

National Healthcare Agreement: PI 33-Full time equivalent employed health practitioners per 1,000 population (by age group), 2013 QS

Identifying and definitional attributes

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Relational attributes

Indicators linked to this Quality statement:	National Healthcare Agreement: PI 33-Full time equivalent employed health practitioners per 1,000 population (by age group), 2013 Health , Superseded 30/04/2014
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Data quality

Quality statement summary:	<ul style="list-style-type: none">• Due to the differences in data collection methods, including survey design and questionnaire, it is recommended that comparisons between workforce data from the National Health Workforce Data Set (NHWDS) and the previous Australian Institute of Health and Welfare (AIHW) Labour Force Survey be made with caution.• Results of the surveys are estimates because the raw data have undergone imputation and weighting to adjust for non-response. It should be noted that any of these adjustments may have introduced some bias in the final survey data and any bias is likely to become more pronounced when response rates are low. So care should be taken when drawing conclusions about the size of the differences between estimates.• Data have been revised since the publication of <i>Medical Practitioner Workforce 2010</i> and <i>Nursing and Midwifery Workforce 2011</i> so these data will not match data previously published.
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Institutional environment: The Australian Institute of Health and Welfare (AIHW) has calculated this indicator. The data are estimates from the National Health Workforce Data Set. Under agreement with AHMAC's Health Workforce Principal Committee, the AIHW receives registration information on health practitioners via the mandatory national registration process administered by Australian Health Practitioner Regulation Agency (AHPRA) and the voluntary Health Workforce Survey data collected at the time of registration renewal. The registration and workforce survey data are combined, cleansed and adjusted for non-response to form the National Health Workforce Data Set (NHWDS), and the findings reported by profession. AIHW is the data custodian of the NHWDS. These data are used for workforce planning, monitoring and reporting.

The AIHW is an independent statutory authority within the Health and Ageing portfolio, which is accountable to the Parliament of Australia through the Minister. For further information see the AIHW website.

Timeliness: National Health Workforce Data Set:

The NHWDS for each of the registered professions will be produced annually during the national registration renewal process. Each profession will also be administered a Workforce Survey as part of the registration renewal process.

- medical practitioners 2010 and 2011

The NHWDS: medical practitioners will be produced annually during the national registration renewal process, conducted between 1 July and 30 September each year, including the collection of the Medical Workforce Survey. The period for the 2010 renewal process was extended to the end of January 2011. Despite this extension, there were still Queensland and Western Australia registrants with expiry dates after January. Therefore data from these states were not included in the 2010 data set.

- nurses and midwives 2011

The NHWDS: nurses and midwives will be produced annually during the national registration renewal process, conducted between 1 April and 31 May each year, including the collection of the Nursing and Midwifery Workforce Survey. The period for the 2011 renewal process was extended to the end of June 2011 for Queensland and end of December 2011 for Western Australia registrants.

- dental practitioners 2011

The NHWDS: dental practitioners will be produced annually during the national registration renewal process, conducted between 1 September and 30 November each year, including the collection of the Dental Workforce Survey. Practitioners with limited registration are due for renewal on the anniversary of their first registration and can thus renew and complete a survey at any time through the year.

Accessibility: Published products available on the AIHW website include workforce reports with survey questionnaires, user guides to the data sets and supplementary detailed tables, for medical practitioners, dental practitioners and nurses and midwives.

Interpretability: Extensive explanatory information for the Medical Workforce Survey, Dental Workforce Survey and the Nursing and Midwifery Workforce Survey is contained in the published reports, supplementary detailed tables and data quality statements to the data set for each. This includes collection method, scope and coverage, survey response, imputation and weighting procedures, and assessment of data quality (including comparability with other data sources).

These are available via the AIHW website and readers are advised to read caveat information to ensure appropriate interpretation of the performance indicator.

Relevance:

Medical practitioners, dental practitioners and nurses/midwives are required by law to be registered with their relevant national board to practise in Australia. All medical practitioners, dental practitioners and nurses/midwives must complete the formal registration renewal form(s) to practise in Australia. This is the compulsory component of the renewal process.

The Health Workforce Surveys for each of these professions is voluntary and only practitioners who renew their registration receive a questionnaire for completion. New registrants will not receive a survey form until they renew their registration the following year, during the registration renewal period. Practitioners with limited registration are due for renewal on the anniversary of their first registration and can thus renew and complete a survey at any time through the year.

National Health Workforce Data Set: medical practitioners 2010 and 2011

The NHWDS: medical practitioners 2010 and 2011 contain registration details of all registered medical practitioners in Australia, as at 30 September on the annual renewal date. Data were extracted from the AHPRA database as at the end of November of the same year. The NHWDS also contains workforce data of respondents whose principal state of practice was not Queensland or Western Australia, obtained from the Medical Workforce Survey 2010. These states were excluded from the survey because not all registrations in these states expired prior to the national registration deadline. In 2011 the NHWDS contains workforce data obtained from the Medical Workforce Survey 2011 for all states and territories.

National Health Workforce Data Set: dental practitioners 2011

The NHWDS: dental practitioners 2011 contain registration details of all registered dental practitioners in Australia, as at 30 November 2011 renewal date. Data were extracted from the AHPRA database as at the end of January 2012. It also contains workforce data obtained from the Dental Workforce Survey 2011.

National Health Workforce Data Set: nurses and midwives 2011

The NHWDS: nurses and midwives 2011 contain registration details of all registered nurses/midwives in Australia as at 31 May 2011 renewal date. Data were extracted from the AHPRA database as at the end of November 2011. The NHWDS also contains workforce data obtained from the Nursing and Midwifery Workforce Survey 2011.

Accuracy:

Data manipulation and estimation processes

The registration and workforce survey data for each health profession are combined, cleansed and adjusted for non-response to form the National Health Workforce Data Set (NHWDS). The cleaning and editing procedures included range and logic checks, clerical scrutiny at unit record level, and validation of unit record and aggregate data.

The data have undergone imputation for item non response and are weighting to adjust for population non response. It should be noted that both of these kinds of non-response is likely to introduce some bias in the final survey data and any bias is likely to become more pronounced when response rates are low. Care should be taken when drawing conclusions about the size of the differences between estimates.

As a result of the estimation method to adjust for non-response, numbers of medical practitioners, dental practitioners or nurses/midwives may have been in fractions, but have been rounded to whole numbers for publication. The full-time equivalent (FTE) rate calculations are based on rounded numbers.

Registration data from the National Registration and Accreditation Scheme (NRAS)

Registration details were migrated from the respective state and territory professional board (or council) for practitioners with registrations expiring after the official AHPRA closing date for their profession.

Some data items previously collected by the AIHW Labour Force Surveys are now collected by the NRAS. However, some data quality issues due to migrated data items from the respective state medical boards may have affected the weighting method.

Medical practitioners, dental practitioners and nurses/midwives who reside overseas have been included with practitioners whose state or territory of principal practice and state or territory of main job, respectively, could not be determined.

Health Workforce Survey

The online survey questionnaire does not include electronic sequencing of questions to automatically guide the respondent to the next appropriate question based on previous responses to questions. This resulted in a number of inconsistent responses.

The order of the response categories for some questions may have also impacted on the accuracy of the information captured. In addition, there was variation in some responses between the online and paper surveys.

NHWDS data by profession

The following should be noted when comparing state and territory indicator data from both surveys:

- The data include employed professionals who did not state or adequately describe their state of principal practice and employed professionals who reside overseas. Therefore, the national estimates include this group.

National Health Workforce Data Set: medical practitioners 2010 and 2011

- The overall response rate for 2010 (excluding Queensland and Western Australia) was 76.6 per cent. Of these respondents, 65.4 per cent completed the survey online and 34.6 per cent used the paper form.
- The overall response rate for 2011 was 85.3 per cent. Of these respondents, 84.7 per cent completed the survey online and 15.3 per cent used paper.

National Health Workforce Data Set: nurses and midwives 2011

- The overall response rate was 85.1 per cent. Of these respondents, 86.7 per cent completed the survey online and 13.3 per cent used paper.

National Health Workforce Data Set: dental practitioners 2011

The overall response rate was 80.3 per cent. Of these respondents, 84.5 per cent completed the survey online and 15.5 per cent used paper.

Coherence:

Health Workforce Survey—coherence with previous surveys

Labour force data published by the AIHW before the NRAS was established in July 2010, were the result of collated jurisdiction-level occupation-specific surveys. The current Health Workforce Survey gathers the same information from each professional group through a separate questionnaire, tailored slightly to take account of profession-specific responses to certain questions, e.g. work setting of main job.

For this indicator, the Workforce Surveys for medical practitioners, dental practitioners and nurses and midwives collect similar data items, but the methodology differs from previous years. The AHPRA is now the single source of benchmark data instead of eight state and territories bodies for each profession, and there is greater consistency between jurisdictions and years in the scope of benchmark data.

The scope and coverage of the Health Workforce Survey is also different from that of the previous series of AIHW Labour Force Surveys as not all jurisdictions surveyed all types of registered health practitioners.

If the location of principal practice recorded in the registration data was different from the corresponding details of their main job self-reported by practitioners in the survey, the location was derived based on main job information and then on principal practice location.

Date of birth is one of many data items previously collected by the AIHW Labour Force Surveys, which is now collected by the NRAS.

The three employment-related questions in the new survey are now nationally consistent, but vary from the previous AIHW Labour Force Survey. Due to the differences in data collection methods, including survey design and questionnaire, it is recommended that comparisons between workforce data from the NHWDS and the previous AIHW Labour Force Survey be made with caution.

Health Workforce Survey—coherence with other data sources - Australian Bureau of Statistics (ABS) Census

The ABS Census of Population and Housing, conducted every 5 years, is the other main source of data on health workforce numbers in Australia, but is not directly comparable with numbers from the NRAS or estimates from the Workforce Surveys. The 2011 Census results include data on occupations classified using the Australian and New Zealand Standard Classification of Occupations revision 1 (ANZSCO) (ABS 2009). Occupation data reports on the main job held during the week before Census night.

The ANZSCO definition of medical practitioners and dentists effectively excludes non-clinicians, but the nursing and midwifery group includes categories for nurse managers, educators and researchers.

The 2011 Census included:

- 70,229 medical practitioners, compared to 73,980 employed clinicians in the NHWDS: medical practitioners 2011 (5.3% higher). This is consistent with the differences found between the 2006 census and the earlier AIHW survey.
- 10,986 dentists, compared to 12,154 employed clinician dentists in the NHWDS: dental practitioners 2011 (10.6% higher). This is consistent with the differences found between the 2006 census and the earlier AIHW survey.
- 257,182 nurses and midwives, compared to 286,701 employed nurses and midwives in the NHWDS: nurses and midwives 2011 (11.5% higher). There was no nursing survey conducted in 2006 so no comparator for the 2006 Census, but the difference is marginally higher than that for Medical practitioners and may reflect some nurses being reported in non-nursing categories. There were 227,712 employed clinical nurses and midwives in the NHWDS: nurses and midwives 2011.

There were 189,017 not stated and unknown responses to the occupation field in the census plus 32,125 Professionals (no further description) plus 2,114 Health professionals (no further description) coded in the Census, which, if evenly distributed, would increase the figures approximately 4%.

Medicare claims data from DoHA

According to the Medicare claims systems, 27,639 medical practitioners provided General practice services claimed for on Medicare during to 2010/11 financial year, equivalent to 20,226 full time working equivalents (DoHA, 2012). In the NHWDS: medical practitioners 2011, there were 25,056 general practitioners working on average 39.1 hours in the week prior to the survey. There are a number of possible reasons for this difference, including that not all activities being undertaken by general practitioners are Medicare claimable.

AIHW Published Numbers

The rates in this report are based on people in the medical practitioner and nursing and midwifery workforce, while the AIHW generally reports only on those who are employed. As a result, the rates in this report are slightly higher than those published elsewhere. Dental practitioner data are restricted to persons employed in the public sector and are thus not comparable to figures published elsewhere.

Registration data from the NRAS—coherence with published Board data

AIHW numbers are a point in time estimate while the AHPRA numbers include people registered in the previous 12 months, thereby including registrants whose registration terminated during that period (including short term registrants).

Medical practitioners in 2010 and 2011

Data for 2010 is consistent with data reported in the 2010–11 AHPRA annual report, with 84,516 total registrations for 2010 and 87,790 total registrations on the files used by AIHW for 2011, compared with 88,293 registrations at 30 June 2011

in the AHPRA annual report. Furthermore, the Medical Board of Australia in their quarterly data tables reported 91,354 for March 2012 and 91,645 for June 2012.

Nurses/midwives in 2011

Data for 2011 is consistent with data reported in the 2010–11 AHPRA annual report, with 330,680 total registrations on the files used by AIHW for 2011, compared with 332,185 registrations at 30 June 2011 in the AHPRA annual report. The Nursing and Midwifery Board of Australia in their quarterly data tables reported 341,189 for March 2012 and 343,703 for June 2012.

Dental practitioners in 2011

Data for 2011 is consistent with data reported in the 2010–11 AHPRA annual report, with 18,803 total registrations on the files used by AIHW for 2011, compared with 18,319 registrations at 30 June 2012 in the AHPRA annual reports. The Dental Board of Australia in their quarterly data tables reported 19,087 for June 2012.

Relational attributes

Related metadata references:

Supersedes [National Healthcare Agreement: PI 65-Net growth in health workforce, 2012 QS](#)

- [Health](#), Superseded 14/01/2015

Has been superseded by [National Healthcare Agreement: PI 33-Full time equivalent employed health practitioners per 1,000 population \(by age group\), 2014 QS](#)

- [Health](#), Superseded 14/01/2015

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