

The cover features a red background with a white and yellow Aboriginal dot pattern on the left side. The title is in white text on the right.

Aboriginal and Torres Strait Islander Health Performance Framework 2014 report

Measure 58 of 68

Detailed analyses

3.12 Aboriginal and Torres Strait Islander people in the health workforce

This measure reports on the number and proportion of Aboriginal and Torres Strait Islander Australians in the health workforce

Introduction

This is no. 58 of 68 measures in the *Aboriginal and Torres Strait Islander Health Performance Framework 2014 report: detailed analyses*. This report provides information on a range of measures of health status, determinants of health and the health system performance relating to Aboriginal and Torres Strait Islander people.

The Framework comprises 3 tiers:

Tier 1 – Health status and outcomes

Tier 2 – Determinants of health

Tier 3 – Health system performance.

The full report, including a comprehensive description of all data sources used in the report, and notes about the data quality is available from

<http://www.aihw.gov.au/publication-detail/?id=60129550779>.

Tables referenced are available from

<http://www.aihw.gov.au/indigenous-data/health-performance-framework/>.

Data source

Census of Population and Housing.

For more information, see 'Data sources and quality' at the end of this measure.

Data analyses

Data on the number and rate of Indigenous and non-Indigenous Australians employed in selected health-related occupations are presented below.

The Census of Population and Housing is conducted by the ABS at 5-yearly intervals, and is designed to include all Australian households. The Census uses the ABS standard Indigenous status question for each household member.

For more information about Aboriginal and Torres Strait Islander people in the health workforce, see measure 3.22, and 'Other related information' at the end of this measure.

The following data are presented for this measure:

- Health workforce by occupation, see tables 3.12.1–2
- Health workforce by sex, see Table 3.12.3.

Health workforce by occupation

Current period

In 2011:

- There were about 8,460 Indigenous Australians employed in selected health-related occupations (Table 3.12.1).
- In 2011, about 1.6% of the Indigenous population were employed in health-related occupations. This is less than the proportion of the non-Indigenous population employed in health related occupations (approximately 3.4%).
- Nursing (including midwives, nurse educators and researchers, and mothercraft nurses) had the largest number of Indigenous employees (2,189), followed by nursing support and personal care workers (1,435), and Aboriginal and Torres Strait Islander Health Workers (1,256) (Table 3.12.1).
- The largest gap between Indigenous and non-Indigenous Australians was for nurses: 40 per 10,000 compared with 129 per 10,000, a gap of 89 per 10,000 (Table 3.12.1).

Trend

- The rate of Indigenous Australians aged 15 and over employed in selected health-related occupations increased from 96 per 10,000 in 1996 to 155 per 10,000 in 2011, an increase of 70% over the period (Table 3.12.1).
 - There was a significant (78%) increase in the rate of those employed as an allied health professional (from 5 per 10,000 in 1996 to 13 per 10,000 in 2011), and as an Aboriginal and Torres Strait Islander Health Worker (from 19 per 10,000 to 23 per 10,000) (Figure 3.12.2).

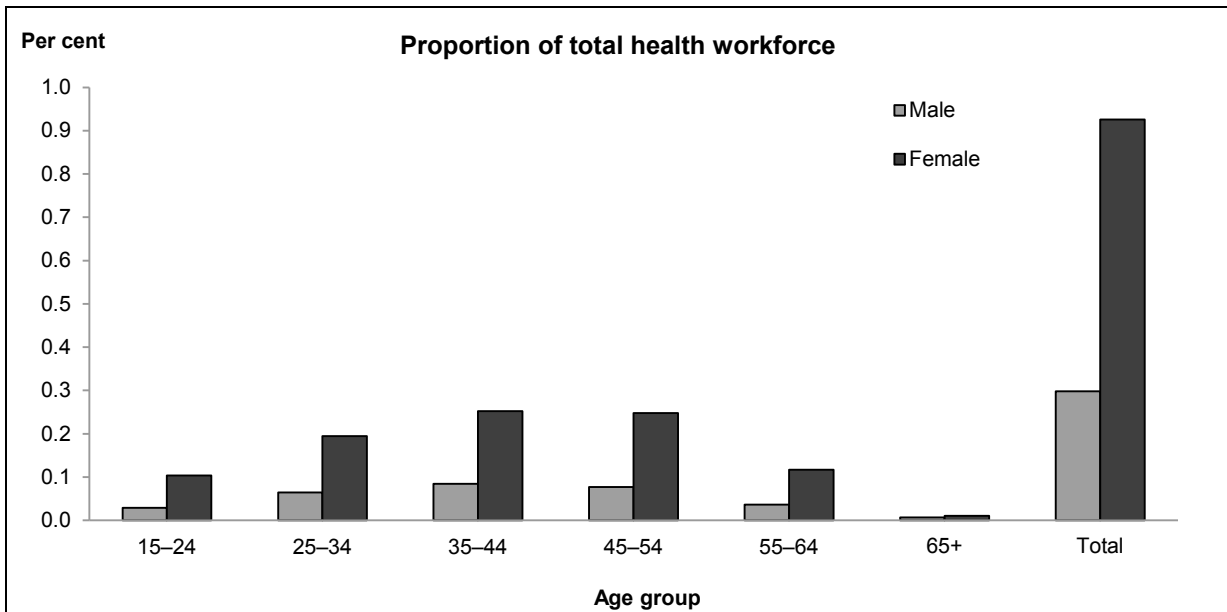
- The gap between Indigenous and non-Indigenous Australians employed in selected health-related occupations widened from 179 per 10,000 in 2006 to 189 per 10,000 in 2011 (Table 3.12.2).

Health workforce by age and sex

Current period

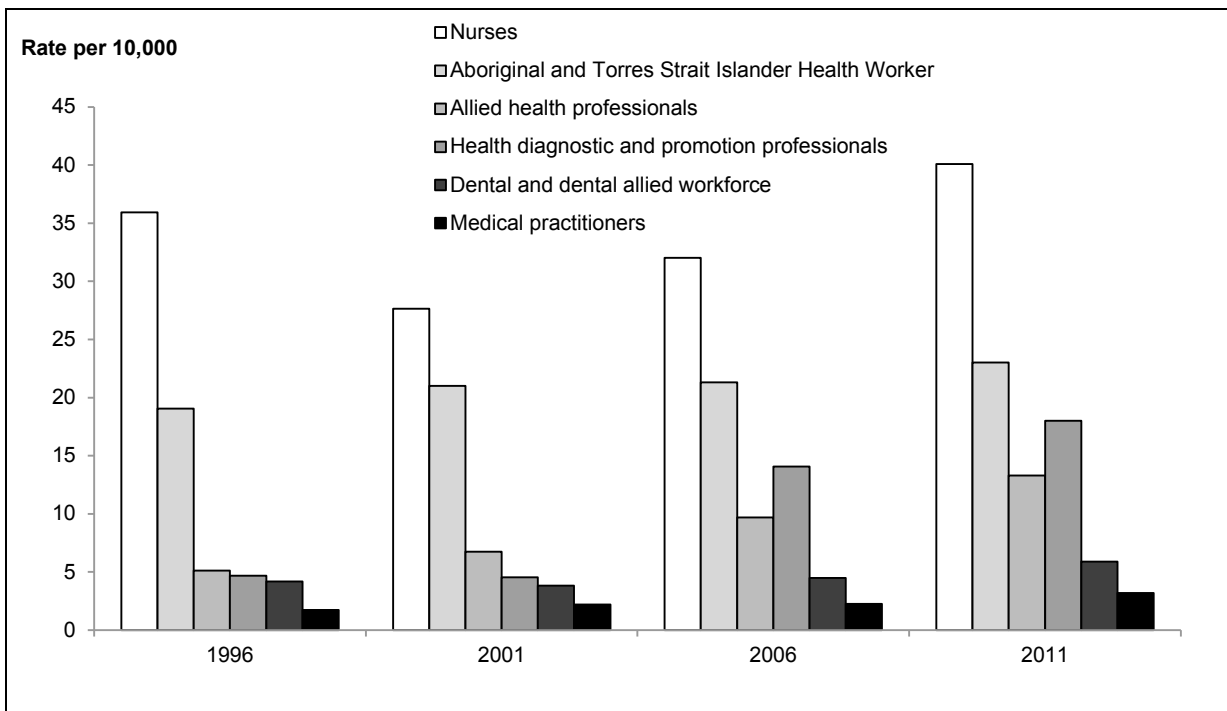
In 2011:

- More than half (54% or 4,570 people) of the Indigenous health workforce were aged 35–54 (Table 3.12.3).
- Indigenous females represented a higher proportion of the Indigenous health workforce than Indigenous males across all age groups. Three-quarters (76%) of the Indigenous health workforce were female (Table 3.12.3).
- Indigenous females aged 45–54 had the highest proportion employed in the health workforce (Table 3.12.3, Figure 3.12.1).



Source: Table 3.12.3.

Figure 3.12.1: Indigenous Australians employed in the health workforce, by age and sex, Australia, 2011



Source: Table 3.12.1.

Figure 3.12.2: Indigenous Australians aged 15 and over employed in selected health-related occupations, Australia, 1996-2011

Table 3.12.1: Employed persons aged 15+, by health-related occupation^(a) by Indigenous status, Australia, 2011

Occupation	Number		Rate (per 10,000) ^(b)				Rate difference 2011 (per 10,000) ^(c)	Period linear % change
	2011	1996	2001	2006	2011	2011		
	Indig.	Indig.	Indig.	Indig.	Indig.	Non-Indig.		
Aboriginal and Torres Strait Islander Health Worker	1,256	19.1	21.0	21.3	23.0	0.1	-23.0	19.1*
Nurses	2,189	35.9	27.6	32.0	40.1	129.0	88.9	16.1
Registered nurses ^(d)	1,713	18.3	20.5	24.5	31.4	103.0	71.6	75.9*
Nurse managers and nursing clinical directors	94	0.6	0.9	1.3	1.7	7.5	5.7	204.2*
Midwives	76	0.8	1.0	1.1	1.4	7.0	5.7	77.2*
Enrolled and mothercraft nurses	284	16.1	5.0	4.8	5.2	8.8	3.6	-77.7
Nurse educators and researchers	22	0.2	0.3	0.4	0.4	2.6	2.2	104.6*
Medical practitioners	171	1.7	2.2	2.3	3.2	35.0	31.8	78.2*
Generalist medical practitioners	123	1.2	1.4	1.8	2.3	21.8	19.5	103.3*
General medical practitioner ^(e)	93	0.8	1.2	1.3	1.7	16.9	15.2	100.5*
Resident medical officer	30	0.3	0.2	0.5	0.6	4.9	4.3	112.1
Other medical practitioners ^(f)	48	0.6	0.8	0.4	0.9	13.2	12.3	31.3
Allied health professionals	724	5.1	6.7	9.7	13.3	43.9	30.6	179.9*
Dietitians	25	n.p.	0.4	0.2	0.5	1.8	1.4	n.a.
Optometrists	6	n.p.	n.p.	0.2	0.1	1.8	1.7	n.a.
Psychologists ^(g)	82	0.4	0.5	1.0	1.5	9.3	7.8	478.9*
Physiotherapist	75	0.5	0.7	1.2	1.4	8.0	6.6	215.3*
Podiatrist	6	0.2	0.2	0.1	0.1	1.4	1.3	-39.2
Speech professionals and audiologists	17	0.2	0.2	0.4	0.3	3.4	3.1	62.8*
Occupational therapist	24	n.p.	n.p.	0.3	0.4	4.6	4.2	n.a.

(continued)

Table 3.12.1 (continued): Employed persons aged 15+, by health-related occupation^(a) by Indigenous status, Australia, 2011

Occupation	Number		Rate (per 10,000) ^(b)				Rate difference 2011 (per 10,000) ^(c)	Period linear % change
	2011	1996	2001	2006	2011	2011		
	Indig.	Indig.	Indig.	Indig.	Indig.	Non-Indig.		
Social worker	463	3.2	4.1	5.9	8.5	8.3	-0.2	189.6*
Other health therapy professionals ^(h)	26	0.3	0.3	0.5	0.5	5.2	4.8	60.5
Dental and dental allied workforce	323	4.2	3.8	4.5	5.9	18.0	12.1	46.4
Dental practitioner	24	0.3	0.3	0.4	0.4	5.5	5.1	34.7*
Dental hygienists, technicians and therapists	32	0.5	0.4	0.3	0.6	3.2	2.6	7.4
Dental assistant	267	3.3	3.1	3.8	4.9	9.3	4.4	54.2*
Health diagnostic and promotion professionals	981	4.7	4.6	14.1	18.0	29.6	11.6	510.2
Medical imaging professionals	21	0.2	0.3	0.4	0.4	6.6	6.3	77.9*
Pharmacists	29	0.2	0.2	0.2	0.5	10.0	9.5	237.1*
Occupational health and safety adviser	193	0.6	0.6	1.1	3.5	7.6	4.0	Significant increase ^(l)
Health promotion officers ⁽ⁱ⁾	567	n.a.	n.a.	9.7	10.4	2.2	-8.2	n.a.
Environmental health officer	104	3.5	2.8	2.2	1.9	1.7	-0.2	-47.5*
Other health diagnostic and promotion professionals ^(k)	67	0.2	0.5	0.5	1.2	1.5	0.2	573.6*
Other	2,812	25.6	32.6	43.4	51.6	88.4	36.8	106.9*
Health service managers ^(l)	54	0.6	n.p.	0.4	1.0	1.3	0.3	n.a.
Nursing support worker and personal care workers ^(m)	1,435	16.5	19.9	21.7	26.3	34.5	8.2	56.9*
Ambulance officers and paramedics	216	1.4	2.0	3.4	4.0	5.9	1.9	201.6*
Drug and alcohol counsellor	156	2.3	2.4	2.6	2.9	0.7	-2.2	26.2*
Other ⁽ⁿ⁾	951	4.7	6.8	15.3	17.4	46.0	28.5	342.6*
Total health occupations^{(o)(p)(q)}	8,456	96.3	98.6	127.3	155.1	344.1	189.0	69.5*

(continued)

Table 3.12.1 (continued): Employed persons aged 15+, by health-related occupation^(a) by Indigenous status, Australia, 2011

* Represents results that are statistically significant at the $p = 0.05$ level.

- (a) Average period change of Indigenous health workforce numbers determined using regression analysis. Per cent change between the reporting periods 1996 and 2011 based on the average annual change over the period.
- (b) Rate per 10,000 measures the health workforce available (numerator) to service the population (denominator). Denominator used in rates is the 2011 Census count by Indigenous status minus those where occupation is not stated.
- (c) Rate difference is non-Indigenous rate minus the Indigenous rate.
- (d) Both 2001 and 2006 figures include midwifery and nursing Professionals n.f.d.
- (e) Generalist Medical Practitioners includes General Medical Practitioner and Resident Medical Practitioner, and Specialist Physician (General Medicine).
- (f) 2006 figure includes Anaesthetist, Pathologist, Psychologist, Neurosurgeon, Medical Practitioners n.f.d. 2001 figure includes Emergency Medical Specialist, Obstetrician and Gynaecologist, Pathologist, Radiologist, Psychiatrist, Surgeon (General), Medical Practitioners n.f.d., and 1996 figure includes Specialist Medical Practitioner.
- (g) 2006 figure includes Clinical Psychologist, Psychotherapist, Educational Psychologists, Organisational Psychologists, Psychologists, n.f.d. and Psychologists, n.e.c. However, both 1996 and 2001 figures are Clinical Psychologists and Psychotherapists combined.
- (h) 2006 figure includes Chiropractor, Osteopath, Homeopath, Naturopath, Complementary Health Therapists n.e.c. 2001 figure includes Chiropractor and Naturopath and 1996 figure includes Chiropractor and Natural Therapy Professionals.
- (i) Per cent change more than 1,000 per cent.
- (j) Health Promotion Officers could not be identified separately in 2001 and 1996 due to different occupation classifications. These were included in Community Workers in 2001 and 1996 and not included in the table.
- (k) Other Health Diagnostic and Promotion Professionals includes Health Diagnostic and Promotion Professionals, n.e.c. 2006 figure also includes Health Professionals, n.f.d. and Health Diagnostic and Promotion Professionals, n.f.d.
- (l) 2006 figure includes Medical Administrators only. Health and Welfare Services Managers, n.e.c and Health and Welfare Services Managers, n.f.d. were included in Other. 2001 figure is for Medical Administrators but not published separately due to quality issues and has been included in Other. 1996 figure is for Medical Administrators.
- (m) Nursing Support Worker and Personal Care Workers includes Therapy Aide, in 2006 includes Hospital Orderly, which in 2001 and 1996 was grouped with Nursing Assistants and Personal Care Assistants occupations because there was no such category.
- (n) 2006 figure includes Medical Laboratory Scientist, Counsellors n.e.c., Medical Laboratory Technician, Anaesthetic Technician, Cardiac Technician, Operating Theatre Technician, Pharmacy Technician, Medical Technicians n.e.c., Optical Dispenser, Optical Mechanic, Diversional Therapist, Massage Therapist, Personal Carers and Assistants n.f.d., Special Care Workers n.f.d., Natural Remedy Consultant.
- (o) 2001 figure includes Health Information Manager, Medical Laboratory Scientist, Medical Technical Officer, Primary Products Inspector, Anatomist or Physiologist, Safety Inspector, Admissions Clerk, Weight Loss Consultant, Massage Therapist, Natural Remedy Consultant.
- (p) 1996 figure includes Health Information Manager, Medical Laboratory Scientist, Medical Laboratory Technician, Medical Technicians n.e.c., Primary Products Inspector, Safety Inspector, Admissions Clerk, Weight Loss Consultant, Massage Therapist, Natural Remedy Consultant.
- (q) For some occupations, such as Nurses, Medical Practitioners, and Pharmacists, there are slight differences between the 2006 figures in this table and those in the *Health and community services labour force 2006*, and the *Aboriginal and Torres Strait Islander health labour force statistics and data quality assessment 2009* reports. These discrepancies are due to the impact of aggregating randomised data from data sets with different small cell distributions and the use of different occupation classifications (in the case of the second report).

Note: Numbers less than 10 are considered too unreliable for general use due to the impact of randomisation of small cell values to avoid the release of confidential data.

Source: AIHW analysis of ABS census data.

Table 3.12.2: Count and rate per 10,000 population of Indigenous and non-Indigenous persons in selected health-related occupations^(a), by state/territory and Australia, 2006 and 2011

State/territory of usual residence	2006				2011				% change in numbers 2006-2011	
	Numbers		Rate per 10,000 ^(b)		Numbers		Rate per 10,000 ^(b)		Indigenous	Non-Indigenous
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous		
NSW	2,017	176,947	146.3	295.1	3,058	210,206	177.9	329.6	51.6	18.8
Vic	469	145,031	156.6	314.1	703	175,708	186.1	348.0	49.9	21.2
Qld	1,593	105,242	125.6	297.4	2,418	136,521	156.0	346.7	51.8	29.7
SA	375	48,039	147.3	339.5	570	57,736	188.3	385.3	52.0	20.2
WA	590	54,929	101.1	310.9	806	69,667	116.5	342.9	36.6	26.8
TAS	222	13,165	133.0	302.4	307	15,930	157.0	350.1	38.3	21.0
NT	436	4,606	81.7	376.7	534	6,042	95.0	440.0	22.5	31.2
ACT	59	8,821	152.8	289.8	59	10,348	114.5	306.8	0.0	17.3
Australia ^(c)	5,764	556,814	127.4	306.0	8,455	682,206	155.0	344.1	46.7	22.5

(a) Occupation classification is based on 2009 Australian and New Zealand Standard Classification of Occupations (ANZSCO) codes. Classification codes for 2006 were mapped to fit that of 2011. See codes for breakdown of occupations included.

(b) Rate per 10,000 measures the health workforce available (numerator) to service the population (denominator). Denominators used in rates are the relevant Census total population counts by Indigenous status minus those where occupation is not stated.

(c) Australia total includes other territories.

Source: ABS and AIHW analysis of 2006 and 2011 Census data.

Table 3.12.3: Employed persons aged 15+, by health-related occupation^(a) Indigenous status, age and sex, Australia, 2011

	Age group						Total
	15–24	25–34	35–44	45–54	55–64	65+	
Indigenous health workforce^(b)							
	Number						
Male	198	448	585	533	252	45	2,061
Female	718	1,346	1,741	1,711	808	72	6,396
Total	916	1,794	2,326	2,244	1,060	117	8,457
	Proportion of Indigenous health workforce (%)^(c)						
Male	2.3	5.3	6.9	6.3	3.0	0.5	24.4
Female	8.5	15.9	20.6	20.2	9.6	0.9	75.6
Total	10.8	21.2	27.5	26.5	12.5	1.4	100.0
	Proportion of total health workforce (%)^(d)						
Male	0.0	0.1	0.1	0.1	0.0	0.0	0.3
Female	0.1	0.2	0.3	0.2	0.1	0.0	0.9
Total	0.1	0.3	0.3	0.3	0.2	0.0	1.2
	Proportion of Indigenous population^(e)						
Male	0.3	1.0	1.5	1.8	1.4	0.5	1.0
Female	1.1	2.9	4.1	5.2	4.2	0.6	2.9
Total	0.7	2.0	2.8	3.6	2.9	0.5	2.0
Total health workforce^(f)							
	Number						
Male	9,514	36,982	42,982	42,698	30,352	9,507	172,035
Female	42,062	119,582	124,180	138,011	83,132	11,664	518,631
Total	51,576	156,564	167,162	180,709	113,484	21,171	690,666
	Proportion of total health workforce (%)^(g)						
Male	1.4	5.4	6.2	6.2	4.4	1.4	24.9
Female	6.1	17.3	18.0	20.0	12.0	1.7	75.1
Total	7.5	22.7	24.2	26.2	16.4	3.1	100.0

(a) Occupation as defined by the Australian and New Zealand Classification of Occupations (ANZSCO).

(b) Includes Aboriginal, Torres Strait Islander, and both Aboriginal and Torres Strait Islander, employed in health related occupations.

(c) Age/sex as a proportion of total Indigenous health workforce.

(d) Age/sex of Indigenous health workforce as a proportion of total health workforce.

(e) Number in health workforce as a proportion of Indigenous persons of that age/sex, using the 2011 Indigenous Estimated Resident Population at 30 June 2011 based on the 2011 Census.

(f) Excludes persons where Indigenous status was not stated.

(g) Age/sex as a proportion of total health workforce.

Source: AIHW analysis of ABS census data.

Data sources and quality

Census of Population and Housing

The Census uses the standard Indigenous status question and it is asked for each household member. There are 4 principal sources of error in Census data: respondent error, processing error, partial response and undercount. Quality management of the Census program aims to reduce error as much as possible, and to provide a measure of the remaining error to data users, to allow them to use the data in an informed way.

The Census form may be completed by 1 household member on behalf of others. Incorrect answers can be introduced to the Census form if the respondent does not understand the question or does not know the correct information about other household members. Many of these errors remain in the final data.

The processing of information from Census forms is now mostly automated. Quality assurance procedures are used during Census processing to ensure processing errors are minimised. Sample checking is undertaken during coding operations, and corrections are made where necessary.

When completing their Census form, some people do not answer all the questions that apply to them. In these instances, a 'not stated' code is allocated during processing, with the exception of non-response to age, sex, marital status and place of usual residence. These variables are needed for population estimates, so they are imputed using other information on the Census form, as well as information from the previous Census.

Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once, or not at all.

The significant volatility in Indigenous Census counts and the variable quality of data on births, deaths and migration of Indigenous Australians do not support the use of the standard approach to population estimation. Due to the inherent uncertainties in estimating the Indigenous population, data that use these estimates should be interpreted with caution (for example, life-expectancy estimates and mortality rates). Given these uncertainties, changes in health outcomes such as mortality rates are difficult to assess.

Following each Census, assumptions are made about past levels of mortality to produce back cast population estimates.

In the 2011 Census, the ABS implemented improvements to the 2011 Census Indigenous enumeration procedures and enhanced the Census Post-Enumeration Survey. There was a 30% increase in the estimate of the Indigenous population between the 2006 and 2011 Censuses (ABS 2014). Population rates used in this edition of the Health Performance Framework were based on the updated population estimates.

List of symbols used in tables

- n.a. not available
- n.p. not available for publication but included in totals where applicable, unless otherwise indicated
- n.e.c. not elsewhere classified
- n.f.d. not further defined

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