



Pathology

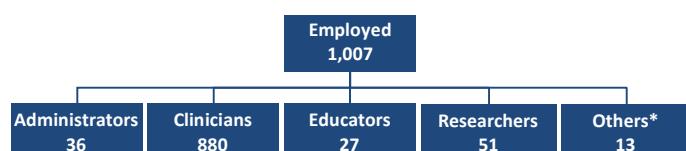
2016 Factsheet

Pathology is the medical specialty concerned with the study of the cause of disease and the ways in which diseases affect our bodies by examining changes in the tissues and in blood and other body fluids. A minimum of five years full-time advanced training through the Royal College of Pathologists of Australasia is required to practice in any of these specialities:

- **Chemical pathology** deals with the diagnosis and management of disease by use of chemicals present in the body fluids and tissues;
- **Clinical pathology** deals with the diagnosis and management of disease by the use of a wide range of diagnostic laboratory medicine techniques, including examination of the patient;
- **Forensic pathology** focuses on medicolegal investigations of sudden or unexpected death;
- **General pathology** deals with the diagnosis and management of disease by use of every component of laboratory medicine and every diagnostic technique, including examination of the patient;
- **Genetic pathology (Biochemical genetics and Medical genomics)** contributes to the multidisciplinary range of skills required within pathology services to aid in the diagnosis, management and treatment of patients with disorders arising from genomic mutations;
- **Haematology** encompasses both clinical and laboratory aspects of primary disorders of the blood as well as how other diseases affect the blood;
- **Immunopathology** encompasses the provision of expert diagnostic support for patients with immune disorders; and
- **Microbiology** involves the use of laboratory techniques to diagnose infectious diseases, recommend antibiotic therapy and to advise, correlate, coordinate and educate clinicians regarding aspects of the pathogenesis, epidemiology, prevention and management of infection.

Workforce

In 2016, there were 1,007 pathologists employed in Australia, of whom 31.2% worked in the private sector. Over 87% of pathologists who completed the 2016 National Health Workforce Survey indicated they were clinicians.



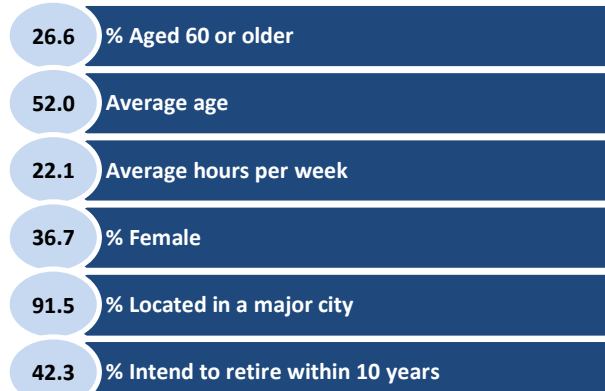
* Includes roles reported by survey respondents that did not fit predefined survey categories.

Demographics of clinicians

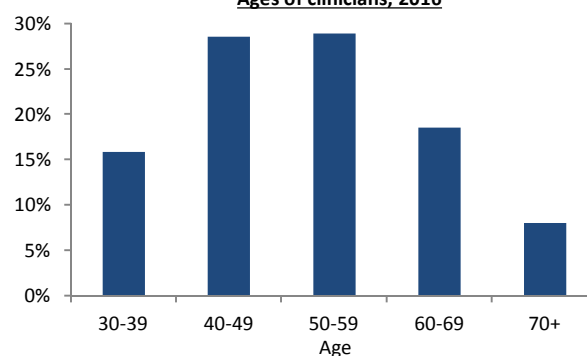
Males represented 63.3% of clinicians in 2016 and had an average age of 54.6 years. Females represented 36.7% of clinicians and were on average 7.1 years younger than male clinicians.

Category	% of clinicians	Average age	Average hours per week
Male	63.3%	54.6	22
Female	36.7%	47.5	22.3
Clinician total	100.0%	52	22.1

Quick facts of clinician workforce



Ages of clinicians, 2016



Distribution of clinicians

In 2016, most clinicians (91.5%) were located in a major city or a location considered as MMM1 under the Modified Monash Model classification system.

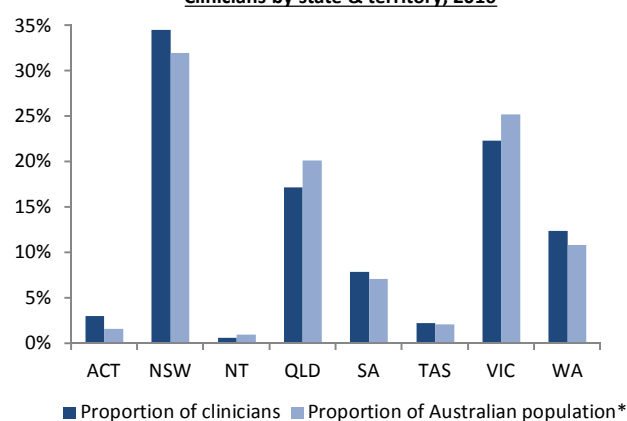
Location of clinicians by remoteness, Modified Monash Model (MMM*)

MMM category	1	2	3	4	5	6	7
%	91.5	5.5	2.7	0.1	0.1	-	0.1

* Further information on the Modified Monash Model is available at doctorconnect.gov.au

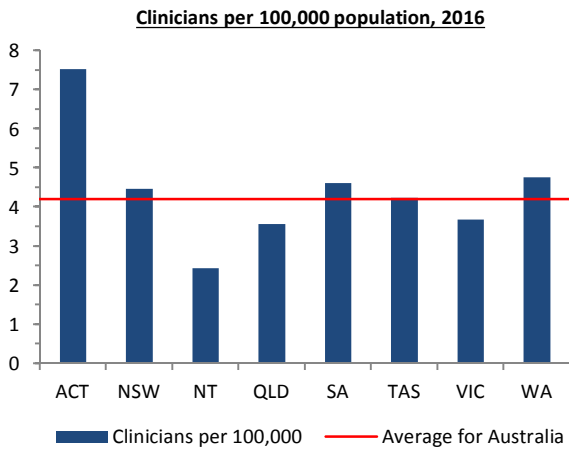
The largest number of clinicians was in New South Wales with 34.5% of clinicians indicating their principle place of practice was in this state.

Clinicians by state & territory, 2016



* ABS 3101.0 – Australian Demographics Statistics. Released 22/09/16.

The Australian Capital Territory had the highest ratio of clinicians in 2016 with 7.5 per 100,000 population. By contrast, the Northern Territory had the lowest ratio with 2.4 per 100,000 population.



New fellows

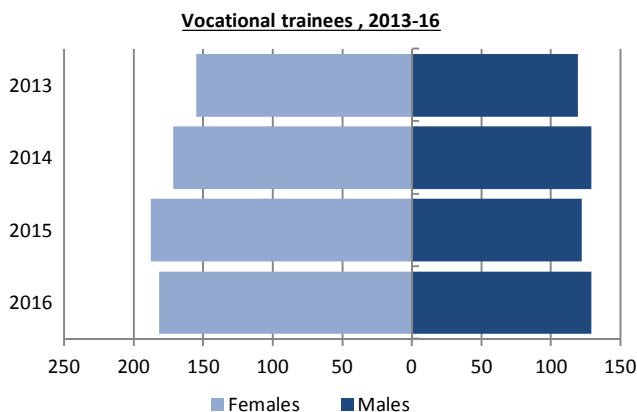
The number of female pathology new fellows increased by 43.5% between 2013 and 2015, whereas the number of males decreased by 26.7%.

Number of new fellows, 2013-15			
	2013	2014	2015
Males	30	24	22
Females	23	28	33
Total	53	52	55

Vocational training

The number of trainees in 2016 was 13.5% higher than the number in 2013.

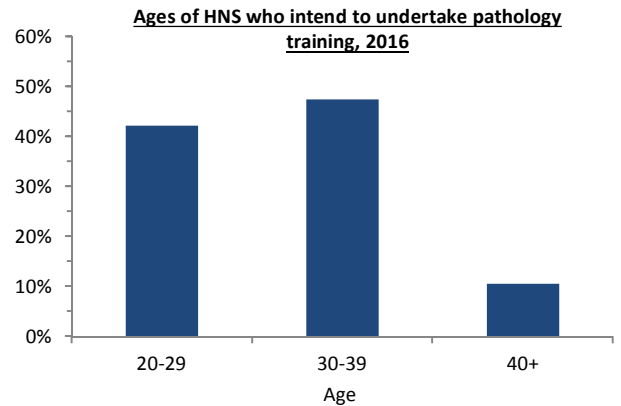
Trainee numbers, 2013-16			
Year	Females	Males	Total
2013	155	119	274
2014	172	129	301
2015	188	122	310
2016	182	129	311
Change 2013-16 (%)	17.4%	8.4%	13.5%



Vocational intentions

In 2016, there were 19 Hospital Non-Specialists (HNS*) who indicated their intention to undertake vocational training in chemical pathology, clinical pathology, forensic pathology, general pathology, genetic pathology, haematology, immunopathology and microbiology.

* A HNS is a medical practitioner employed in a salaried position mainly in a hospital. They do not hold a specialist qualification and are not training to obtain one. They include career medical officers, hospital medical officers, interns, principal house officers, resident medical officers and registrars.



Workforce dynamics indicator*

The workforce dynamics indicator highlights areas of concern in the future. The indicators measured and their current status is highlighted in the table below.

Note: The workforce dynamics indicators are for workforce assessment purposes only and are not intended to guide future training numbers.

* Further information on the workforce dynamics Indicator is available at health.gov.au



Indicator	Description	Status
Ageing of workforce	Workforces with higher average ages are more susceptible to higher exit rates due to retirements.	●
Replacement rate	This measure indicates whether trainee numbers are sufficient to replace the numbers leaving the workforce.	●
Duration of training program	This measure indicates how long it takes to train a replacement workforce.	●

References

- 1) National Health Workforce Dataset (NHWDs): Medical Practitioners 2016.
- 2) Australian Medical Association (AMA) Career Pathways Guide.
- 3) Royal College of Pathologists of Australasia.
- 4) Medical Education and Training Report 1st edition (Unpublished).
- 5) ABS 3101.0 – Australian Demographics Statistics. Released 22/09/16.
- 6) National Medical Training Advisory Network (NMTAN) – Prevocational Doctor Factsheet Methodology Paper.

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