National Healthcare Agreement: PI 65-Net growth in health workforce, 2011 QS

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Identifying and definitional attributes

Metadata item type:	Data Quality Statement
METEOR identifier:	449083
Registration status:	Health, Superseded 04/12/2012

Data quality

Data quality statement summary:	· 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 as response rates decline. · Care should be taken when drawing conclusions about the size of the differences between estimates. · Care is also advised with State and Territory comparisons because of low response rates in some jurisdictions.
Institutional environment:	The Australian Institute of Health and Welfare (AIHW) has calculated this indicator. The data are estimates from the AIHW National Health Labour Force Survey series, which are annual surveys managed by State and Territory health authorities. The survey questionnaire is administered by the relevant registration boards in each jurisdiction as part of the registration renewal process. Under agreement with AHMAC's Health Workforce Principal Committee, the AIHW cleans, manipulates, collates and weights the State and Territory survey results to obtain national estimates of the total medical labour force and reports the findings. These data are used for workforce planning, monitoring and reporting. The Institute 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:	The reference periods for the indicator data from the Medical Labour Force Survey are the 2007 and 2008 calendar years. The reference periods for the indicator data from the Nursing and Midwifery Labour Force Survey are the 2007 and 2008 calendar years.
Accessibility:	Published products available on the AIHW website are: · Medical Labour Force Survey reports with associated Excel tables. · Nursing and Midwifery Labour Force Survey reports with associated Excel tables. Ad-hoc data are available on request (cost recovery charges apply).
Interpretability:	Extensive explanatory information for the Medical Labour Force Surveys and the Nursing and Midwifery Labour Force Surveys is contained in the published reports and supplementary Excel tables for each, including collection method, scope and coverage, survey response, imputation and weighting procedures. These are available via the AIHW website and readers are advised to read caveat information to ensure appropriate interpretation of the performance indicator.

Relevance:

This indicator is an interim measure, pending the implementation of the National Registration and Accreditation Scheme (NRAS) in mid-2010. Long-term indicators using NRAS data are expected to be available in 2012 and will include a much larger group of health professions. To date, there have been difficulties collecting consistent, quality data on the health workforce and many of these difficulties are expected to be resolved by the shift to NRAS data, particularly that of national consistency.

The estimates for this indicator are based on the weighted responses from the AIHW surveys of the Medical Labour Force and the Nursing and Midwifery Labour Force. The two surveys have been conducted using very similar methods and measure similar concepts. The survey populations have been drawn from the respective professional registers for these occupations, maintained by each State and Territory registration board. The registers contain demographic information on all professionals allowed to practise in that state or territory and have been the most suitable framework for surveying the professions. The surveys have been designed to measure employment-related activity for each profession.

The states and territories have agreed on the core content of the data collected, but there has been some variation in actual questions asked and in the questionnaire format. Where necessary and possible, the AIHW has mapped responses to provide nationally comparable estimates from each survey.

Reference periods differed across jurisdictions but were within a single calendar year. The questionnaires were generally sent out with registration renewal papers by the respective registration boards for the professions, with survey timing depending on the registration practices for each profession within each jurisdiction.

The indicators are disaggregated by State/Territory information primarily sourced from the registration boards. It should be noted that response rates varied considerably across jurisdictions resulting in some variation in the reliability of the estimates.

Estimates were produced from the survey data, after weighting to adjust for non-response. For this indicator, data are presented as a full-time equivalent (FTE) number of health professionals. FTE = (number of employed professionals in each profession × average hours worked) ÷ the hours in a standard working week for each profession. For the indicator reporting, the standard working week for medical practitioners is 40 hours and the standard for nurses/midwives is 38 hours. The clinician/non-clinician disaggregation is based on work activity of main job.

Postcode information was collected, although for the indicator reporting, its quality does not support disaggregation by variables based on postcode. Data disaggregation by the Socio-Economic Indexes for Areas (SEIFA) and AGSC Remoteness Areas is to be assessed for possible inclusion in future indicator reporting, pending further investigation into the quality of postcode information available.

Accuracy:

Data capture and initial processing of the survey data were undertaken by the individual State/Territory health authorities, whose procedures varied. AIHW conducts independent cleaning, editing and manipulation of the data received in order to produce more nationally consistent data. 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 surveys were conducted in conjunction with the registration renewal process and, as a result, people registering in a profession for the first time in the reference year were not sent a questionnaire. For the medical survey, practitioners with conditional registration have not always been included. Overseas-trained medical practitioners doing postgraduate or supervised training were not surveyed and interns were surveyed in some jurisdictions, only.

There was no sampling undertaken for the data collection: the entire population of re-registrants was targeted. The national response rate for the Medical Labour Force Survey was 69.9 per cent in 2007 and 68.7 per cent in 2008. The national response rate for the Nursing and Midwifery Labour Force Survey was 49.6 per cent in 2007 and 46.6 per cent in 2008.

The data have undergone imputation for item non response and 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 as response rates decline. Care should be taken when drawing conclusions about the size of the differences between estimates.

Where possible, benchmark data were the number of registered medical practitioners or nurses/midwives in each State and Territory supplied to the AIHW by the State and Territory registration boards for each profession. Also if possible, benchmarks were broken down by age group and sex and if the data were not available from the boards this way, benchmark figures were obtained from other sources, such as registration board annual reports. Where available, benchmark data relate to the time the survey was conducted. Details of the benchmarks supplied by the states and territories for each survey can be found in the published survey reports on the AIHW website.

It should be noted that in the Medical Labour Force Survey and the Nursing and Midwifery Labour Force Survey comparability between jurisdictions is limited by differences between the surveyed population and the available benchmark data. Currently there is no information available about the effect of these differences on the indicator data. As a result, the following should be noted when comparing State and Territory indicator data from both surveys:

Medical Labour Force Survey

· In 2007 and 2008, NSW registration numbers were based on financial general registrants, conditionally registered specialists, limited prescribing and referring and non-practising medical practitioners only, resulting in an underestimate of the total number of practitioners in that state.

· In 2007 and 2008, the Queensland registration numbers did not include all conditionally registered medical practitioners, resulting in an underestimate of the total number of practitioners.

· For WA, the 2008 benchmark used was the total number of registered practitioners in 2008 using 2007 age-by-sex proportions. For WA in 2007 and 2008, the benchmark data was inflated by an unknown number of registered medical practitioners that are no longer active in the workforce. It is also unknown how significantly past years have been affected.

· In 2007 and 2008, Tasmanian registration numbers were based on general registrants, conditionally registered specialists and non-practising practitioners only, resulting in an underestimate of the total number of practitioners.

Nursing and Midwifery Labour Force Survey

· For 2007, State and Territory estimates should be treated with caution due to low response rates in some jurisdictions, particularly Victoria (39.9 per cent). Queensland (33.9 per cent), Western Australia (36.7 per cent) and the Northern Territory (28.7 per cent).

· Western Australian data for nurses and midwives has been suppressed in indicator NHA Table 65.2 — Net growth in health workforce, by clinical/non-clinical status due to concerns regarding interaction between clinical status data quality and the low response rate.

· For 2008, State and Territory estimates should be treated with caution due to low response rates in some jurisdictions, particularly Victoria (33.3 per cent). Queensland (32.9 per cent), WA (34.4 per cent) and NT (24.9 per cent). In 2008, Victorian data was affected by large numbers of online survey records being unusable for technical reasons.

· Due to concerns regarding interaction between clinical status, data quality and the low response rate the growth rates for the ACT should be treated with caution.

As a result of the estimation process used for non-response, numbers of medical practitioners or nurses/midwives may have been in fractions, but were rounded to whole numbers for publication. The FTE calculation for medical practitioners and nurses/midwives is based on rounded numbers.

Coherence:

Comparability of estimates for the medical workforce between 2007 and 2008 is limited by differences in coverage of the available benchmark across years (see Accuracy above). Care should be taken when drawing conclusions about the size of the differences between estimates across these years.

Currently there is no information available about the effect of these differences on the indicator data.

Some broad-level comparisons of workforce percentage growth have been made between Medical Labour Force Surveys, the ABS Census of Population and Housing and Medicare administrative data. All sources showed upward trends, although comparisons are limited by significant differences in collection method, scope, coverage and definitions between the data sources.

Relational attributes

Related metadata references:

Supersedes National Healthcare Agreement: P65-Net growth in health workforce, 2010 QS
Health, Superseded 08/06/2011

Has been superseded by National Healthcare Agreement: PI 65-Net growth in health workforce, 2012 QS
Health, Superseded 14/01/2015

Indicators linked to this Data Quality statement:

National Healthcare Agreement: PI 65-Net growth in health workforce, 2011
Health, Superseded 31/10/2011