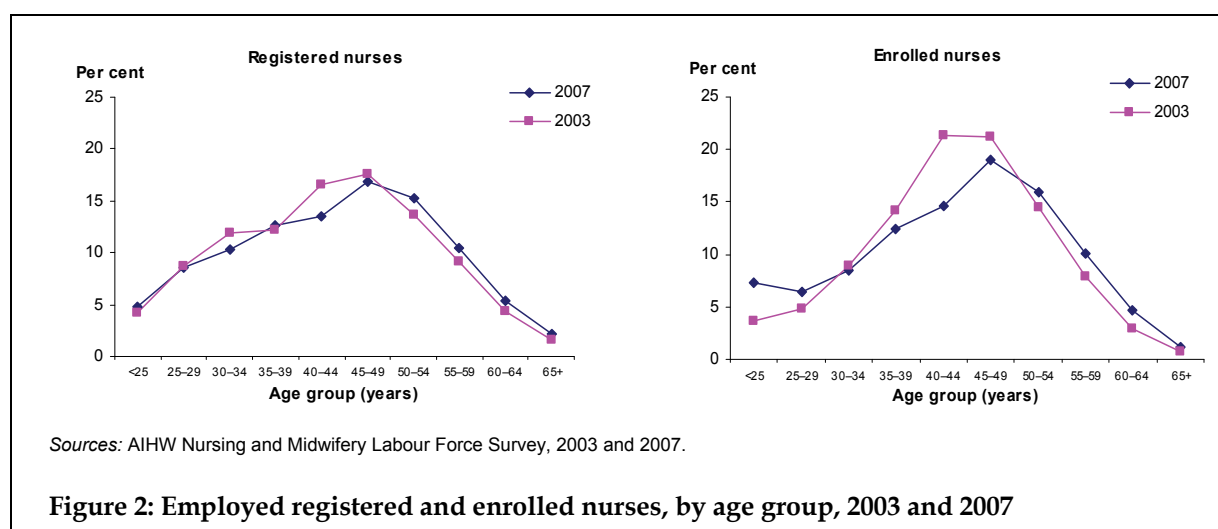
The nursing population aged slightly, on average, between 2003 and 2007. In 2003, the average age of employed nurses was 43.1 years (43.0 years for registered and 43.5 years for enrolled nurses). In 2007, the average age was 43.7 years (43.8 years for registered and 43.4 years for enrolled nurses). However, this increase in average age overall was less than the change between 2001 and 2005, when there was an increase of 2.9 years. The proportion of nurses who were aged 50 years or older increased from 28.2% to 33.0% between 2003 and 2007. Although average age did not increase for enrolled nurses, the proportion aged over 50 years did increase (Table 5).

Table 5: Employed registered and enrolled nurses: age and sex, 2003 and 2007

	Registered nurses	Enrolled nurses	All nurses
2003			
Number	189,071	47,574	236,645
Male (per cent)	8.6	8.8	8.6
Average age (years)	43.0	43.5	43.1
50 years or older (per cent)	28.7	26.2	28.2
2007			
Number	212,342	50,990	263,331
Male (per cent)	9.6	9.5	9.6
Average age (years)	43.8	43.4	43.7
50 years or older (per cent)	33.3	31.7	33.0

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 and 2007.

The ageing of the nursing workforce is illustrated in Figure 2. The peak age group for registered nurses remained the same for 2003 and 2007 (45–49 years), and changed from 40–44 years to 45–49 years for enrolled nurses. The trend generally showed a reduction in the proportion of nurses in younger age categories and an increase in the proportion in older age categories. However, there was an increase in the proportion of enrolled nurses aged under 30 years.



3.2 Aboriginal and Torres Strait Islander nurses

In 2007, there were 2,164 employed nurses who identified as Aboriginal or Torres Strait Islander, representing 0.8% of employed nurses who provided their Indigenous status (Table 6).

Over one-third (38.9%) of Indigenous nurses were employed in New South Wales and Victoria, the two most populous states in Australia (Table 6). Western Australia had the highest proportion of nurses who identified as Aboriginal or Torres Strait Islander at 3.0%; however, these estimates should be treated with caution (see Table 6 footnotes).

Table 6: Employed registered and enrolled nurses: Indigenous status, states and territories, 2007

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(a)	Australia
Registered nurses	64,384	57,253	41,412	18,975	18,120	6,051	3,505	2,642	212,342
Indigenous	313	135	254	545	55	68	6	38	1,413
Non-Indigenous	62,938	56,809	40,936	18,279	17,661	5,934	3,415	2,514	208,486
Not stated	1,133	310	223	150	404	49	85	89	2,443
Enrolled nurses	12,651	17,818	7,723	4,994	5,793	990	686	334	50,990
Indigenous	283	111	124	164	36	18	8	8	751
Non-Indigenous	12,217	17,532	7,537	4,735	5,618	967	659	315	49,580
Not stated	150	175	62	96	139	5	20	11	658
Total	77,034	75,071	49,135	23,969	23,913	7,041	4,192	2,976	263,331
Per cent of employed nurses who were Indigenous^{(a)(b)}	0.8	0.3	0.8	3.0	0.4	1.2	0.3	1.6	0.8

(a) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information. Data quality issues are inherent in Indigenous data, and likely to have been compounded by low response rates in several jurisdictions.

(b) Percentage of Indigenous nurses employed in nursing excludes the Not stated category.

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Indigenous nurses were, on average, 1.6 years younger than non-Indigenous nurses (42.1 years compared with 43.7 years), which may be related to increased educational opportunities for Indigenous Australians in recent years (NATSIHC 2008). Indigenous nurses tended on average to work more hours per week than their non-Indigenous colleagues (35.3 hours compared with 33.3 hours) which may in part relate to the higher hours worked by remote area nurses generally.

In 2007, nurses employed in clinical roles accounted for 89.9% of Indigenous nurses. This proportion is slightly lower than for non-Indigenous (91.4%) nurses. The percentage of male Indigenous nurses (11.5%) was slightly higher than the non-Indigenous proportion (9.6%).

3.3 Country of first nursing qualification

About one in six nurses (15.5%) in 2007 indicated that they obtained their first qualification in a country outside of Australia. Western Australia had the highest proportion of overseas-trained nurses (26.3%), while Tasmania had the lowest (5.8%).

Just under one-fifth (17.6%) of registered nurses received their initial training overseas, while a smaller proportion of enrolled nurses were trained overseas (6.9%) (Table 7).

Table 7: Employed registered and enrolled nurses: country of first qualification, states and territories, 2007

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(a)	Australia
<i>Registered nurses</i>	64,384	57,253	41,412	18,975	18,120	6,051	3,505	2,642	212,342
Australia	46,975	47,342	32,117	13,321	14,441	5,004	2,692	1,984	163,876
New Zealand	1,116	1,026	1,507	587	164	61	41	70	4,571
UK/Ireland	3,648	2,808	2,192	3,307	986	202	129	115	13,387
Other countries	4,949	3,289	5,596	1,760	809	74	221	229	16,928
Not stated	7,696	2,787	—	—	1,720	710	422	244	13,580
<i>Enrolled nurses</i>	12,651	17,818	7,723	4,994	5,793	990	686	334	50,990
Australia	10,720	15,484	6,340	4,343	4,972	850	570	278	43,558
New Zealand	95	104	288	137	32	3	4	13	677
UK/Ireland	100	241	136	290	65	20	n.p.	7	860
Other countries	152	299	959	224	31	n.p.	13	4	1,685
Not stated	1,583	1,690	—	—	692	115	97	32	4,210
All nurses	77,034	75,071	49,135	23,969	23,913	7,041	4,192	2,976	263,331
Australia	57,695	62,825	38,457	17,663	19,413	5,854	3,262	2,262	207,433
New Zealand	1,210	1,130	1,795	724	197	64	45	82	5,248
UK/Ireland	3,748	3,049	2,328	3,597	1,050	222	131	122	14,247
Other countries	5,101	3,588	6,555	1,985	841	76	234	233	18,613
Not stated	9,279	4,478	—	—	2,412	825	519	277	17,790
Per cent Australian trained^(b)	85.2	89.0	78.3	73.7	90.3	94.2	88.8	83.8	84.5

(a) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information.

(b) Per cent Australian trained excludes the Not stated category.

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

3.4 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 are defined as working part-time and nurses working 35 hours or more 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 Survey form. In the 2003 and 2004 surveys, most jurisdictions specified that hours be broken down into detailed categories, including paid (regular and overtime) and unpaid hours usually worked. In the 2005 survey, 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. In 2007, all jurisdictions used the more detailed question that was used by most jurisdictions in 2005.

Table 8: Employed registered and enrolled nurses: average total weekly hours worked^(a), proportion working part-time and 50 hours or more per week, 2003 to 2007

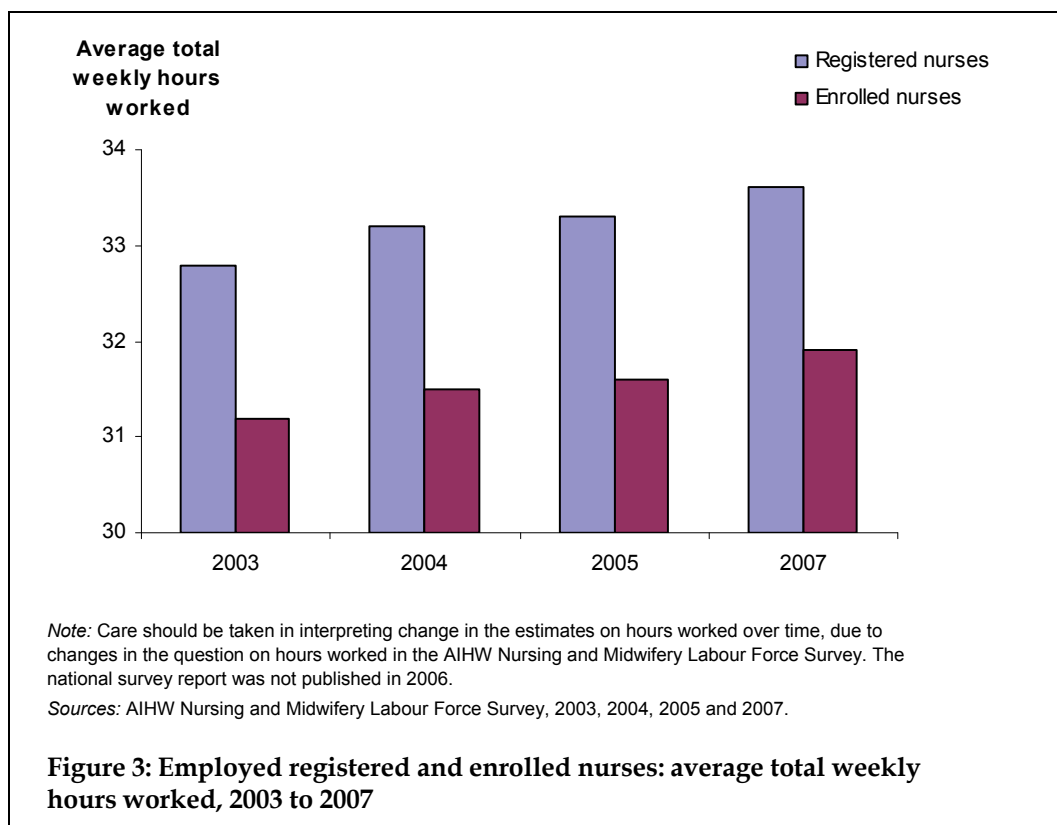
	Average weekly hours	Per cent working part-time	Per cent working 50+ hours	Average weekly hours	Per cent working part-time	Per cent working 50+ hours	Average weekly hours	Per cent working part-time	Per cent working 50+ hours
Year	Registered nurses			Enrolled nurses			All nurses		
2003	32.8	48.6	5.8	31.2	56.1	4.1	32.5	50.1	5.5
2004 ^(b)	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
2007	33.6	46.5	6.6	31.9	55.2	5.1	33.3	48.1	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 Survey since 2005.

(b) The Western Australia data for 2004 have been revised, so the national figures shown here may differ from those previously published.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003, 2004, 2005 and 2007.

There was a slight but gradual rise in average hours between 2003 and 2007, from 32.5 hours in 2003 to 33.3 hours in 2007 (Table 8 and Figure 3). Between 2003 and 2007, the overall proportion of nurses working 50 hours or more rose, from 5.5% to 6.3%, while the proportion working part-time decreased, from 50.1% to 48.1% (Table 8).



The gradual increase in hours over time was apparent for both registered and enrolled nurses. However, enrolled nurses worked fewer weekly hours than registered nurses. In 2007, registered nurses worked, on average, 33.6 hours per week in total, compared with 31.9 hours worked by enrolled nurses. Enrolled nurses were also more likely than registered nurses to work part-time (55.2% compared with 46.5%) and less likely to work 50 hours or more (5.1% compared with 6.6%) (Table 8).

Age

The hours worked by nurses differed by registration and enrolment status, as well as by age (Table 9). In 2007, 85.0% of registered nurses aged less than 25 years were working 35 hours or more (that is, full-time), a much higher proportion than for any other age group. This group had the highest average weekly hours of 39.1 (compared with 33.6 hours for all registered nurses). Of registered nurses in this age group, 15.0% were working less than 35 hours per week (defined as part-time). In comparison, 55.0% of registered nurses aged 35–44 years and 52.0% of those aged 55 years or over worked part-time. Registered nurses aged 35–44 years and enrolled nurses aged less than 25 years were the age groups most likely to work less than 20 hours per week.

Weekly hours worked did not differ with age for enrolled nurses as much as it did for registered nurses. Enrolled nurses across most age groups were more likely to work part-time than registered nurses.

Table 9: Employed registered and enrolled nurses: distribution of total weekly hours worked (percentage) by age, 2007

Age (years)	Total weekly hours worked (per cent)					Total number of nurses	Average weekly hours worked
	<20	20–34	35–49	50+	Total		
Registered nurses							
<25	1.8	13.2	80.1	4.9	100.0	10,034	39.1
25–34	11.9	25.6	56.3	6.3	100.0	40,056	34.9
35–44	18.7	36.3	39.0	6.0	100.0	55,582	31.4
45–54	9.4	36.9	46.2	7.5	100.0	68,442	34.4
55+	12.7	39.3	41.5	6.5	100.0	38,227	32.8
<i>Total</i>	<i>12.5</i>	<i>33.9</i>	<i>47.0</i>	<i>6.6</i>	<i>100.0</i>	<i>212,342</i>	<i>33.6</i>
Enrolled nurses							
<25	18.9	33.1	42.2	5.8	100.0	3,757	31.3
25–34	15.5	35.1	43.1	6.2	100.0	7,591	32.4
35–44	17.0	43.7	34.7	4.6	100.0	13,757	30.6
45–54	9.4	43.9	41.6	5.1	100.0	17,802	32.7
55+	11.2	44.2	40.1	4.4	100.0	8,083	32.2
<i>Total</i>	<i>13.4</i>	<i>41.8</i>	<i>39.8</i>	<i>5.1</i>	<i>100.0</i>	<i>50,990</i>	<i>31.9</i>
All nurses							
<25	6.3	18.4	70.0	5.2	100.0	13,790	37.0
25–34	12.5	27.1	54.2	6.2	100.0	47,647	34.5
35–44	18.4	37.8	38.2	5.7	100.0	69,340	31.2
45–54	9.4	38.3	45.2	7.0	100.0	86,244	34.0
55+	12.5	40.1	41.2	6.2	100.0	46,311	32.7
Total	12.7	35.4	45.6	6.3	100.0	263,331	33.3

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

States and territories

Across the jurisdictions, there was some variation in average weekly hours worked by nurses. In 2007, nurses in the Northern Territory worked the highest weekly hours on average (39.3 hours), followed by New South Wales (34.3 hours). Between 2003 and 2007, there was an increase in the hours worked by nurses in all jurisdictions. The highest increases were for New South Wales and Western Australia, where average hours increased by 1.2 hours per week. Enrolled nurses in Western Australia showed the greatest increase in average hours of 1.6 hours over the period compared with 0.7 hours for enrolled nurses overall (Table 10).

Table 10: Employed registered and enrolled nurses: average total weekly hours worked^(a), states and territories, 2003 and 2007

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(b)	Australia
2003									
<i>All nurses</i>	33.1	31.8	32.8	31.4	31.4	32.6	33.5	38.2	32.5
Registered nurses	33.4	32.2	33.0	31.6	31.9	32.7	33.5	38.3	32.8
Enrolled nurses	31.9	30.7	32.1	30.6	29.7	31.8	34.0	36.6	31.2
2007									
<i>All nurses</i>	34.3	32.4	33.5	32.6	32.4	33.4	34.2	39.3	33.3
Registered nurses	34.5	32.9	33.6	32.7	32.8	33.6	34.2	39.3	33.6
Enrolled nurses	33.0	30.6	32.9	32.2	31.1	32.2	33.9	39.1	31.9

(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 Survey since 2005.

(b) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 and 2007.

Remoteness Areas

The Remoteness Areas from the Australian Standard Geographical Classification (ABS 2008) have been used in this report to show data by geographic region (see *Glossary* for further information).

In 2007, nurses in *Remote* and *Very remote* areas worked longer hours than other nurses, an average of 34.9 hours per week in *Remote* areas and 38.7 hours in *Very remote* areas compared with the national average of 33.3 hours (Table 11).

Nurses in *Remote* areas experienced larger increases in average hours between 2003 and 2007, rising by 1.1 hours, compared with the national average increase of 0.8 hours. Enrolled nurses in *Remote* areas showed the largest increase in average hours of 3.3 hours over the period (0.7 hours for all enrolled nurses) (Table 11).

Table 11: Employed registered and enrolled nurses: average total weekly hours worked, region of main job, 2003 and 2007

	Major cities	Inner regional	Outer regional	Remote	Very remote	Not stated	Australia
2003							
<i>All nurses</i>	32.7	31.7	32.3	33.9	37.7	31.1	32.5
Registered nurses	32.9	32.1	32.8	34.9	38.3	31.6	32.8
Enrolled nurses	31.7	30.4	31.0	30.9	35.7	29.3	31.2
2007							
<i>All nurses</i>	33.5	32.5	33.3	34.9	38.7	32.4	33.3
Registered nurses	33.8	32.9	33.8	35.2	39.4	32.9	33.6
Enrolled nurses	32.2	31.3	31.8	34.2	35.8	30.6	31.9
Change in average total hours between 2003 and 2007	0.8	0.8	1.0	1.0	1.0	1.3	0.8

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 and 2007.

Employment sector

The profile of nurses by employment sector changed little between 2003 and 2007, with around two-thirds of nurses employed in the public sector (67.2% in 2003 and 66.0% in 2007). In 2007, nurses employed in the public sector worked, on average, 2.3 hours per week more than nurses employed in the private sector. There was a similar difference in hours between sectors in the previous three years. The proportion of registered nurses in the private sector dropped slightly between 2005 and 2007 (Table 12).

Table 12: Employed nurses: selected characteristics, employment sector of main job, 2003 to 2007

Characteristics	2003	2004	2005	2007
Public sector				
Number	159,022	159,621	161,085	173,903
Per cent in sector	67.2	65.4	65.9	66.0
Per cent registered	80.6	81.1	82.3	82.0
Average hours worked (per week)	33.4	33.7	33.9	34.1
Private sector				
Number	77,622	84,296	83,275	89,428
Per cent in sector	32.8	34.6	34.1	34.0
Per cent registered	78.4	78.1	79.0	77.9
Average hours worked (per week)	30.7	31.2	31.4	31.8

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 to 2007.

3.5 Hours worked in main and second jobs

Nurse role

In 2007, 28,611 employed nurses (10.9%) 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, 2007

	Number	Average hours worked in main job	Average hours worked in second job	Total average weekly hours worked
Nurses with a main job only	234,721	32.4	.	32.4
Nurses with a main and second job	28,611	28.1	13.5	40.1
Total	263,331	32.0	13.5	33.3

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Overall, nurses worked, on average, 33.3 hours per week. For nurses with only one job, the average was slightly lower, at 32.4 hours per week. Nurses working an additional job worked fewer hours in their main job (28.1 hours) but longer hours overall (40.1 hours) than nurses with only one job (Table 13).

Setting and sector

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 2007. 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 2007, the most common nursing role for a main and a second job was as a clinical nurse (Table 14). A second job was more commonly in the private sector than in the public sector (Table 15). The most common settings for both a main and second job were hospitals and residential aged care centres (Table 16).

Table 14: Employed nurses: number and average weekly hours worked in main and second nursing job, nursing role, 2007

Nursing role	Main nursing job		Second nursing job	
	Number	Average weekly hours	Number	Average weekly hours ^(a)
<i>Clinical nursing role</i>	240,738	31.9	20,448	12.9
Clinical nurse	212,480	31.1	19,355	12.8
Clinical nurse manager/ administrator	28,258	38.2	1,094	14.4
<i>Non-clinical nursing role</i>	22,594	32.3	8,163	15.0
Lecturer/teacher/educator and/or supervisor of new nurses	7,341	34.3	1,596	13.0
Researcher	2,153	33.0	407	12.6
Other	13,100	31.0	1,528	12.9
Not stated	–	–	4,632	16.6
Total	263,331	32.0	28,611	13.5

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

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

In 2007, nurses who were clinical nurse managers/administrators in their main nursing job worked, on average, the highest number of hours per week (38.2 hours compared with 32.0 hours for all nurses). Nurses working in this role in their second job also worked more hours, on average, than other nurses in their second job (14.4 hours compared with 13.5 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 slightly more hours (34.3) than the other non-clinicians (32.3 for non-clinicians overall), whereas non-clinicians in their second job worked similar hours across the roles (ranging from 12.6 to 13.0 hours) (Table 14).

Nurses with a main job in the public sector worked an average of 32.9 hours per week in that job, while those with a main job in the private sector worked fewer (30.2) hours (Table 15). Those with a second job worked similar hours in both the public and private sector in that job (13.1 and 12.7 hours, respectively).

Table 15: Employed nurses: number and average weekly hours worked in main and second nursing job, employment sector, 2007

Employment sector ^(a)	Main nursing job		Second nursing job	
	Number	Average weekly hours	Number	Average weekly hours ^(b)
Public	173,903	32.9	12,199	13.1
Private	89,428	30.2	13,711	12.7
Not stated	–	–	2,700	19.1
Total	263,331	32.0	28,611	13.5

(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.

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Nurses working in psychiatric hospitals and mental health facilities in their main job were more likely than other nurses to work a relatively high number of hours, with over two-thirds (68.2%) working full-time (35 hours or more) compared with 48.0% overall (Table 16). Nurses with a second nursing job in a tertiary institution or a psychiatric hospital and mental health facility reported working a slightly higher number of hours than nurses with a second job in other work settings. Just over one-fifth (both 21.3%) of nurses with second jobs in these settings worked 20 hours or more per week, compared with 18.8% overall.

Table 16: Employed nurses: distribution of weekly hours worked^(a) in main and second nursing jobs (percentage), work setting, 2007

Work setting ^(b)	Hours worked in main nursing job (per cent)					Hours worked in second nursing job (per cent)				Number with a second nursing job	Total number of nurses
	<20	20–34	35–49	50+	Total	<20	20–34	35+	Total		
Hospital	13.8	37.4	44.9	3.9	100.0	85.4	12.1	2.5	100.0	10,833	160,186
Psychiatric hospital/mental health facility	7.6	24.3	63.1	5.1	100.0	78.7	16.5	4.8	100.0	715	10,747
Day procedure centre	24.8	43.4	29.4	2.5	100.0	90.1	8.9	1.0	100.0	651	3,426
Residential aged care centre	15.9	43.8	34.8	5.5	100.0	80.2	16.4	3.4	100.0	3,933	30,640
Hospice	15.0	46.3	34.4	4.4	100.0	82.8	15.5	1.7	100.0	112	860
Community health centre	13.8	36.4	46.3	3.5	100.0	86.7	10.6	2.8	100.0	1,269	14,468
Doctors' rooms/ medical practice	27.3	48.3	23.1	1.3	100.0	89.0	10.2	0.8	100.0	1,641	7,974
Outpatient clinic	13.5	39.9	43.6	2.9	100.0	81.6	15.6	2.8	100.0	346	2,714
School	18.2	36.4	40.2	5.3	100.0	89.0	9.4	1.6	100.0	271	1,966
Tertiary institution	17.1	32.7	42.6	7.7	100.0	78.6	16.1	5.2	100.0	1,591	7,380
Other	14.3	31.7	47.0	6.9	100.0	82.8	13.5	3.7	100.0	2,909	13,943
Not stated	14.7	31.8	48.5	4.9	100.0	65.5	20.9	13.5	100.0	4,340	9,028
Total	14.6	37.4	43.7	4.3	100.0	81.2	14.3	4.5	100.0	28,611	263,331

(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.

Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

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 hours worked. For this reason, it is more appropriate to assess the supply of labour using the numbers of full-time equivalent (FTE) nurses, a measure that accounts for both the number of employed nurses and the hours they worked.

Using 38 hours as a standard working week, there was an increase in nursing supply of 7.6% between 2003 and 2007, from 1,017 to 1,095 FTE nurses per 100,000 population (Table 19). This was mainly a result of both an 11.3% rise in the number of employed nurses and a 2.5% increase in the average hours they worked over this period.

As outlined earlier in the section on hours worked, the increase in hours worked and consequent changes in supply from 2003 to 2007 should be interpreted with care, due to changes in the question on hours worked over time.

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 that nurses worked.

Unless otherwise stated, FTE figures in this report are based on 38 hours as a standard working week. FTE estimates based on a 35-hour standard working week are also provided in this section for comparison with data from other sources and previous Nursing and midwifery labour force reports.

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^(a) and FTE rate^(b), 2003 to 2007

	2003 ^(c)	2004 ^(d)	2005	2007	Change between 2003 and 2007 (per cent)
Registered nurses					
Number of nurses	189,071	195,339	198,315	212,342	12.3
Average weekly total hours	32.8	33.2	33.3	33.6	2.4
FTE nurses					
35-hour week	177,186	185,293	188,683	203,848	15.0
38-hour week	163,198	170,665	173,787	187,755	15.0
FTE rate					
35-hour week	891	921	925	967	8.6
38-hour week	820	848	852	891	8.6
Enrolled nurses					
Number of nurses	47,574	48,577	46,045	50,990	7.2
Average weekly total hours	31.2	31.5	31.6	31.9	2.2
FTE nurses					
35-hour week	42,409	43,720	41,572	46,473	9.6
38-hour week	39,061	40,268	38,290	42,804	9.6
FTE rate					
35-hour week	213	217	204	221	3.5
38-hour week	196	200	188	203	3.5

(continued)

Table 17 (continued): Employed nurses: number, average hours, FTE nurses^(a) and FTE rate^(b), 2003 to 2007

	2003 ^(c)	2004 ^(d)	2005	2007	Change between 2003 and 2007 (per cent)
All nurses					
Number of nurses	236,645	243,916	244,360	263,331	11.3
Average weekly total hours	32.5	32.8	33.0	33.3	2.5
FTE nurses					
35-hour week	219,741	228,584	230,396	250,541	14.0
38-hour week	202,393	210,538	212,207	230,761	14.0
FTE rate					
35-hour week	1,104	1,136	1,130	1,189	7.6
38-hour week	1,017	1,046	1,040	1,095	7.6

(a) FTE calculated based on a 35-hour and 38-hour working week.

(b) FTE nurses per 100,000 population (based on 35-hour and 38-hour week).

(c) 2003 FTE data may differ from previously published data due to revision in the ABS estimated resident population data (March 2009).

(d) The Western Australia data for 2004 have been revised, and so the national figures shown here may differ from those previously published.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003, 2004, 2005 and 2007; Unpublished ABS estimated resident population data.

Table 18: Employed registered and enrolled nurses: FTE rate^(a), based on a 35-hour standard working week, states and territories, 2003 and 2007

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(b)	Australia ^(c)
2003^(d)									
Registered nurses	885	920	822	777	994	1,064	937	1,535	891
Enrolled nurses	172	311	151	187	287	177	189	175	213
Total nurses	1,059	1,232	974	964	1,282	1,239	1,126	1,710	1,104
2007									
Registered nurses	919	1,031	947	839	1,071	1,178	1,004	1,381	967
Enrolled nurses	173	298	173	217	325	185	195	174	221
Total nurses	1,093	1,331	1,121	1,057	1,396	1,362	1,201	1,556	1,189

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

(b) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information.

(c) FTE for Australia includes respondents who did not report location of main job.

(d) 2003 FTE data may differ from previously published data due to revision in the ABS estimated resident population data (March 2009).

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 and 2007; unpublished ABS estimated resident population data.

Table 19: Employed registered and enrolled nurses: FTE rate^(a), based on a 38-hour standard working week, states and territories, 2003 and 2007

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(b)	Australia ^(c)
	2003^(d)								
Registered nurses	815	847	757	715	916	980	863	1,414	820
Enrolled nurses	159	286	139	172	264	163	174	162	196
Total nurses	975	1,134	897	888	1,181	1,141	1,037	1,575	1,017
	2007								
Registered nurses	847	949	873	773	986	1,085	925	1,272	891
Enrolled nurses	159	275	159	200	299	170	180	160	203
Total nurses	1,007	1,226	1,032	973	1,286	1,255	1,106	1,433	1,095

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

(b) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information.

(c) FTE for Australia includes respondents who did not report location of main job.

(d) 2003 FTE data may differ from previously published data due to revision in the ABS estimated resident population data (March 2009).

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 and 2007; Unpublished ABS estimated resident population data.

In 2007, there was an increase in the FTE rate in all states and territories except the Northern Territory (Table 19). Nursing supply across the Remoteness Areas was highest in *Remote areas* followed by *Inner regional areas* (tables 20 and 21). The lowest supply was in *Major cities*. All regions other than *Very remote areas* experienced an apparent rise in supply between 2003 and 2007, while supply decreased in *Very remote areas* (see Chapter 5 and the *Glossary* for an explanation of Remoteness Areas).

Table 20: Employed registered and enrolled nurses: FTE rate^(a) based on a 35-hour standard working week, geographic region of main job, 2003 and 2007

	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia ^(c)
	2003^(b)					
Registered nurses	853	855	798	907	1,014	891
Enrolled nurses	164	269	301	290	248	213
Total nurses	1,017	1,125	1,099	1,197	1,262	1,104
	2007					
Registered nurses	939	932	836	873	947	967
Enrolled nurses	177	271	287	338	202	221
Total nurses	1,116	1,202	1,124	1,211	1,149	1,189

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

(b) 2003 FTE data may differ from previously published data due to revision in the ABS estimated resident population data (March 2009).

(c) FTE for Australia includes respondents who did not report location of main job.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 and 2007; unpublished ABS estimated resident population data.

Table 21: Employed registered and enrolled nurses: FTE rate^(a) based on a 38-hour standard working week, geographic region of main job, 2003 and 2007

	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia ^(c)
2003^(b)						
Registered nurses	785	787	735	835	934	820
Enrolled nurses	151	248	278	267	228	196
Total nurses	937	1,036	1,012	1,103	1,162	1,017
2007						
Registered nurses	865	858	770	804	872	891
Enrolled nurses	163	250	265	311	186	203
Total nurses	1,028	1,107	1,035	1,115	1,058	1,095

(a) FTE nurses per 100,000 population (based on 38-hour week). FTE for Australia includes respondents who did not report location of main job.

(b) 2003 FTE data may differ from previously published data due to revision in the ABS estimated resident population data (March 2009).

(c) FTE for Australia includes respondents who did not report location of main job.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003 and 2007; unpublished ABS estimated resident population data.

5 Regional comparisons

5.1 Overview

The following section contains an overview of the 2007 Nursing and Midwifery Labour Force Survey data by state and territory and Remoteness Areas. This is followed by individual state and territory profiles for all the jurisdictions, which provide details of employed nurses by clinical area and the relationship between the nurses' clinical area and post-registration/enrolment qualifications.

States and territories

The characteristics of nurses varied across jurisdictions in 2007. Nationally, the average age of employed nurses was 43.7 years. The highest average age was in South Australia (45.3 years) and the lowest in the Northern Territory (42.6 years) (Table 22). The proportion of nurses who were male was highest in New South Wales (11.3%) and lowest in the Australian Capital Territory (7.5%), compared with a national average of 9.6%.

Between 2003 and 2007, the proportion of clinical nurses increased in all jurisdictions, with a 3.7 percentage point increase for Australia overall. The largest increase occurred in Western Australia (6.6 percentage points), followed by New South Wales (4.8 percentage points). The smallest increase was in South Australia (0.7 of a percentage point) (Table 22). Over this period, the number of nurses per 100,000 population (the nursing rate) rose or was steady in all jurisdictions except the Northern Territory, where it dropped from 1,563 to 1,385 (-11.4%) nurses per 100,000 population. Queensland had the highest increase in nursing rate of 13.0%, which was in addition to a large proportional increase in the Queensland population over the period.

Table 22: Employed registered and enrolled nurses: selected characteristics, states and territories, 2003 and 2007

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT ^(a)	Australia
2003									
Number	74,480	66,534	39,463	20,984	21,883	6,354	3,821	3,126	236,645
Average age (years)	42.6	42.1	44.1	45.2	42.7	45.5	44.5	43.6	43.1
Per cent male	9.4	8.5	8.7	5.4	9.0	9.8	6.7	11.1	8.6
Per cent registered nurses	83.0	73.8	84.2	80.1	76.3	85.4	83.5	89.3	79.9
Per cent clinical nurses ^(b)	86.6	87.8	88.9	87.7	88.4	90.2	88.7	83.4	87.7
Nursing rate ^(c)	1,116	1,351	1,036	1,074	1,429	1,330	1,173	1,563	1,189
Australian population	6,672,577	4,923,485	3,809,214	1,953,070	1,531,278	477,646	325,661	200,046	19,895,435
2007									
Number	77,035	75,071	49,135	23,969	23,913	7,041	4,192	2,976	263,331
Average age (years)	43.2	43.1	43.7	45.2	45.3	45.2	43.5	42.6	43.7
Per cent male	11.3	8.8	9.2	7.8	9.2	10.5	7.5	10.9	9.6
Per cent registered nurses	83.6	76.3	84.3	79.2	75.8	85.9	83.6	88.8	80.6
Per cent clinical nurses ^(b)	91.4	91.2	91.7	94.3	89.1	92.6	91.5	86.6	91.4
Nursing rate ^(c)	1,116	1,438	1,171	1,134	1,508	1,428	1,229	1,385	1,250
Australian population	6,904,942	5,221,310	4,195,981	2,112,967	1,585,794	493,204	341,054	214,804	21,072,452

(a) State and territory estimates for 2007 should be treated with caution due to low response rates in some jurisdictions, particularly the Northern Territory (28.7%). See *Appendix A* for further information.

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

(c) Nurses per 100,000 population.

Sources: AIHW Nursing Labour Force Survey, 2003 and 2007; unpublished ABS estimated resident population data.

Remoteness Areas

The distribution of nurses in Australia is of considerable interest to both government and communities. Information on the work location of nurses is collected in the AIHW Nursing and Midwifery Labour Force Survey, providing a means of looking at variability in the supply of practitioners across Australia. Using the postcode of the main work location, nurses are allocated to one of the following Australian Standard Geographical Classification Remoteness Areas: *Major cities*, *Inner regional*, *Outer regional*, *Remote* and *Very remote*.

Of the Remoteness Areas, nurses in *Outer regional* areas were, on average, the oldest (45.1 years), and those in *Major cities* were the youngest (43.1 years), compared with 43.7 years for Australia overall (Table 23).

Between 2003 and 2007, the nursing rate rose in *Major cities* and *Inner regional* areas. The largest growth occurred in *Major cities*, from 1,086 to 1,166, then *Inner regional* areas, from 1,242 to 1,295 (up by 80 and 53 nurses per 100,000 population, respectively). These rises were due to relatively larger increases in nursing numbers than population numbers compared with other regions and nationally. The opposite situation was true in *Outer regional*, *Remote* and *Very remote* areas, with both the number of nurses and the nursing rate decreasing between 2003 and 2007.

Nationally, the growth in nurse numbers was 11.3%, and the population growth was 5.9% over the period.

Table 23: Employed registered and enrolled nurses: selected characteristics, region of main job, 2003 and 2007

	Major cities	Inner regional	Outer regional	Remote	Very remote	Not stated	Australia
2003							
Number	147,670	48,440	22,719	3,870	1,936	12,009	236,645
Average age (years)	42.5	44.2	44.3	44.2	44.3	43.4	43.1
Per cent male	8.8	9.1	6.1	6.7	10.3	9.8	8.6
Per cent registered nurses	83.3	75.0	71.5	73.4	79.1	75.5	79.9
Per cent clinical nurses ^(a)	87.1	88.7	88.9	87.1	86.0	88.3	87.7
Nursing rate ^(b)	1,086	1,242	1,191	1,229	1,168	..	1,189
Australian population	13,602,896	3,901,173	1,908,199	314,984	165,725	..	19,895,435
2007							
Number	168,261	53,811	23,545	3,856	1,739	12,120	263,331
Average age (years)	43.1	44.9	45.1	44.0	44.2	43.2	43.7
Per cent male	9.9	9.4	7.2	6.5	14.4	10.3	9.6
Per cent registered nurses	83.5	76.6	73.2	71.5	81.0	76.8	80.6
Per cent clinical nurses ^(a)	91.2	92.1	92.0	91.3	91.1	90.3	91.4
Nursing rate ^(b)	1,166	1,295	1,181	1,214	1,039	..	1,250
Australian population	14,435,219	4,156,847	1,993,113	317,490	167,387	..	21,072,452

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

(b) Nurses per 100,000 population.

Sources: AIHW Nursing Labour Force Survey, 2003 and 2007; ABS preliminary estimated resident population data.

5.2 State and territory profiles

Introduction

This section presents data from the 2007 AIHW Nursing and Midwifery Labour Force Survey for each state and territory on the characteristics of employed nurses by clinical area of nursing. The relationship between clinical area and post-registration or enrolment qualifications is shown, firstly by looking at whether nurses and midwives working in clinical areas had completed courses of study particular to that area, and secondly 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, 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 working in clinical areas will be underestimated.
- Not all nurses and midwives who reported that they had completed a course of study provided details about the course. It is estimated that around 14% of employed nurses and midwives who indicated that they had completed a course did not provide further detail about 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.

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 Rehabilitation/disability, followed by Surgical and Mixed medical and surgical (figures 4, 6, 8, 10, 12, 14, 16 and 18).

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 and 19.

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, 30.2% of nurses who reported their main job as being in Critical care/emergency held Critical care/emergency qualifications. In that same state, 61.2% of the qualifications in the field of Critical care/emergency were held by nurses working in Critical care/emergency areas.

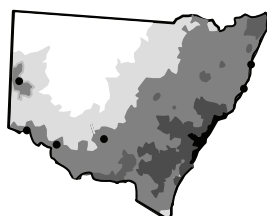
New South Wales

Area: 800,628 sq km

Population: 6,904,942

Number of nurses: 77,034

FTE rate of nursing supply: 1,093



Remoteness Areas

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

In New South Wales in 2007, the largest proportion of nurses worked in the clinical area of Critical care/emergency (21.8% or 16,810 nurses), followed by Medical nursing (15.9% or 12,283 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 (39.4 years and 49.3 years, on average, respectively, compared with 43.2 years overall) (Table 24).

One-third (33.2%) of nurses working in the area of Mental health were male compared with 11.3% for the state, and just over one-quarter (28.3%) of Mental health nurses were working part-time, compared with 42.3% for the state.

Nurses working in Community health worked the shortest hours, on average, whereas those in Mental health worked the longest hours (32.1 hours and 37.2 hours, respectively compared with 34.3 hours for the state).

Clinical area of nursing and nurse characteristics

Table 24: Employed nurses by clinical area: selected characteristics, New South Wales, 2007

Clinical area ^(a)	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							
Medical	12,283	42.7	9.8	74.4	33.9	43.2	39.6
Surgical	6,929	40.9	8.6	79.2	33.5	45.5	34.6
Mixed medical and surgical	3,731	40.8	6.5	76.3	32.5	49.3	37.4
Other clinical areas							
Aged care	8,100	49.3	7.9	82.1	34.1	46.4	32.0
Community health	4,582	46.1	7.8	89.7	32.1	50.0	46.6
Critical care/emergency	16,810	39.4	14.2	88.1	35.8	34.7	53.4
Family and child health	1,791	45.8	2.8	94.8	32.2	50.1	72.3
Mental health	4,675	45.4	33.2	84.3	37.2	28.3	51.7
Midwifery	5,270	44.5	1.4	96.8	32.5	53.0	57.8
Perioperative	5,939	41.8	10.4	86.7	34.1	42.8	49.7
Rehabilitation/disability	2,747	46.1	18.8	68.0	33.8	43.4	29.1
Other ^(b)	4,178	45.7	10.6	85.6	35.5	38.9	59.4
Total	77,034	43.2	11.3	83.6	34.3	42.3	45.8

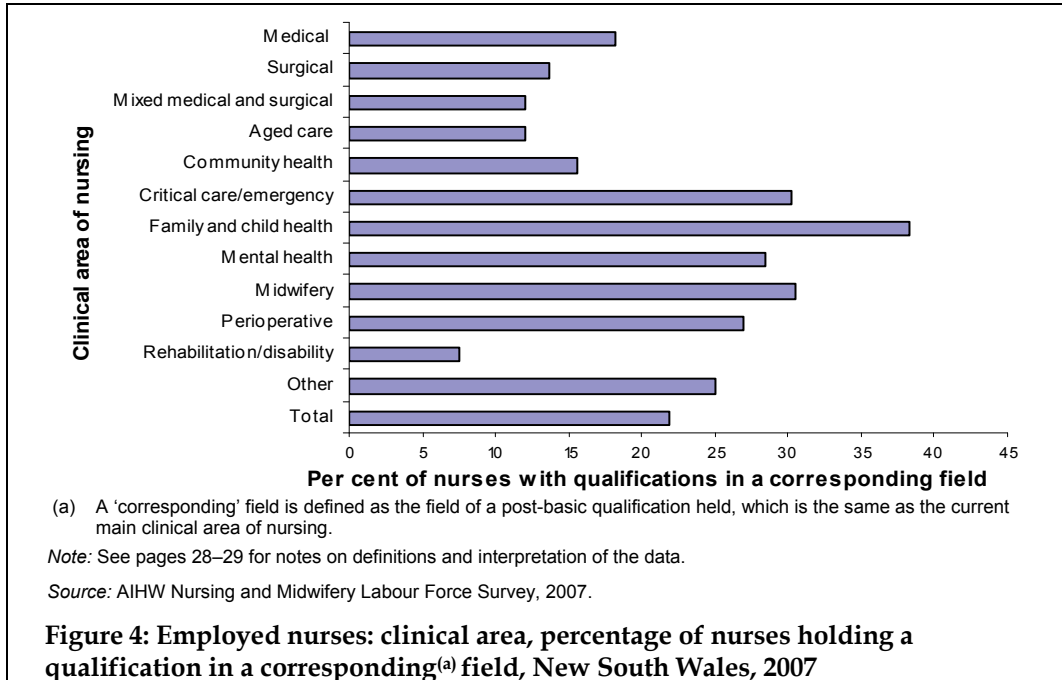
(a) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(b) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

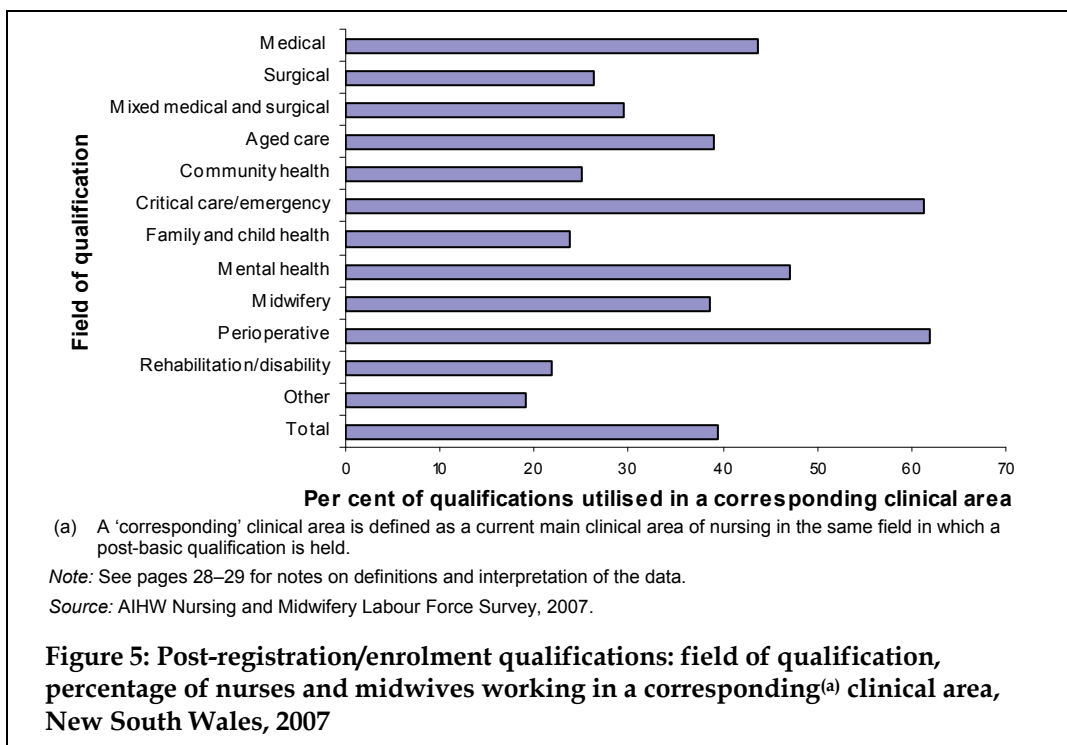
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in New South Wales, 45.8% reported having post-registration/enrolment qualifications and 21.9% held a qualification in a field that corresponded with the clinical area of their job (Table 24 and Figure 4). For example, 38.3% of nurses working in the Family and child health areas held qualifications in the field of Family and child health (Figure 4).



Of all the relevant qualifications held by employed nurses in New South Wales, 39.5% were being utilised in a corresponding clinical area. For example, 21.9% of qualifications in the field of Rehabilitation/disability were held by nurses working in the Rehabilitation/disability area (Figure 5).



Victoria

Area: 227,010 sq km

Population: 5,221,310

Number of nurses: 75,071

FTE rate of nursing supply: 1,331



Remoteness Areas

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

In Victoria in 2007, the largest proportion of nurses worked in the Medical nursing area (18.6% or 13,994 nurses), followed by Aged care (14.2%) and Critical care/emergency (13.8%). On average, aged care nurses were older and were less likely to be registered nurses than their colleagues in other clinical areas (46.8 years compared with the state average of 43.1 years, and 43.8% registered compared with 76.3% for the state) (Table 25).

Nurses working in Midwifery worked the shortest hours (30.1 hours, on average) followed closely by nurses in Family and child health (30.7 hours) and Community health (30.8 hours). Correspondingly, nurses in Midwifery were most likely to work part-time (63.6%).

Clinical area of nursing and nurse characteristics

Table 25: Employed nurses by clinical area: selected characteristics, Victoria^(a), 2007

Clinical area ^(b)	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							
Medical	13,994	42.1	7.3	73.5	32.5	53.3	37.0
Surgical	7,448	39.9	6.2	80.5	32.1	51.7	32.8
Mixed medical and surgical	4,181	41.1	5.9	82.0	31.0	61.0	34.1
Other clinical areas							
Aged care	10,637	46.8	6.8	43.8	31.1	60.1	26.6
Community health	4,270	45.7	8.2	87.1	30.8	58.7	49.4
Critical care/emergency	10,395	39.4	10.4	90.3	33.6	49.4	61.5
Family and child health	1,127	44.6	4.9	86.5	30.7	59.7	60.1
Mental health	4,223	43.8	31.5	70.2	35.6	36.0	47.0
Midwifery	6,561	45.7	1.7	95.6	30.1	63.6	54.9
Perioperative	5,180	42.7	7.9	90.8	33.2	48.0	61.4
Rehabilitation/disability	2,626	45.7	14.2	58.5	32.2	53.2	29.7
Other ^(c)	4,429	44.6	10.0	75.0	35.0	43.1	59.4
Total	75,071	43.1	8.8	76.3	32.4	53.3	44.4

(a) Estimates for Victoria for 2007 should be treated with caution due to the low response rate (39.9%).

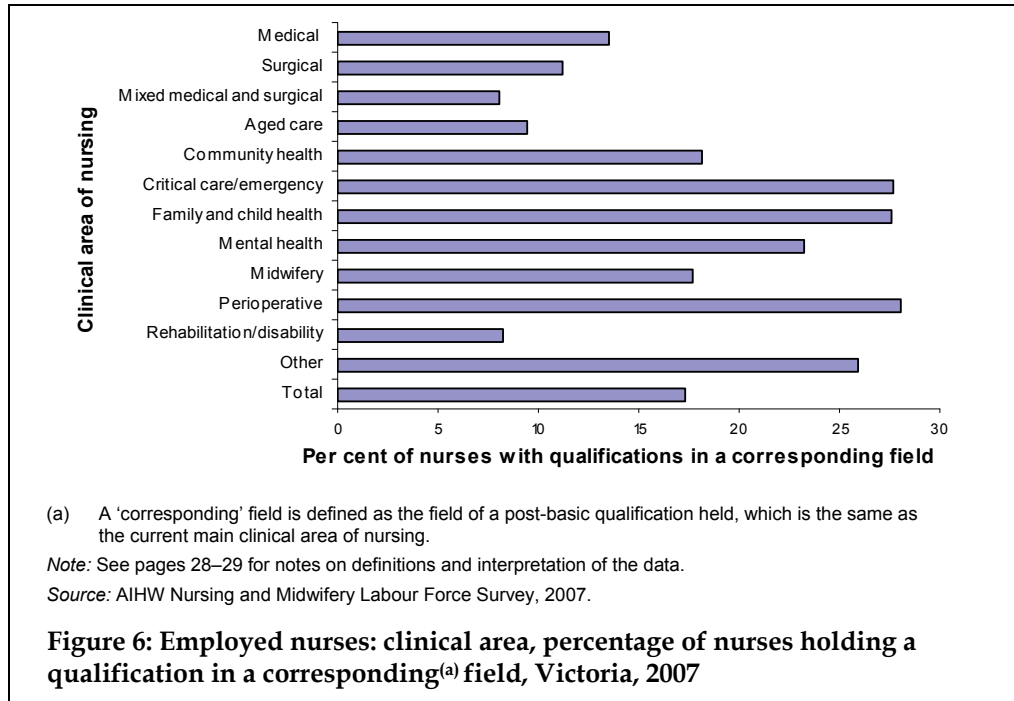
(b) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(c) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

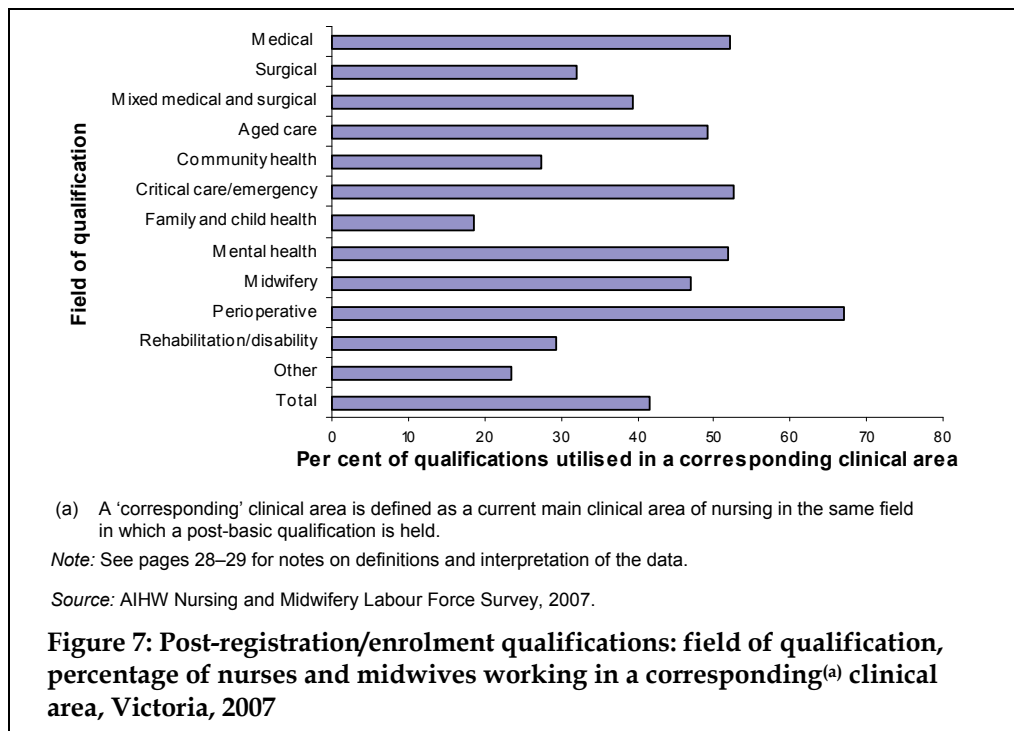
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Victoria, 44.4% reported having post-registration/enrolment qualifications and 17.3% held a qualification in a field that corresponded with the clinical area of their job (Table 25 and Figure 6). For example, 9.5% of all nurses working in the Aged care area held qualifications in Aged care (Figure 6).



Of the qualifications held, overall, by employed nurses in Victoria, 41.6% were being utilised in a corresponding clinical area. For example, 51.9% of nurses' qualifications in the field of Mental health were held by nurses working in the Mental health area (Figure 7).



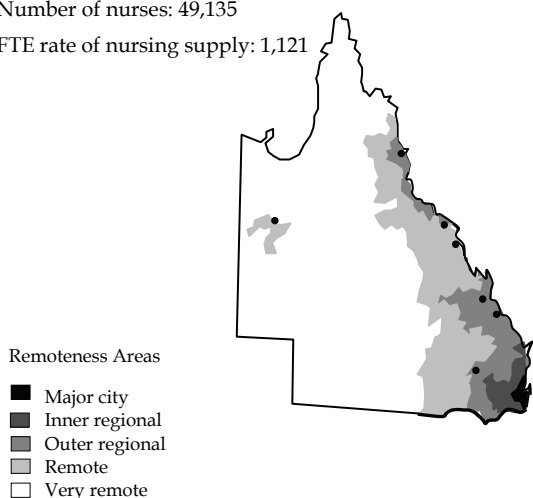
Queensland

Area: 1,723,936 sq km

Population: 4,195,981

Number of nurses: 49,135

FTE rate of nursing supply: 1,121



In Queensland in 2007, 8,864 nurses (18.0%) worked in the clinical area of Medical nursing and 8,333 nurses (17.0%) worked in Critical care/emergency. The next largest group worked in Surgical nursing, where 5,259 (10.7%) of the state's nurses were working (Table 26).

Surgical nurses and Critical care/emergency nurses were younger, on average, than other nurses (39.8 years and 40.6 years, respectively, compared with the state average of 43.7 years).

Just under two-thirds of nurses in the Midwifery areas (61.9%) worked part-time compared with around half (47.5%) for the state, overall.

Rehabilitation/disability areas had the lowest proportion of registered nurses (62.4%).

Clinical area of nursing and nurse characteristics

Table 26: Employed nurses by clinical area: selected characteristics, Queensland^(a), 2007

Clinical area ^(b)	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							
Medical	8,864	42.9	7.8	77.0	33.1	49.4	29.9
Surgical	5,259	39.8	7.8	83.5	33.0	48.5	24.2
Mixed medical and surgical	2,702	41.1	4.8	77.5	32.0	53.7	31.0
Other clinical areas							
Aged care	5,037	50.2	5.9	74.2	33.8	48.8	25.4
Community health	3,469	45.9	7.7	90.0	32.7	49.1	42.9
Critical care/emergency	8,333	40.6	12.1	90.3	34.7	42.8	52.8
Family and child health	1,134	45.8	3.0	98.2	31.9	51.5	69.7
Mental health	2,736	46.9	35.9	86.8	37.3	29.2	49.2
Midwifery	3,917	44.7	1.1	97.2	30.6	61.9	55.4
Perioperative	4,008	43.2	8.6	86.9	33.2	46.0	43.8
Rehabilitation/disability	986	46.9	7.8	62.4	33.0	50.9	30.7
Other ^(c)	2,690	45.2	8.8	86.2	35.7	40.2	56.2
Total	49,135	43.7	9.2	84.3	33.5	47.5	40.4

(a) Estimates for Queensland for 2007 should be treated with caution due to the low response rate (33.9%).

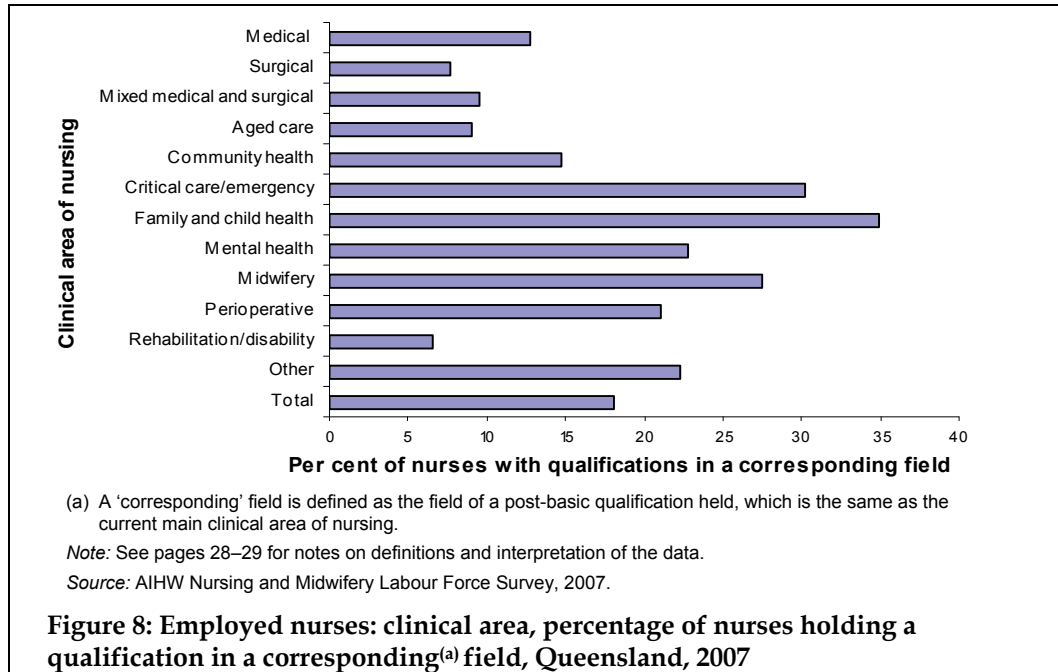
(b) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(c) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

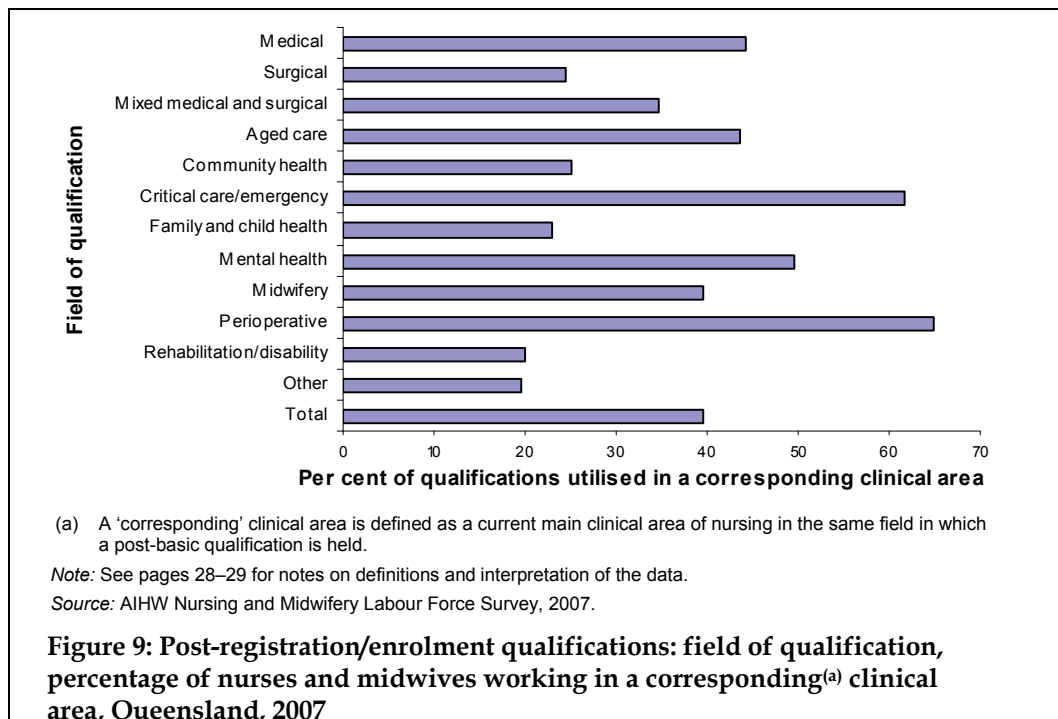
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Queensland, 40.4% reported having post-registration/enrolment qualifications and 18.1% held a qualification in a field that corresponded with the clinical area of their job (Table 26 and Figure 8). For example, 21.1% of nurses working in the Peri-operative area, held qualifications in Peri-operative care (Figure 8).



Of the qualifications held, overall, by employed nurses in Queensland, 39.5% were being utilised in a corresponding clinical area. For example, 61.6% of qualifications in the field of Critical care/emergency were held by nurses working in the Critical care/emergency area (Figure 9).



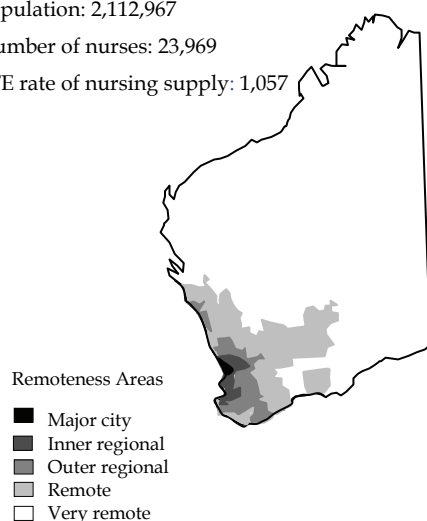
Western Australia

Area: 2,526,786 sq km

Population: 2,112,967

Number of nurses: 23,969

FTE rate of nursing supply: 1,057



In Western Australia in 2007, the largest proportion of nurses worked in the Medical nursing area (18.3% or 4,389 nurses), followed by Critical care/emergency (17.2% or 4,122 nurses) (Table 27).

Critical care/emergency nurses were the youngest, on average (42.6 years, compared with the state average of 45.2 years).

Nurses in Mixed medical and surgical, Community health and Family and child health worked the shortest hours, on average (30.3 hours compared with the 32.6 hour state average). Nurses in Mental health were the least likely to work part time.

Over one-third (37.1%) of nurses in Mental health areas were male, compared with 7.8% for the state. Almost all nurses were registered in the Midwifery areas (96.9%).

Clinical area of nursing and nurse characteristics

Table 27: Employed nurses by clinical area: selected characteristics, Western Australia^(a), 2007

Clinical area ^(b)	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							
Medical	4,389	45.7	5.6	71.1	32.3	52.2	40.7
Surgical	3,016	43.2	5.3	77.7	31.8	52.4	34.5
Mixed medical and surgical	1,376	42.9	3.7	77.1	30.3	57.1	44.2
Other clinical areas							
Aged care	1,929	49.6	3.8	56.4	31.6	54.4	30.9
Community health	1,318	47.0	4.8	79.2	30.3	58.4	43.7
Critical care/emergency	4,122	42.6	10.2	86.3	34.4	43.6	55.6
Family and child health	724	45.8	1.6	93.8	30.3	60.3	70.6
Mental health	1,319	46.8	37.1	79.8	37.3	29.0	40.7
Midwifery	1,965	46.5	0.9	96.9	30.5	59.1	61.0
Perioperative	1,813	44.8	7.1	85.6	32.1	49.7	52.8
Rehabilitation/disability	525	48.7	8.5	55.9	32.2	52.6	25.1
Other ^(c)	1,473	46.5	11.0	87.1	35.7	38.3	64.1
Total	23,969	45.2	7.8	79.2	32.6	50.0	46.7

(a) Estimates for Western Australia for 2007 should be treated with caution due to the low response rate (36.7%).

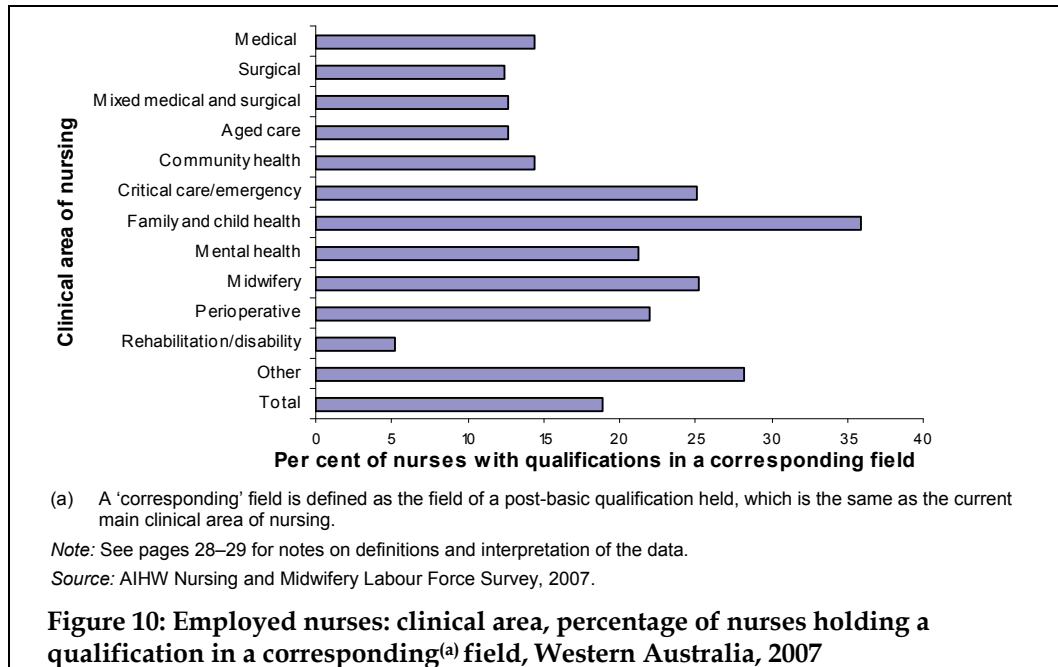
(b) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(c) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

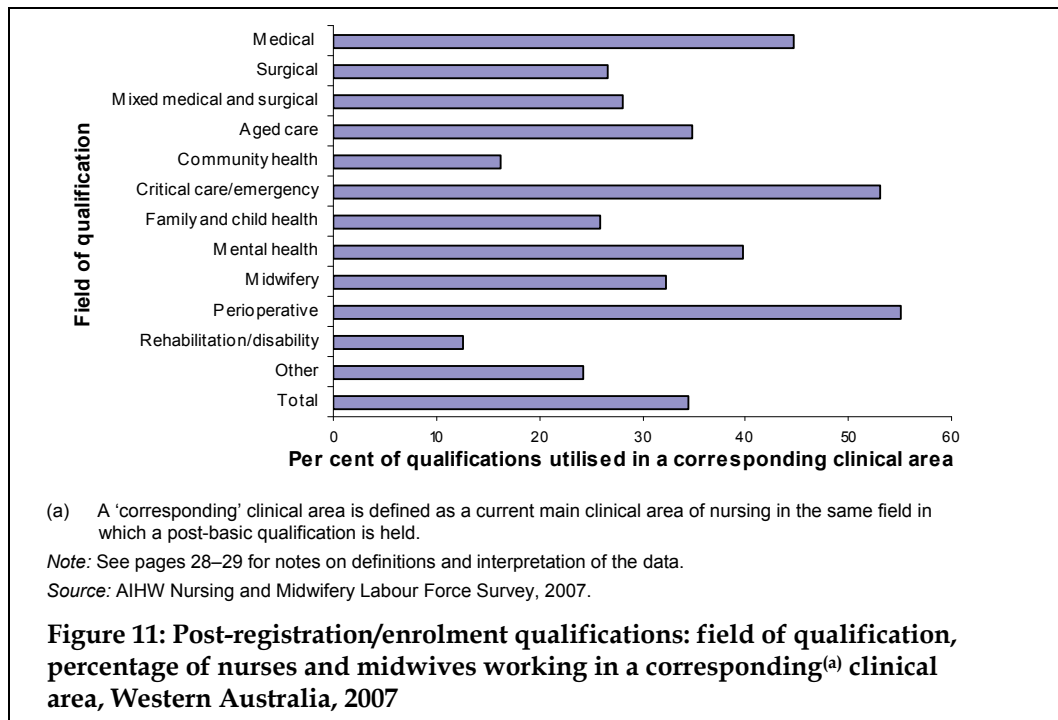
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Western Australia, 46.7% reported having post-registration/enrolment qualifications and 18.9% held a qualification in a field that corresponded with the clinical area of their job (Table 27 and Figure 10). For example, 25.3% of nurses working in the Midwifery area held post-registration qualifications in Midwifery (Figure 10).



Of the qualifications held overall by employed nurses in Western Australia, 34.4% were being utilised in a corresponding clinical area. For example, 34.8% of the qualifications in Aged care, were held by nurses working in the Aged care area (Figure 11).



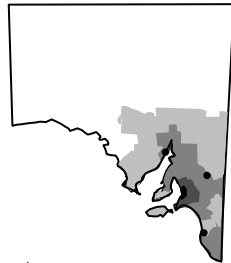
South Australia

Area: 978,810 sq km

Population: 1,585,794

Number of nurses: 23,913

FTE rate of nursing supply: 1,396



Remoteness Areas

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

In South Australia in 2007, the largest proportion of nurses worked in the clinical area of Critical care/emergency (18.5% or 4,432 nurses) (Table 28).

Mental health and Aged care nurses were older, on average, than other nurses (49.8 and 49.4 years, respectively, compared with the state average of 45.3 years).

In Mental health, nurses worked 36.2 hours, on average, per week, and almost one-third of them (29.2%) were male. By comparison, nurses working in Midwifery worked 30.4 hours, on average, per week and 1.3% were male.

The lowest proportion of registered nurses was in Aged care (60.6%). Nurses working in Family and child health were most likely to have post-registration/enrolment qualifications (69.2%).

Clinical area of nursing and nurse characteristics

Table 28: Employed nurses by clinical area: selected characteristics, South Australia, 2007

Clinical area ^(a)	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							
Medical	4,276	44.1	7.8	66.5	31.8	56.5	36.7
Surgical	2,272	42.9	7.1	72.5	31.4	55.0	32.9
Mixed medical and surgical	1,432	43.3	4.8	72.1	31.0	60.2	35.6
Other clinical areas							
Aged care	3,065	49.4	5.7	60.6	32.6	54.4	29.0
Community health	1,505	47.6	6.5	80.7	30.7	58.7	42.5
Critical care/emergency	4,432	42.3	13.0	82.1	33.7	46.9	56.5
Family and child health	472	46.9	2.8	96.6	30.4	64.8	69.2
Mental health	1,337	49.8	29.2	81.1	36.2	29.8	64.3
Midwifery	1,463	45.9	1.3	96.1	30.4	64.3	52.0
Perioperative	1,607	44.6	7.3	85.4	31.6	54.4	54.2
Rehabilitation/disability	683	48.2	17.2	64.5	33.8	46.9	35.4
Other ^(b)	1,370	47.1	9.7	82.2	34.5	42.4	52.3
Total	23,913	45.3	9.2	75.8	32.4	52.6	44.4

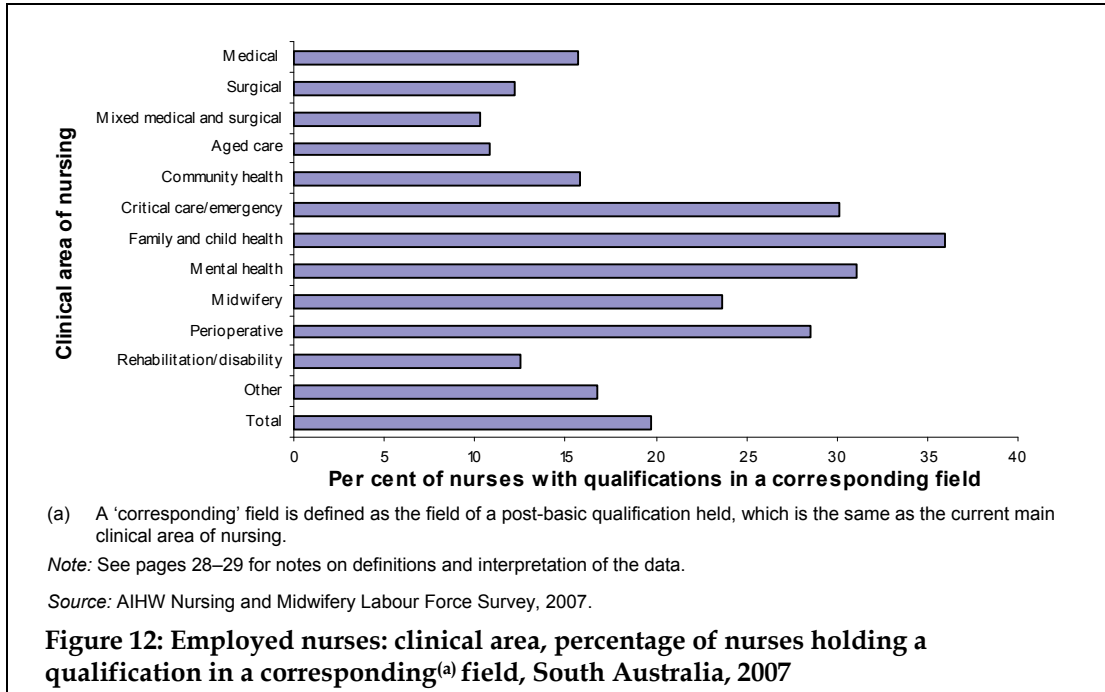
(a) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(b) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

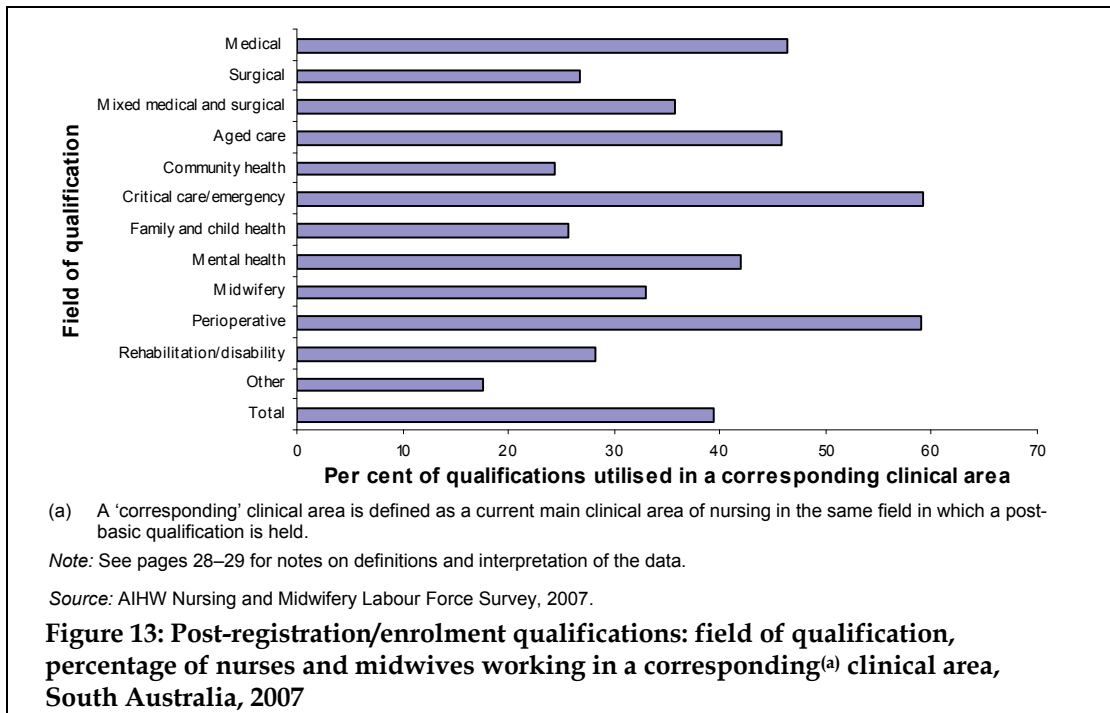
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in South Australia, 44.4% reported having post-registration/enrolment qualifications and 19.7% held a qualification in a field that corresponded with the clinical area of their job (Table 28 and Figure 12). For example, 15.7% of nurses working in the Medical nursing area held qualifications in Medical nursing.



Of the qualifications held overall by employed nurses in South Australia, 39.4% of the qualifications were being utilised in a corresponding clinical area. For example, 32.9% of the qualifications in Midwifery were held by nurses working in the Midwifery area (Figure 13).



Tasmania

Area: 64,519 sq km

Population: 493,204

Number of nurses: 7,041

FTE rate of nursing supply: 1,362



Remoteness Areas

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

In Tasmania in 2007, the largest proportion of nurses worked in the clinical area of Medical nursing (17.5% or 1,231 nurses), followed by the Critical care/emergency area (16.6% or 1,167 nurses) (Table 29).

Aged care nurses and Rehabilitation/disability nurses were older, on average, than other nurses (49.7 years and 49.1 years, respectively, compared with the state average of 45.2 years).

Nurses in Community health areas worked 30.6 hours, on average, per week and about one in 17 (5.8%) was male. By comparison, nurses in the Mental health area worked 37.0 hours, on average, per week and one in three (33.6%) was male.

The lowest proportion of registered nurses was in the area of Rehabilitation/disability (68.6%) and the lowest proportion working part-time was in the Mental health area (28.3%).

Clinical area of nursing and nurse characteristics

Table 29: Employed nurses by clinical area: selected characteristics, Tasmania, 2007

Clinical area ^(a)	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							
Medical	1,231	45.1	9.2	77.4	32.9	53.3	31.7
Surgical	787	41.5	6.1	89.3	33.6	51.0	28.5
Mixed medical and surgical	315	43.2	7.8	85.0	31.5	57.8	35.9
Other clinical areas							
Aged care	804	49.7	6.6	68.8	33.4	51.5	27.7
Community health	568	48.4	5.8	84.2	30.6	58.7	38.1
Critical care/emergency	1,167	42.2	16.6	94.2	34.7	47.4	59.6
Family and child health	144	49.0	2.7	97.3	32.4	59.2	77.4
Mental health	408	47.8	33.6	89.0	37.0	28.3	49.5
Midwifery	517	46.5	2.6	98.3	31.1	66.3	53.3
Perioperative	525	43.5	11.9	93.7	34.2	47.5	44.8
Rehabilitation/disability	154	49.1	15.2	68.6	33.8	45.9	28.2
Other ^(b)	420	45.1	7.0	91.9	34.3	42.9	57.2
Total	7,041	45.2	10.5	85.9	33.4	50.9	42.1

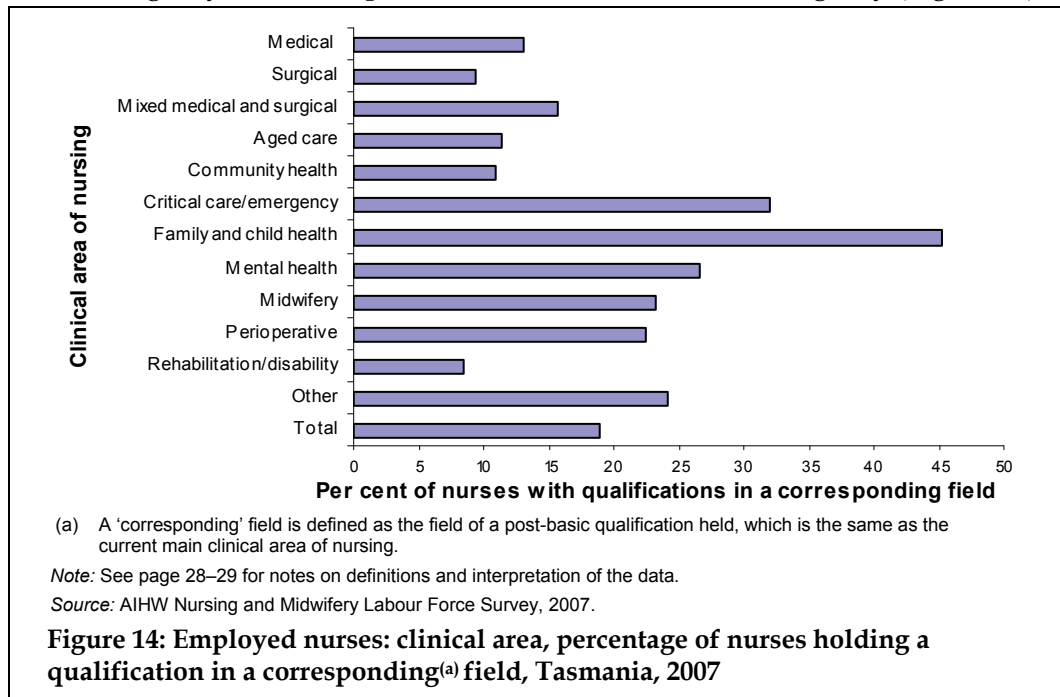
(a) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(b) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

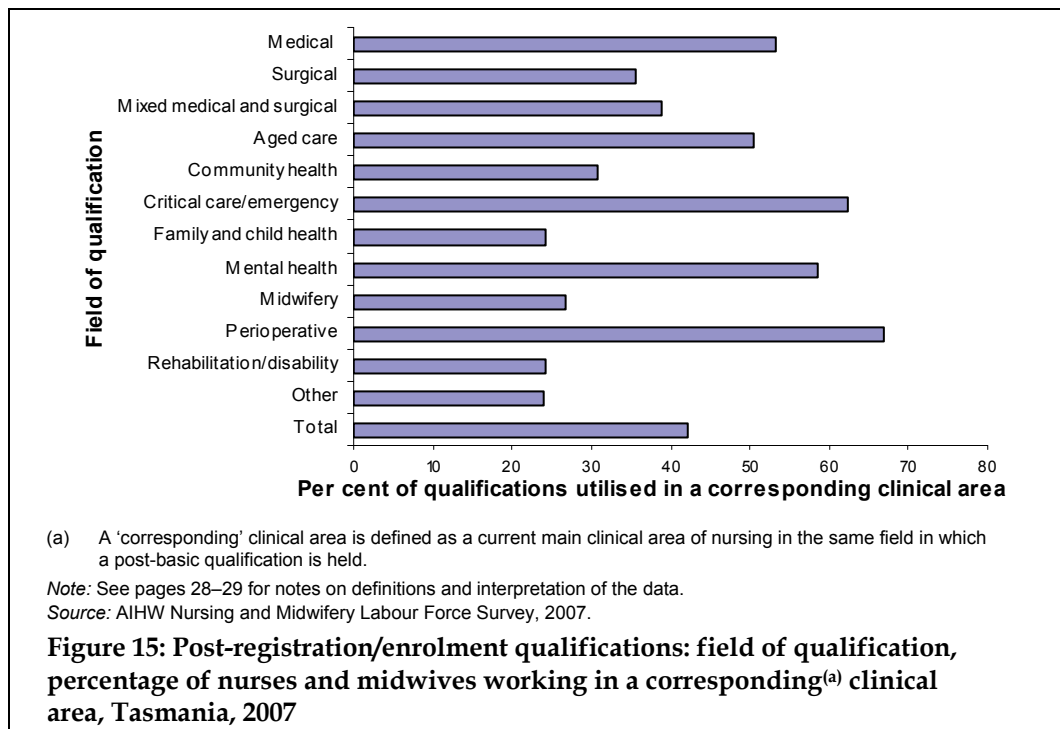
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in Tasmania, 42.1% reported having post-registration/enrolment qualifications and 19.0% held a qualification in a field that corresponded with the clinical area of their job (Table 29 and Figure 14). For example, 31.9% of nurses working in the Critical care/emergency area held qualifications in Critical care/emergency (Figure 14).



Of the qualifications held overall by employed nurses in Tasmania, 42.2% were being utilised in a corresponding clinical area. For example, 35.7% of the qualifications in Surgical nursing were held by nurses working in the Surgical area (Figure 15).



Australian Capital Territory

Area: 2,358 sq km

Population: 341,054

Number of nurses: 4,192

FTE rate of nursing supply: 1,201



Remoteness Areas

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

In the Australian Capital Territory in 2007, the largest proportion of nurses worked in the clinical area of Critical care/emergency (19.6% or 822 nurses), followed by Medical nursing (17.0% or 712 nurses) (Table 30).

Nearly one-quarter (23.9%) of nurses working in the Mental health area were male compared with 7.5% for the territory overall. Over one-third (35.6%) of these nurses were working part-time, compared with 44.9% for the territory.

Nurses working in the Midwifery area worked shorter hours, on average, whereas those in Other (non-clinical) areas worked longer hours (29.9 hours and 37.5 hours, respectively, compared with 34.2 hours for the territory overall).

The Rehabilitation/disability area had the lowest proportion of registered nurses (55.5%), followed by Aged care (67.6%).

Clinical area of nursing and nurse characteristics

Table 30: Employed nurses by clinical area: selected characteristics, Australian Capital Territory, 2007

Clinical area ^(a)	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							
Medical	712	44.3	4.5	74.7	34.8	43.1	40.1
Surgical	500	41.3	3.8	78.5	33.2	50.0	36.7
Mixed medical and surgical	174	39.2	3.1	77.6	31.8	51.7	39.8
Other clinical areas							
Aged care	267	49.1	6.8	67.6	33.4	43.8	41.2
Community health	277	47.6	4.1	84.1	33.3	50.1	50.9
Critical care/emergency	822	38.8	15.2	90.7	35.1	39.9	51.6
Family and child health	142	47.1	1.9	93.9	34.9	35.9	71.7
Mental health	156	48.2	23.9	86.0	37.4	35.6	53.3
Midwifery	427	46.0	1.1	99.4	29.9	63.0	55.8
Perioperative	319	41.5	12.9	83.1	35.4	40.9	46.5
Rehabilitation/disability	94	47.9	1.6	55.5	34.9	42.0	35.9
Other ^(b)	301	45.3	5.5	92.1	37.5	35.3	61.9
Total	4,192	43.5	7.5	83.6	34.2	44.9	48.0

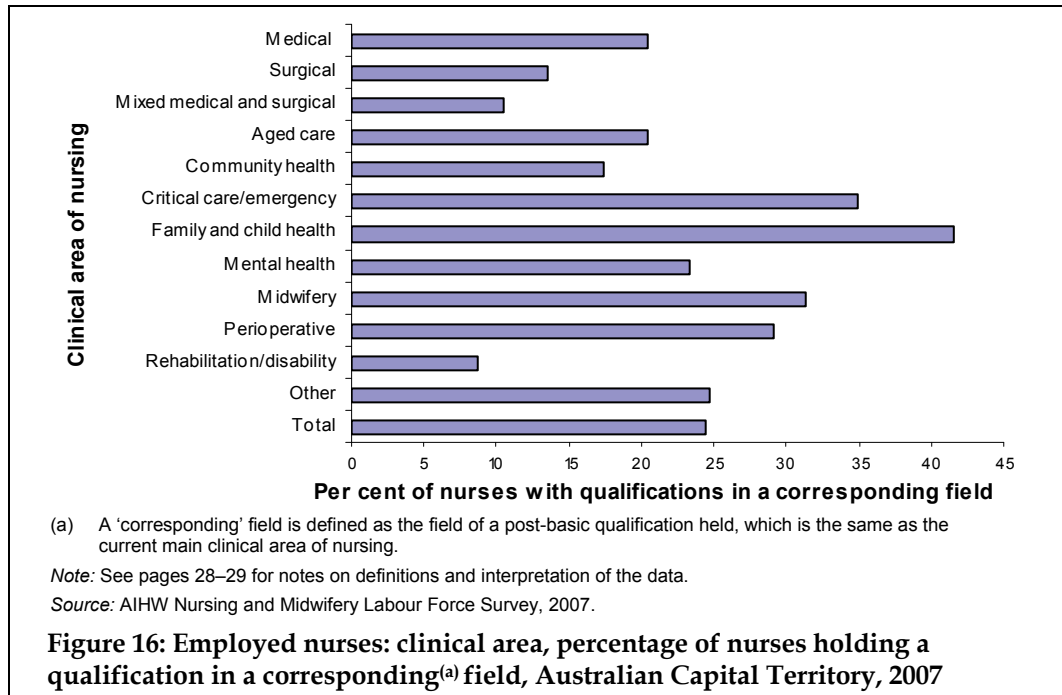
(a) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(b) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

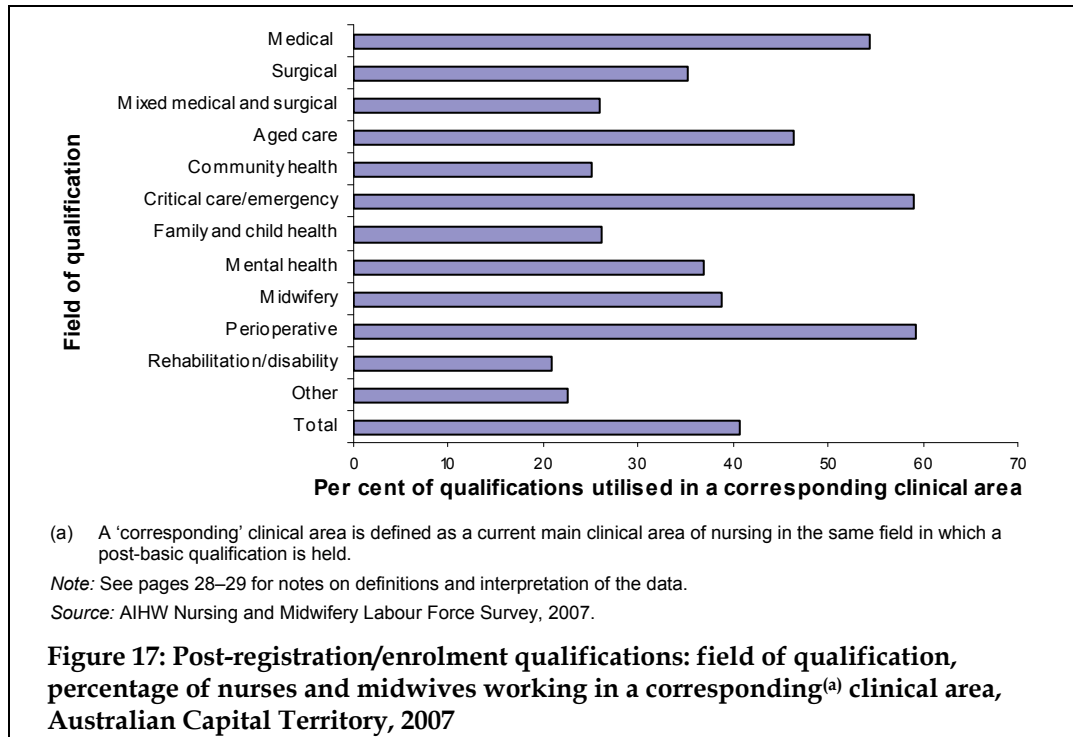
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in the Australian Capital Territory, 48.0% reported having post-registration/enrolment qualifications and 24.5% held a qualification in a field that corresponded with the clinical area of their job (Table 30 and Figure 16). For example, 17.4% of nurses working in the Community health area held qualifications in Community health (Figure 16).



Of the qualifications held overall by employed nurses in the Australian Capital Territory, 40.7% were being utilised in a corresponding clinical area. For example, 54.3% of the qualifications in Medical nursing were held by nurses working in the Medical area (Figure 17).



Northern Territory

Area: 2,358 sq km

Population: 214,804

Number of nurses: 2,976

FTE rate of nursing supply: 1,556



Remoteness Areas

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

In the Northern Territory in 2007, the largest proportion of nurses worked in the clinical area of Critical care/emergency (24.5% or 728 nurses), followed by Midwifery (15.3% or 454 nurses) (Table 31).

Nearly one-third (32.7%) of nurses working in the Mental health area were male compared with 10.9% for the territory overall. A small proportion (6.9%) of these nurses were working part time, compared with one-quarter (24.8%) for the territory.

Nurses working in Rehabilitation/disability worked the shortest hours (34.0 hours) and Other (non-clinical) nurses the longest hours (44.0 hours), compared to 39.3 hours for the territory overall.

The Rehabilitation/disability area had the lowest proportion of registered nurses (32.3%), compared with 88.8% for the territory.

Clinical area of nursing and nurse characteristics

Table 31: Employed nurses by clinical area: selected characteristics, Northern Territory^(a), 2007

Clinical area ^(b)	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							
Medical	369	42.7	7.1	86.8	38.0	28.4	55.0
Surgical	159	41.4	—	73.0	36.9	33.2	37.0
Mixed medical and surgical	250	39.7	5.0	76.3	37.1	31.3	42.0
Other clinical areas							
Aged care	110	46.4	6.4	76.7	39.6	20.9	57.4
Community health	339	46.2	14.1	89.4	42.1	14.7	70.2
Critical care/emergency	728	39.8	16.9	92.5	40.7	21.2	65.7
Family and child health	81	46.2	—	84.2	38.4	20.2	60.9
Mental health	105	48.0	32.7	100.0	42.7	6.9	56.5
Midwifery	454	43.9	1.3	98.2	35.8	35.8	69.5
Perioperative	171	41.9	17.9	85.5	38.2	32.8	51.2
Rehabilitation/disability	19	51.7	15.1	32.3	34.0	45.1	54.9
Other ^(c)	191	41.6	17.3	95.2	44.0	12.1	71.1
Total	2,976	42.6	10.9	88.8	39.3	24.8	60.7

(a) Estimates for the Northern Territory for 2007 should be treated with caution due to the low response rate (28.7%).

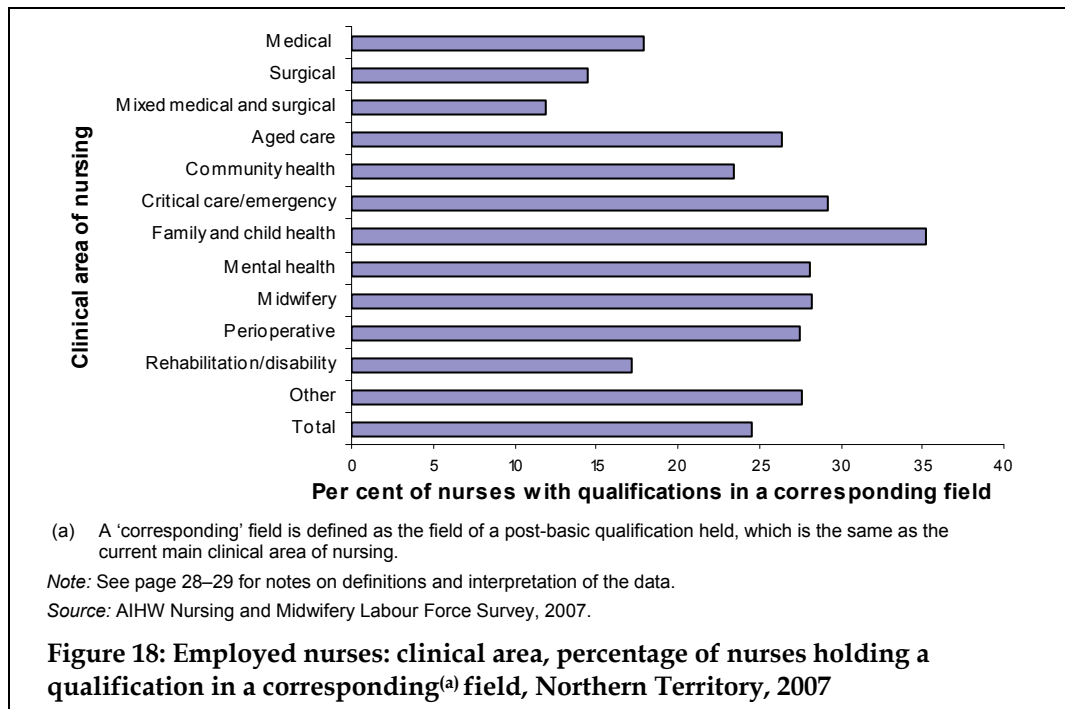
(b) Updates to the categories comprising these clinical areas were introduced in the 2005 questionnaire. As a result, these categories are not directly comparable with those used before 2005.

(c) Includes non-clinicians (that is, administrators, teachers/educators and researchers).

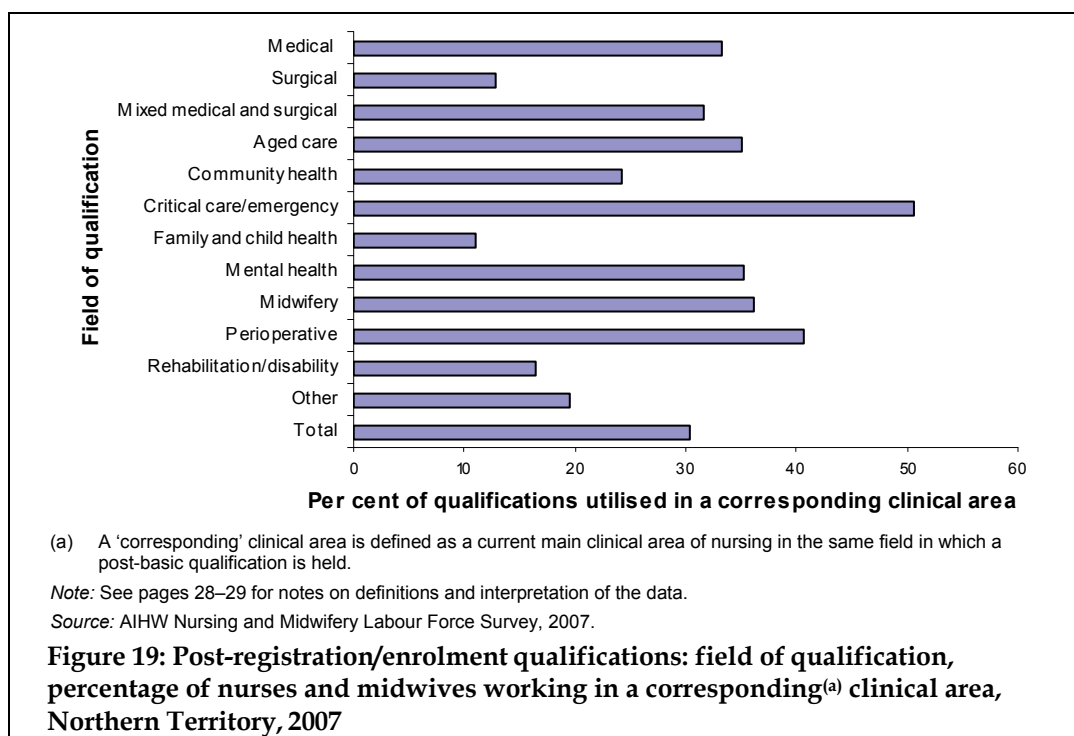
Source: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Clinical area of nursing and post-registration/enrolment qualifications

Of nurses in the Northern Territory, 60.7% reported having post-registration/ enrolment qualifications and 24.5%, held a qualification in a field that corresponded with the clinical area of their job (Table 31 and Figure 18). For example, 26.4% of nurses working in the Aged care area held qualifications in Aged care (Figure 16).



Of the qualifications held overall by employed nurses in the Northern Territory, 30.3% were being utilised in a corresponding clinical area. For example, 35.2% of the qualifications in Mental health were held by nurses working in the Mental health area (Figure 17).

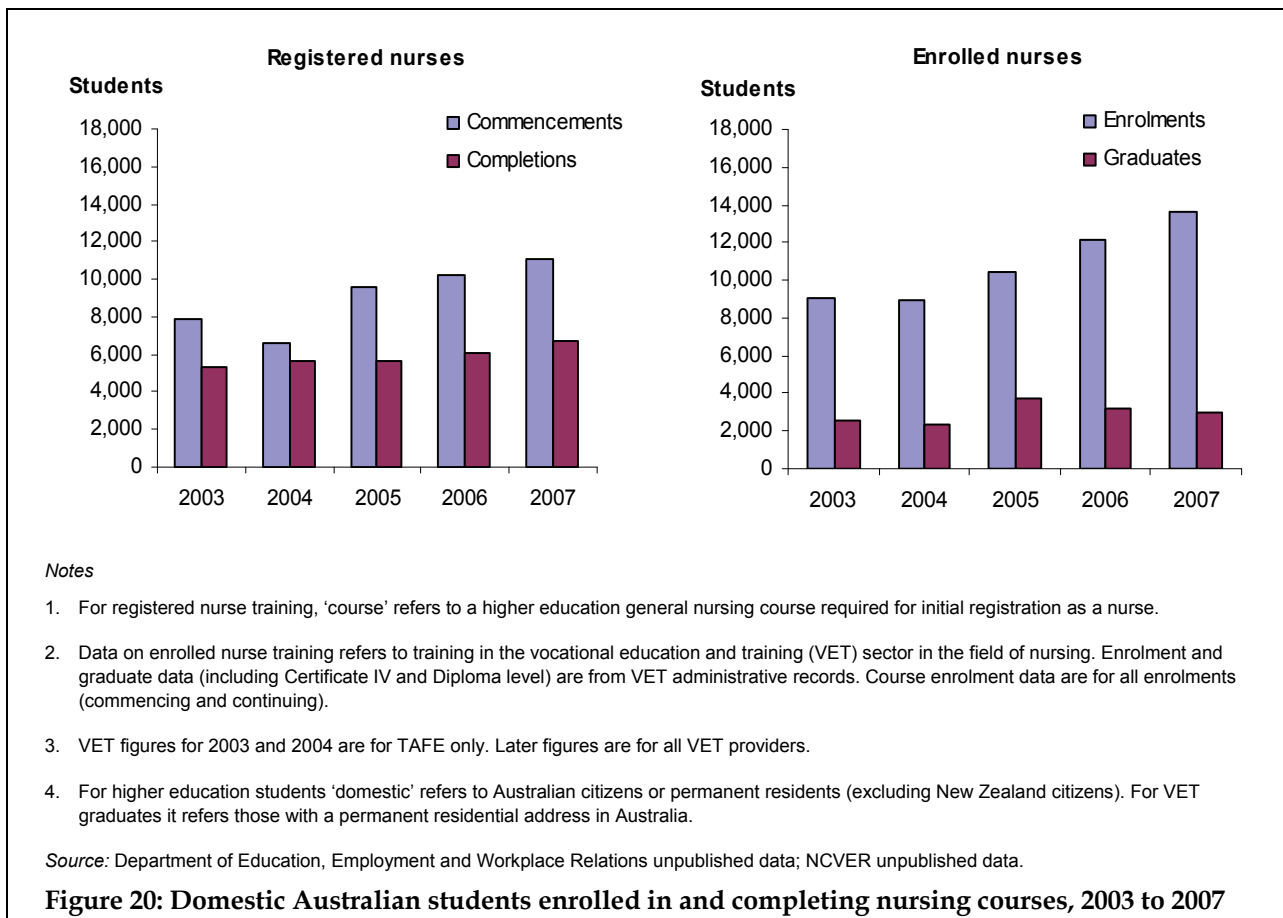


6 Sources of new entrants and re-entrants to the nurse labour force

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 or enrolment, but who are not employed in nursing are a potential source of re-entrants. This chapter discusses data relevant to these three sources.

6.1 Nurse training

Basic training for nursing is provided through 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, Employment and Workplace Relations. 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 past decade through more varied training pathways, such as training packages that focus on competencies that can be achieved either in a clinical setting or in the classroom (ANMC 2002). This explains, in part, the slowing growth rate of enrolled nurse numbers compared with registered nurse numbers (Table 2).

University-level general nursing courses required for initial registration as a nurse are usually 3 or 4 years long when studied full-time. The number of commencements in these courses dropped between 2003 and 2004, then showed an increase in 2005 followed by a gradual further increase through to 2007 (7,926 commencements in 2003 and 11,093 in 2007). Initially, completions remained relatively stable over the period, increasing slightly between 2005 and 2007 (5,306 domestic completions in 2003 and 6,683 in 2007) (Figure 20).

The basic training for an enrolled nurse is shorter than for registered nurses. Enrolled nurse training varies across jurisdictions, although there is a national set of competencies (ANMC 2002). Enrolled nurse courses are generally Certificate IV or Diploma level training programs, and can take between 1 and 2 years to complete, depending on the level of theory mixed with clinical experience. In 2007, there were 13,636 students enrolled in VET nursing courses, and 3,034 students completed their course in that year (Figure 20). Numbers of VET nursing enrolments gradually increased between 2003 and 2007, though numbers of graduates remained relatively flat.

6.2 Nurse migration

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

In 2006–07, 8,566 nurses entered Australia and 4,661 left for periods of 12 months or more (defined as ‘long term’). This is a net gain of 3,905 nurses (Table 32). However, these movements are not all for employment reasons, and so 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, with 57.2% of nurses who were long-term visitor arrivals and 52.4% of nurses who were long-term resident departures giving ‘employment’ as their reason for moving in 2006–07, compared with 60.1% of long-term resident departures and 52.8% of long-term visitor arrivals in 2004–05.

Table 32: Movement of nurses: overseas arrivals and departures, 2003–04 and 2006–07

Year	Arrivals				Departures			
	Long-term residents	Permanent settlers	Long-term visitors	Total arrivals	Long-term residents	Permanent residents	Long-term visitors	Total departures
2003–04	1,965	1,777	2,732	6,474	1,764	882	1,316	3,962
2006–07	1,833	2,102	4,631	8,566	1,759	1,106	1,796	4,661
Change (per cent)	-6.7	18.3	69.5	32.3	-0.3	25.4	36.5	17.6

Notes

1. Table includes all movements, including movements of Australian citizens, regardless of the purpose (that is, employment, holiday, etc.), but excludes short-term movements (that is, less than 12 months).
2. Data is based on a number of classification standards due to the nature of the occupation question on the incoming and outgoing passenger cards. It is a written response and is subject to interpretation difficulties. It cannot be determined that the occupation as described by the passenger is the occupation that person will undertake while in Australia or abroad.

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

6.3 Nurses not employed in nursing

The Nursing and Midwifery Labour Force Survey 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 survey.

In 2007, an estimated 42,503 (13.9%) registered and enrolled nurses were not employed as a nurse in Australia (Table 33). Of these, nearly two-thirds (62.3%) were not looking for work in nursing, with about half of these (47.7%) employed elsewhere. A further 23.2% were on extended leave and 4.8% were working as a nurse overseas. The remaining 9.7% 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 (3.7% and 5.6%, respectively) compared with other nurses (9.6% of employed nurses). In comparison, nurses employed elsewhere and looking for work in nursing, and those employed elsewhere and not looking for work in nursing were more likely to be male (11.9% and 13.0%, respectively). Nurses on extended leave and overseas were, on average, younger than other nurses (38.1 years and 39.3 years, respectively), while those who were not employed and not looking for work in nursing were older (48.0 years).

While almost all of the nurses working overseas were registered nurses (94.1%), those looking for work in nursing were less likely to be registered (62.9%). Of those working overseas, 59.3% had gained their initial qualification in Australia, a lower proportion than for all employed nurses (86.7%) and for other nurses not employed in nursing in Australia (88.7% for those looking for work, 90.9% for those not looking for work).

Table 33: Registered and enrolled nurses: labour force status: selected characteristics, 2007

Labour force status	Number	Per cent male	Average age (years)	Per cent registered nurse	Per cent metropolitan residence ^(a)	Per cent initial qualification in Australia
Not employed in nursing in Australia						
<i>On extended leave</i>	9,863	3.7	38.1	85.1	86.2	91.1
<i>Looking for work in nursing</i>	4,103	10.5	43.9	62.9	84.7	88.7
Employed elsewhere	1,515	11.9	43.8	58.8	85.2	92.3
Not employed	2,588	9.7	44.0	65.3	84.4	86.5
<i>Overseas</i>	2,047	11.5	39.3	94.1	89.1	59.3
<i>Not looking for work in nursing</i>	26,490	9.1	46.7	76.5	85.3	90.9
Employed elsewhere	12,628	13.0	45.4	74.0	86.2	92.2
Not employed	13,862	5.6	48.0	78.7	84.5	89.7
Total	42,503	8.1	44.1	78.0	85.5	89.2
All employed nurses	263,331	9.6	43.7	80.6	87.4	86.7

(a) Based on postcode of home residence concorded to Australian Standard Geographical Classification regions. See *Glossary*. Percentage calculations exclude 'not stated' values for Australian Standard Geographical Classification region of home residence.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2007.

Appendix A: Explanatory notes on the Nursing and Midwifery Labour Force Survey

Background

All nurses must be registered with a state or territory nursing and 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 and 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. The results of the 2007 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 and 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 Survey', below).

Scope and coverage

The scope of the survey is all nurses who were registered or enrolled with the nursing and 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 year before 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 Survey in 2007 represented 49.6% of the nursing registrations and enrolments in all jurisdictions (Table A.1). The response rate was lower for enrolled nurses (44.7%) than for registered nurses (50.7%). 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 A.1: Nursing and Midwifery Labour Force Survey: estimated response rates, registered and enrolled nurses, 2003 to 2007

	NSW	Vic ^(a)	Qld	WA	SA	Tas	ACT	NT	Australia
Registered nurses									
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 ^(b)
2007	65.6	42.2	33.6	39.8	67.4	60.2	60.2	29.6	50.7
Enrolled nurses									
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 ^(b)
2007	65.3	32.8	35.6	25.1	59.1	54.2	58.7	22.6	44.7
All nurses									
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 ^(b)
2007	65.5	39.9	33.9	36.7	65.4	59.3	60	28.7	49.6

(a) Because survey data for Victoria were not available in 2005, the 2006 Victorian survey responses were weighted to 2005 benchmarks (see 'Weighting: estimation for population non-response', below, 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.

(b) Excluding Victoria.

Sources: AIHW Nursing and Midwifery Labour Force Survey, 2003, 2004, 2005 and 2007.

Actual response rates cannot 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 survey varied considerably across jurisdictions (Table A.1), possibly reflecting variations in the way the survey was administered by registration boards in each state and territory and local issues.

The Nursing and Midwifery Labour Force Survey has had some decline in response rates over time (for example, in 2003 the estimated response rate for all nurses was 62.7%). 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 and territory to the total number of registered and enrolled nurses in that state or 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 registration boards provide age group and sex information.

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 and 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 survey', below).

Estimation procedures for non-response to the survey

The figures produced from the survey 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 that 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 (usually 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 or 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 Survey, missing values are imputed, in addition to type of nurse, age and sex, for the following variables (if less than 5%): 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. As 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 that are known for the whole population. The population benchmark data is provided to the AIHW by nursing and 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 2007, benchmark data by type of nurse, age and sex was provided by all jurisdictions.

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 done by the registration boards.

The 2004 Nursing and Midwifery Labour Force Survey figures for Western Australia have been revised because of a revision to the figures used for weighting. As a result, 2004 national figures and Western Australian figures in this report are different from those published in the 2004 report (AIHW 2006). The additional tables associated with the 2004 report have been revised and are available at <www.aihw.gov.au/publications/index.cfm/title/10380>.

Accounting for multi-state registrations

Nurses and midwives may be registered and practise 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 nurses (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 in AIHW registered and enrolled nurse estimates.

Appendix B: Additional tables available from the AIHW website

In addition to the tables in this publication, more detailed tabulations (see below) from the 2007 Nursing and Midwifery Labour Force Survey are published on the AIHW website at <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: 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 and territory and by geographic location of main job.

Clinical area by selected characteristics: Four tables of clinical area by state and territory, geographic location of main job, age and hours worked; state breakdowns for clinical area by average age and hours, sex, proportion aged over 55 years, part-time and registration status (total of 10 tables).

Work setting by selected characteristics: Five tables of work setting and sector of main job by state and 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).

Glossary

Aboriginal

A person of Aboriginal descent who identifies as an Aboriginal and is accepted as such by the community in which he or she lives.

Clinical area of nursing activity

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

Employed

An employed nurse is one who either:

- worked for a total of 1 hour or more in the week before the survey in a job or business for pay, commission, payment in kind or profit, mainly or only in a particular state or territory
- 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 and midwifery registration board in each state and territory. The minimum educational requirement for an enrolled nurse is a Certificate IV or 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, doing 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 before 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.

Care should be taken in interpreting any change in hours worked over time, due to changes in the question on working hours in the AIHW Nursing and Midwifery Labour Force Survey form. In the 2003 and 2004 surveys, most jurisdictions specified that hours be broken down into detailed categories, including paid (regular and overtime) and unpaid hours usually worked. Some specified the inclusion of overtime hours as well. In the 2005 survey, 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. In 2007, all jurisdictions used the more detailed question that was used by most jurisdictions in 2005.

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.

Indigenous

A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander and is accepted as such by the community in which he or she lives.

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 registered nurses, and then do additional midwifery training to qualify and register as midwives. 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, as with other midwives, must be registered with a nursing and midwifery board to practise. Direct entry midwives are restricted to practising midwifery only, whereas other midwives are also able to practise general nursing.

In this publication, where a registered and enrolled nurse breakdown is provided, midwives are included in the category of 'registered nurses', irrespective of the training path they have followed. Although direct entry midwives are not registered to practise in general nursing,

they are included as registered nurses in broad breakdowns of registered and enrolled nurses to ensure that all nurses are represented in these results. This is consistent with previous AIHW Nursing and Midwifery Labour Force publications.

Multiple registrations

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

Nursing and midwifery labour force

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

- registered and enrolled nurses employed in nursing or midwifery in the week before the survey
- registered and enrolled nurses not employed in nursing or midwifery but looking for work in nursing in the week before the survey
- registered and 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 before 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 before the survey) in the nurse's main job (that is, the job with the most number of hours worked in the week before 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 and midwives).
- **Non-clinical role:** A registered or enrolled nurse other than a clinician. This includes:
 - lecturing, nurse/midwifery educator, supervisor 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.

Post-registration or enrolment qualifications

Refers to courses of study relevant to nursing completed by registered and enrolled nurses in addition to the basic requirement for registration or 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 and continuing education sessions, refresher and re-entry courses or courses of less than 6 months duration.

Registered nurse

A nurse or midwife who is on the register maintained by the state or territory nursing and midwifery 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).

In this publication, where a registered or enrolled nurse breakdown is provided, midwives are included in the category of ‘registered nurses’, irrespective of the training path they have followed. Although direct entry midwives are not registered to practise in general nursing, they are included as registered nurses in broad breakdowns of registered and enrolled nurses to ensure that all nurses are represented in these results. This is consistent with previous AIHW Nursing and Midwifery Labour Force publications.

Remoteness areas

The Remoteness Area Structure within the Australian Standard Geographical Classification, produced by the Australian Bureau of Statistics (ABS 2008), has been used in this publication to present regional data.

The Remoteness Area Structure of the Australian Standard Geographical Classification is based on the Accessibility/Remoteness Index of Australia, 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 2006 Census of Population and Housing. These classes are:

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

The Australian Standard Geographical Classification 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.

Torres Strait Islander

A person of Torres Strait Islander descent who identifies as a Torres Strait Islander and is accepted as such by the community in which he or she lives.

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