Research Report, May 2026

Australian Medical Workforce supply is high

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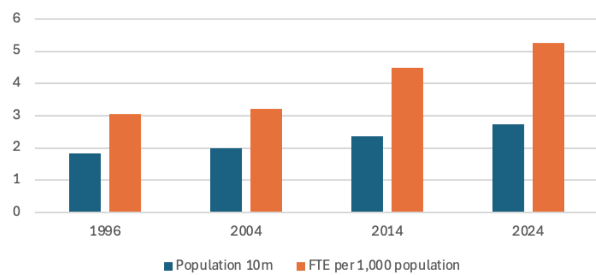
Abbreviations

- AHPRA Australian Health Practitioner Regulation Agency
- AIHW Australian Institute of Health and Welfare
- DoH Department of Health
- DVA Department of Veteran Affairs
- ED Emergency Department
- FTE Full time equivalent
- FY Financial Year
- GDP Gross Domestic Product
- GP General Practitioner, General Practice.
- HAH Hospital at home
- HOTH Hospital in the home
- HAQI Healthcare Access and Quality Index.
- HMO Hospital Medical Officer
- HWF Health Workforce
- MET Medical Education and Training
- MMM Modified Monash Model
- MWF Medical Workforce
- OECD Organisation for Economic and Cooperative Development.

Introduction

Figure 1. Australian Full Time Equivalent (40 hours per week) working doctors per 1,000 population 1996 - 2024 compared to population. AIHW Medical Labour Reports and DoH Health Workforce Datatool.



Australia is not short of doctors. It is popularly assumed that there is a shortage of doctors but, properly calculated, Australian Medical Workforce (MWF) supply is, in terms of headcount against rapidly growing population, near highest in the OECD.[2] It is also increasing rapidly, and well ahead of reduction in working hours and retirements. Both medical school output and overseas recruitment have increased hugely this century, increasing full time equivalent (FTE) supply despite reduction in working hours (Figure 1).[3] Medical workforce supply is not related, at least directly, to rank on the (world) Healthcare Access and Quality Index (HAQI).[4] Canada (4th) and the Netherlands (3rd) rank above Australia (7th) on the HAQI but both have a considerably smaller medical workforce headcount and of the other 9 in the top 10 only Italy (10th) has higher supply.[5] It is promptness of access to quality

[2] All supply data in this paper is adjusted to 1,000 population.

[3] This century Domestic graduate output has increased 168% to 3,201 in 2024, and International fee-paying graduates by 257% to 732. The active workforce proportion of doctors with basic training overseas has increased from around 20% to 41%.

[4] Lancet Global Health 2022; 10 e1715-43. Contact author Lozano R. Assessing the performance of the **Healthcare Access and Quality Index** (HAQI) overall and by select age groups, for 204 countries and territories: a systematic analysis from the Global Burden of Disease study 2019. https://pmc.ncbi.nlm.nih.gov/articles/PMC9666426/. The studies have used death rates for 32 identified individual and groups of conditions that "should not occur in the presence of timely, quality Health Care". Deaths from accident and injury are not included. The top 10 OECD countries on the HAQI in order for 2019 were Iceland, Switzerland, Netherlands, Canada, Norway, Sweden, ***Australia (7th),*** Ireland, Spain, and Italy. **Note**: Use of the original article rather than AI is advised to check country performance.

[5] For the top 10 OECD countries on the Healthcare Access and Quality Index in 2019, the 2023 OECD reported **MWF supply** per 1,000 population was, in order: Iceland 4.5, Switzerland 4.5, Netherlands 3.9, Canada 2.7, Norway 5.0, Sweden 4.5, ***Australia 4.2*** (but 5.03 when provisional and limited registrants are included), Ireland 3.8, Spain 4.4, and Italy 5.4. Only Italy and Austria (13th) 5.7, were more highly supplied than Australia. OECD Health at a Glance 2025, Fig. 8.4. OECD data for full workforce equivalence by hours worked is not published. Females work fewer hours but their proportion is comparable. For the top 10 HAQ Index countries in order, the **female proportion** of MWF in 2023 was Iceland 50%, Switzerland 47%,

healthcare in acute illness, whether at hospitals or in the community, that determines mortality rates and HAQ Index ranking. Such access varies widely from country to country.

An emphasis on bed-based care, with large numbers of hospital-based doctors, is driving the increase in the Australian Medical Workforce. The expense of high hospitalisation rates could be justified were they related to high Healthcare Access and Quality Index (HAQI) ranking. However they are not. Table 1 provides relevant data to this paragraph. Both Canada and the Netherlands have hugely lower acute overnight hospitalisation rates than Australia, which has near highest in the OECD.[6]

GP supply against population (OECD highest in Australia) also does not appear to directly relate to HAQ Index score, nor does a high proportion of doctors as GPs.[7] Hospitalisation rates are not related to *ED attendance* which is low in the Netherlands and high in Canada. Countries with low and reducing hospitalisation rates appear to have *effective* 'Hospital at Home' (HaH) systems for managing low acuity acute care, diverting patients from bed to home-based care. The Australian 'Hospital in the Home' (HiTH) program has not achieved this.

Table 1: Comparison of Top 10 HAQ Index Rank, GP supply, ED attendance and hospitalisation rates.

Country HAQ Index top 10 2019^Rank	Ice[1]	Swi[2]	Neth[3]	Can[4]	Nor[5]	Swe[6]	Aus[7]	Ire[8]	Spn[9]	Italy[10]
GP supply per 1,000 popn. (2019 OECD)	0.62	1.14	0.94	1.32	0.88	0.60	1.50	0.84	0.95	0.70
ED Attendance/k popn. (EUSEM 2017)	479	209	124	476	250	267	334	264	595	339
Overnight Hospitalisations/k (OECD **2019**)	107	155	89	82	153	124	164	133	114	100
Overnight Hospitalns/k (OECD **2000** ONY)	171	129	90	94	154	157	154'05	142	116	163

Sources: OECD Curative care hospitalisations. OECD data explorer. OECD Health at a Glance 2021. EUSEM (European Society for Emergency medicine) 2017. ***Note***: Data matched as far as possible to 2019 HAQ Index figures. Rates simplified to per 1,000 population.

The challenge for Australia is to shift acute medical care into the community and downsize hospitals. This would require radical change in Healthcare Administration and a redefinition of State and Commonwealth responsibilities. *It was recommended by the Productivity Commission in 2017.*[8]

What are the numbers?

Based on reliable information systems as referenced in this study, the Australian working Medical Workforce is undercounted. What is the correct number? OECD criteria include

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Netherlands 59%, Canada 47%, Norway 54%, Sweden 52%, *Australia 45%,* Ireland 47%, Spain 48%, and Italy 58%. OECD Health at a Glance 2025, Fig. 8.7

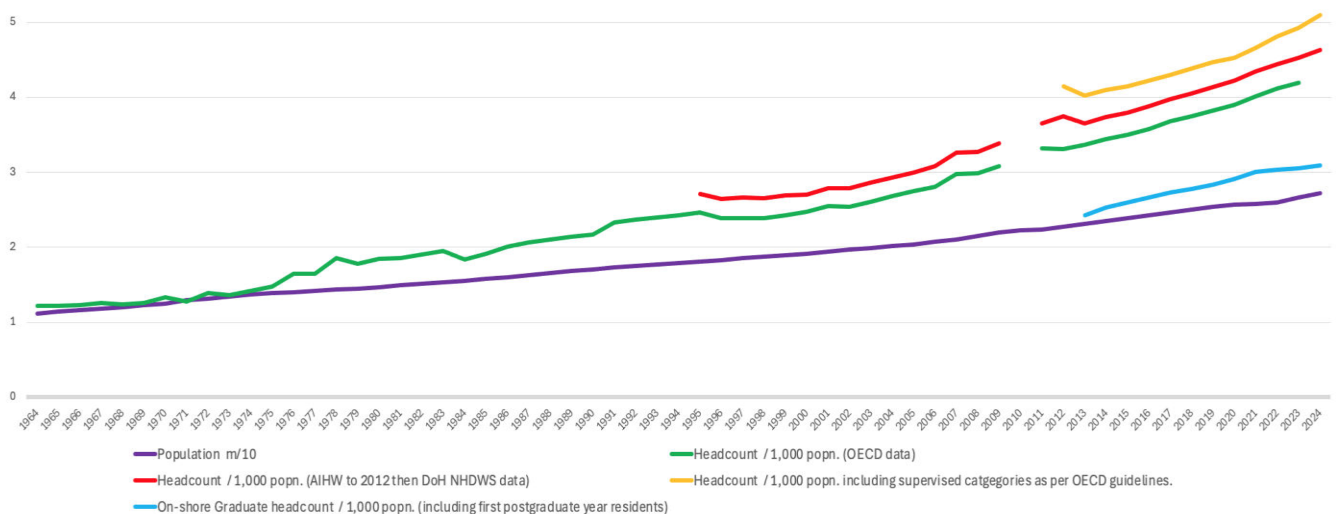
[6] **Acute overnight ('curative') hospitalisation rates** in the top 10 HAQ Index countries are given in Table 1. There appears to be a generalised tendency in the OECD for rates to reduce, though patterns were disrupted during the Covid 19 pandemic. Outside the top 10 only Germany (HAQI 20th) 233, Austria (13th) 224 and Czechia (32nd) 179 are ahead of Australia. OECD data-explorer.

[7] As a proportion of MWF, GPs in the **top 10 OECD countries on the Healthcare Access and Quality Index** in order in 2019 were: Iceland 13%, Switzerland 25%, Netherlands 24%, Canada 47%, Norway 18%, Sweden 14%, ***Australia 30%,*** Ireland 24%, Spain 21%, and Italy 12%. OECD Health at a Glance 2025 Figure 8.8 (Spain calculated). This commonly referenced metric is not particularly relevant to access.

[8] Productivity Commission. 'Shifting the dial'. 2017 Supporting paper no 1. P62. See also 'Radical reforms to empty hospitals' The Australian 9.9.19.

partly registered doctors working under supervision.[9] Australia is now the only country that does not include this category in its workforce count.[10] The Australian Department of Health reports all fully registered doctors in the 'National Health Workforce Dataset' but has excluded partly registered doctors since the establishment of the (national) Australian Health Practitioners Registration Authority (AHPRA) in 2011. The OECD makes its own estimate of the number of doctors in practice for its countries, which for Australia has been consistently lower than that provided by the AIHW since it first reported in 1995.[11]

Figure 2. Published Australian practising medical practitioner supply per 1,000 population 1964 - 2024. Sources OECD data explorer, AIHW annual Medical Labour Force reports, DoH National Health Workforce Data set online 'datatool' and AHPRA 3rd quarter registrant data. Note: the yellow line represents total workforce as per OECD criteria.



Measured against population per 1,000 there are therefore three graphs of medical workforce supply, namely those calculated by the OECD (Figure 1 green line), by the AIHW and DoH (red line)[12] and a total with added Australian Health Practitioner (AHPRA)-reported provisional and limited registrants (yellow line).[13] Growth in supply started to exceed that of

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[9] OECD Health Statistics 2025. Definitions, Sources, and Methods. '**Practicing physicians**' includes- Practising physicians who have completed studies in medicine at university level (granted by adequate diploma) and who are licensed to practice- *Interns and resident physicians (with adequate diploma and providing services under supervision of other medical doctors* during their postgraduate internship or residency in a healthcare facility)- Salaried and self-employed physicians delivering services irrespectively of the place of service provision- Foreign physicians licensed to practice and actively practising in the country- All physicians providing services for patients, including radiology, pathology, microbiology, haematology, hygiene. Details for most countries are provided.

[10] Ibid OECD Health Statistics 2025, Definitions, Sources and Methods, Practising Physicians. Of other OECD countries only France and Italy followed this practice and both ceased to do so in 2020, which took Italy to near top of the table. Countries reporting working and non-working doctors together and hence high totals are Greece, Portugal, Argentina and Chile. OECD Health at a Glance 2025 Figure 8.4.

[11] The OECD excludes "administrators, teacher/educators, researchers, public health physicians, occupational health physicians and 'other non-clinicians' i.e. medical practitioners who spend most of their weekly working hours not engaged in clinical practice".

[12] Internal Australian reporting is derived from annual medical registration questionnaires as entered into the National Health Workforce Dataset and published by the Department of Health in the on-line 'data-tool' for 2013 onwards.

[13] Provisional and Limited Registrant numbers can be found in AHPRA Medical Board quarterly registrant data. https://www.medicalboard.gov.au/News/Statistics.aspx. September quarter data is used, when the registration process is complete, while December quarter data includes both incoming and outgoing first year on-shore domestic and non-domestic graduates. Prior to the establishment of the AHPRA there was also no mechanism to report these categories. In contrast with the Medical Council of New Zealand, the AHPRA does not report the basic training locus of medical registrants.

population in 1974 (purple line). On-shore ('Australian trained') working graduate supply itself pulled ahead of population from 2012 (blue line). [14] An acceleration in growth occurred during the pandemic from increased entry of doctors from overseas.

In 2024 the Department of Health (DoH) reported 126,030 *working* doctors with full registration (omitting partially registered doctors), a 44% increase from 2014, of whom 80,193 were Australian trained.[15] The balance of 45,837 are assumed in this study to have had training overseas (increased in number by 45% from 2014). There were an additional 12,549 Limited and Provisional registrants not reported in the total, bringing the 2024 number of working doctors by OECD criteria to 138,579 (5.1 per 1,000 population of 27.4m).[16] 3,616 of these were Australian-trained, working in their first postgraduate year, bringing the total Australian-trained workforce to 83,842.[17] This indicated an additional 8,933 who had graduated overseas but who were as yet without full registration, bringing the total of overseas-trained doctors to 54,770, or 39.5% of the total working headcount.

Public Hospitals are the main driver of workforce increase. Their 2014-24 increase of reported fully registered doctors was 60%.[18] The proportion of fully registered Australian specialist doctors in hospitals, (including 2,000 GPs), fluctuated between 62% and 70%. The number of overseas-trained provisional and limited registrant doctors working in hospitals is not reported. A rough estimate for whole hospital medical headcount (65,257 in 2024), includes 62% Australian-trained (from 67% in 2021 before the pandemic period influx of overseas recruits).

78,285 of working MWF were trained to specialist status in 2024, and 60,474 (44%) were not. The headcount of non-GP specialists doubled from 1996 to 2014 and increased by a further 51% to 45,728 in 2024, when the proportion with basic training in Australia had dropped from 70% to 68%. Vocationally recognised (fellow or fellow equivalent) GPs increased 34% in number over the decade.[19] Future specialist headcount increase can be gauged roughly from the number in advanced training (3-5 years) as a proportion of those working. This was 43%

[14] Australian trained medical graduates include Domestic Commonwealth Sponsored graduates as well as domestic and international fee-paying graduates. Now that there are several Australian university overseas campuses it is not certain how these will be classified in workforce statistics. While New Zealand graduates are eligible to work in Australia they are classified as overseas trained.

[15] DoH HWD Data tool.

[16] Provisional and Limited registrants since 2013 have not been included in the MWF total by AIHW and presumably not by the OECD despite OECD guidelines. They are found in APHRA quarterly medical registrant data, totalling 12,549 in 2024. Provisional registrants undergo one year's mandatory supervised employment after acquisition of their basic medical degree. Limited Registrants carry registration only for the period that they have employment and must pass the AMC examination or acquire specialist recognition to be given full registration. Off-shore (overseas) trained graduates with limited and provisional registration increased from 4,942 in 2018 to 8,933 in 2024.

[17] The number of Australian-trained Provisional Registrants is to be found on the Medical Education and Training web site https://hwd.health.gov.au/met-primary/index.html (Table 3.4).

[18] Provisional and limited registrants are not separately reported for hospitals but are mostly to be found in hospitals. They totalled 16,374 in 2024. Their overall numbers increased substantially during the pandemic. AHPRA quarterly medical registrant data.

[19] DoH GP Statistics. Vocationally recognised GPs now nearly all have formal specialist fellowship as the grandfathered category phases out, but irregularity in the collection of data necessitated a substantial correction in the 2021 tables, putting a 10 year comparison in doubt.

in 2023 for non-GP and 24% for GP specialists, emphasising the much lower priority given to General Practice.[20]

Workforce inputs, and the rising proportion of overseas graduates.

Australian MWF supply is high. Until around 2004 Australia was in line with other Anglophone countries [21] in maintaining lowish Medical Workforce supply per head of population.[22] It then embarked upon medical school expansion and greatly increased overseas recruitment.[23] Supply went well ahead, despite Australia's population expansion and is now nearly the highest in the OECD.[24]

The on-shore medical graduate output has, by itself, been adequate for maintenance of supply per 1,000 population (Figure 1 blue line). It has stayed ahead since 2013, before flattening during the pandemic period, with the surge of overseas migration. The first-year medical school intake grew from 1,660 in the year 2000 to 3,737 in 2014 and then to 4,691 in 2024. Nine new medical schools were established by 2008.[25] The proportion paying fees, including both international and domestic undergraduates has varied from 15% to 20%. Annual numbers of medical graduates increased from 1,400 in the year 2000 to 3,437 in 2014 and 3,933 in 2024, of whom 3,674 obtained first year hospital placements.[26] Total annual graduates appear to be heading towards 5,000 over the next decade, including those in off-shore campuses. [27]

There has been a major increase in doctors recruited from overseas. In 2023 Australia ranked 7th in the OECD for its proportion of 'foreign-trained' doctors.[28] The overseas-trained graduate proportion of MWF had reached 18% of total in 1995 when first reported.[29] As

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[20] This is calculated from DoH data for doctors accessing GP Medicare rebates, non-vocationally recognised added to GP Trainees to assess those in training. A calculation of training numbers from the Medical Education and Training website compared to working Vocationally Registered is only 16%. Either way, the number of doctors in specialist GP training is far below that of non-GP specialists.

[21] OECD published data for practising physicians per 1,000 Anglophone country population in the year 2000.

	Aust	Can	Ire	NZ	UK	USA	OECD	
2000	2.5	2.0	nr	2.2	2.0	2.2		
2023	4.2	2.7	3.8	3.7	3.4	2.7	3.9	Note underestimate for Australia.

[22] "Of particular concern is whether more doctors lead to a greater availability and quality of care, or to overservicing and increased health costs". AIHW 'Australia's Health 1st edition 1988 p167. (Actual supply was 2.1/1,000 population from 1.9/1,000 10 years previously). Graduate output was 1,376 in 1980 1,395 in 1986, 1,084 in 1990, and 1,327 in 1996 (various sources).

[23] The change in MWF policy coincided with the 2004 Commonwealth Medicare Plus package, designed to counteract falling Bulk-billing rates in GP. There were no overt discussions or published material related to the policy change. The Australian Medical Workforce Advisory Committee (AMWAC), which had directed conservative MWF policy for a decade, was quietly disbanded in 2005.

[24] Source material is varied but Australia's population growth is consistently high within the OECD.

[25] 'A brief history of medical education and training in Australia'. Geffen L MJA 201 (1) 7th July 2014.

[26] https://hwd.health.gov.au/met-primary/index.html. Chapter 2 and Table 3.4. Available first year hospital places have been low some years and the proportion not having to go overseas for the PGY1 placement has been as low as 28% in 2010 but has been mostly over 50% in the last decade and up to 66% in 2021. Total first year (PGY1) places surprisingly increased only 8% from 3,366 in 2014 to 3,649 in 2024 after doubling in the first part of the century. Considerably more will be required.

[27] Ibid MET Chapter 2. The two Campuses are Monash Malaysia and Queensland USA, with a combined 2024 intake of 84.

[28] OECD 'Health at a Glance' 2025. Figure 8.23. Within the OECD Australia is one of 7 countries with over 30% of 'foreign-trained' doctors. Average OECD proportion of foreign trained working doctors in 2023 was 20%, dwindling to 1% for Italy. Above Australia, notwithstanding its underquoted proportion (31%) are Israel 59%, Norway 44%, Ireland 43%, New Zealand 42%, Switzerland 40% and the UK 38%.

[29] AIHW Medical Labour force 1995 ch7.

mentioned, this study calculates that it is now around 40%.[30] International recruitment has been energetic, with some hundreds of testing stations worldwide.[31] There has been much effort to smooth the recruitment and settling-in process.[32] Most recruitment is into junior public hospital workforce. Slightly more in due course register as Non-GP specialists? than GP specialists either trained overseas or after arrival.[33]

Australia shares a propensity with central European countries for high hospitalisation rates, engendering the large hospital-based medical workforce.[34] Of the OECD top 10 HAQ Index countries, Australia's acute overnight hospitalisation rate is highest (Table 1). Anecdotally, hospital MWF is in surplus. Overseas medical recruits to Public Hospitals rose from 26% to 32% of total over the decade.[35] Despite some reduction in working hours, total Australian Public hospital FTE medical workforce increased by 57% from 2014 to 2024.[36] Female hospital working doctor headcount increased by 74%, and their total hours worked by 61%. Male headcount increased by 44%, and total hours worked by 20%.[37] *Hospital workload was static*. Total day and overnight hospitalisations together increased only 4%.[38] Nursing numbers increased by 36%, FTE by 38%.[39]

Were levels of MWF input to remain at 2024 levels, the total headcount could be expected to rise to around 150,000 by 2034. This would equate to 4.8 per 1,000 population of the expected population of 31.3 million. However with inputs inexorably increasing, the headcount is more likely to rise rather than fall.

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[30] Data-tool (National Health Workforce dataset) capture of Australian-trained doctors is assumed to be complete. To the number detailed in the on-line HWD data-tool are added first post-graduate year (PGY1) doctors detailed on the DoH Medical Education and Training (MET) website. https://hwd.health.gov.au/met-primary/index.html, Prevocational Medical Training Index. The data-tool provides numbers for New Zealand Trained doctors, other overseas trained doctors and a 'not stated' category (assumed to be foreign-trained). The PGY1 total is assumed to compromise doctors trained in Australia and is subtracted from total provisional and limited registrants to provide an estimate of working non-Australian-trained doctors yet to obtain full registration who have been excluded from the data-tool total.

[31] The screening test is the first part of the Australian Medical Council examination, the second part of which must be later passed to obtain full registration unless the doctor obtains Specialist College fellowship recognition in one of several ways.

[32] 'Lost in the Labyrinth'. Parliamentary Inquiry 2012.

[33] In 2024 there were 14,714 non-GP and 14,264 GP specialists not identifying themselves as Australian trained. DoH Health Workforce datatool.

[34] OECD highest Hospital discharge rates in 2023 were (Bulgaria 322/1000), Germany 202, Austria 193, Romania, Australia 164, Lithuania 162, and Czechia 159, OECD average 128/1000. OECD 'Health at a Glance' 2025. Australian data commences in 2004. Other OECD countries have for the most part been reducing hospitalisation rates this century,

[35] For 2024, the DoH (Datatool) identifies 36,963 fully registered domestic medical graduates identifying as working in hospitals, not counting 3,600 first year graduates (2023 figure pending 2024 data). Most of the other 7,178 provisional and limited registrants from overseas are also working in hospitals.

[36] Doctors located in hospitals in 2024 were reported by DoH as 54,498 (excluding provisional and limited registrants), a ten year increase of 57%. FTE[40] numbers were reported as 59,600 (AIHW hospital resources), a 42 % rise from 41,988 in 2014-15. Private hospitals have a very small number of salaried junior medical officers, the workload otherwise being carried by visiting specialists.

[37] Calculated for this study using data from the DoH HWD Datatool.

[38] AIHW news release 28.5.25. https://www.aihw.gov.au/news-media/media-releases/2025/2025-may/hospital-admission-rates-in-australia-have-increased. Of 11.6m, 36% were overnight, which cost 7.5x more than same day (IHPA 2015).

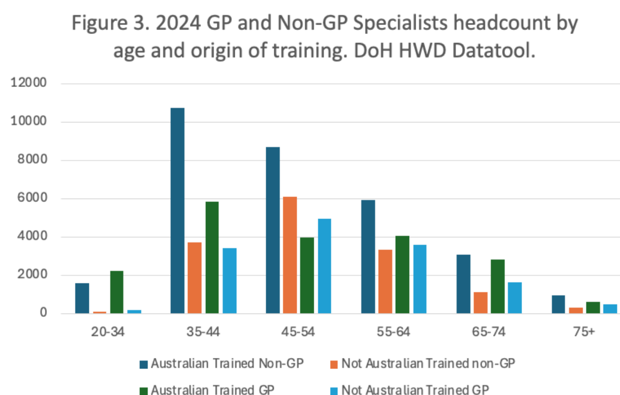
[39] DoH On-line datatool data. Weekly nursing hours worked increased from 34.5 to 35.1.

The specialties.

The rate of Australian Non-GP specialist training has accelerated greatly this century and particularly in the last decade.[40] Individual specialty numbers have not been constrained and at least in one instance have resisted reduction.[41] Numbers increased by 47% over the 2014-24 decade to 45,728, despite an estimated 17% of them retiring.[42] Judging by the numbers now in training, a further 44% expansion to over 65,000 can be anticipated over the decade to 2034.[43]

The calculated full-time equivalent (40 hours) of non-GP specialists increased by 19% from 1.46/1,000 population to 1.74/1,000 over the decade,[44] This % increase is less than that of headcount because of population increase and lower working hours Non-GP Specialist training serves as an incentive to keep up the numbers of junior hospital doctors. Non-GP specialist trainees have also been better paid than GP trainees.[45] Junior hospital doctors are sequestered early on into non-GP specialist basic training streams (6,183 in 2024), as well as into 'unaccredited' surgical training positions before entering advanced training (11,804 in 2024).

Rather than wait for the greatly increased numbers of graduates to come through, migrants with specialty training have been recruited from overseas. For 2013-22, 12.5% of new non-GP specialists already had specialist qualifications obtained overseas and an additional 19.6% were overseas recruits who had joined specialist training programs in hospitals.[46] The proportion of all non-GP specialists with their original basic training in Australia reduced from 70% in 2014 to 68% (31,014 in 2024).[47] The growth of individual specialties in some cases has



[40] The annual number of new non-GP specialist fellows rose 34% from 1,763 in 2013 to 2,586 in 2023, double the population growth. Numbers are to be found in Medical Training Review panel reports from 2008 to 2014, and DoH Medical Education and Training reports from 2016, absent 2015.

[41] The DoH pointed out in 2017 that Emergency Physician workforce was heading towards 100% oversupply. DoH 'Australia's Future Health workforce: Emergency Medicine'. This has had no effect on training rates.

[42] Working Non-GP Specialists increased from 15,744 in 1996 to 30,310 in 2014 and 45,728 in 2024, AIHW Trained output for 2014-2024 was 20,049. Medical Labour Force reports, DoH Health Workforce on-line datatool. Medical Education and Training webpage.

[43] Excluding unaccredited surgical trainees, there were nearly 17,267 identifiable non-GP specialist trainees, equivalent to 38% of 45,728 working non-GP specialists in 2024. Advanced Non-GP specialist trainees, taking 3-4 years to qualify as specialists numbered 11,084, implying in excess of 25,000 newly trained specialists over the next 10 years, with around 7,000 expected retirements, increasing non-GP specialist workforce by at least 44% to 65,600. In-advanced training as a proportion of working non-GP specialist workforce was 20% in 2008, 27% in 2013 and 47% in 2023.

[44] DoH Health workforce on-line datatool hours worked.

[45] AusDoc 28.5.20. NewsGP 30.1.25. Although incentive payments are coming in to encourage GP training uptake, hospital doctors have various leave and overtime benefits that also make them better off.

[46] New non-GP specialists for 2013-2022 were 39,435, 4,464 with specialist qualifications from overseas and 7,741 overseas recruits to the training programs. Medical Training Review Panel and Medical Education and Training annual reports and MET website.

[47] DoH HWD Datatool data.

been excessive.[48] It is difficult to see how the emerging large number of young Australian-trained graduates (Figure 3) will be accommodated in the already crowded Non-GP specialties. The physician specialties are more crowded than the surgical.[49]

Data for the supply of GP specialists has been somewhat inconsistent. In 2021 the reported number jumped by 5,000. This took them ahead of the number of reported Vocationally Registered (VR) GPs.[50] 'GPFTE' (ie all trained and untrained doctors accessing primary care rebates combined), as used by the DoH, increased over the 2014-24 decade by only 6%, from 1.04/1,000 population to 1.10/1,000. [51] As well as from the population increase, this was because the proportion of females in GP increased from 40% to 50% of total, providing only 66% of hours per doctor compared to male GPs.[52] Australian-trained female GP specialists are also becoming very much more numerous than males.[53] GP Trainees doubled in number to 6,200 but 38% are part time.[54] They are restricted in patient contact for learning purposes under the rules of their training.[55] The GP training program has been undersubscribed all century. [56]

In 2024 only 50% (16,344) of recognised GP specialists were Australian-trained. [57] This is a pity, as Australian undergraduate medical training was reorientated towards General Practice in the 1990s. Offshore recruitment therefore is likely to be diluting productivity.[58] GP Specialist training has been augmented with ancillary streams of overseas recruits working

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[48] Major Specialties significantly enlarged over the 2013-23 decade were (in brackets in advanced training as % of those working): Emergency Physicians 138% (53%), Intensive Care 69% (73%), Paediatricians 82% (41%), Adult Physicians 59% (24%), and Radiologists 47% (20%). Some significant specialties with lower rates of growth were Anaesthetics 38% (15%), Ophthalmology 19% (8%), Surgery 28% (18%), Pathology 18% (32%). Ophthalmologist training to fellow headcount ratio is only 14%, while average income is $660,000, far above other specialties (Gratton).

[49] Keeping surgeon numbers down improves volume of practice and hence level of expertise. It also increases average income.

[50] VR GPs (DoH Primary Care GP statistics) included a large number grandfathered from 1989 but these have more or less phased out. Total and working GP specialist fellows are identically reported in the DoH HWD Datatool, so the VR number must be relied upon for supply for the time being.

[51] GPFTE is calculated in DoH Primary Care data for an estimated 40 hour week based on billing patterns. Female specialist GPs increased from 44% to 50% of total GP specialists. Female Australian-trained GP specialists report 31 hours while their overseas-trained counterparts report 35 hours a week.

[52] Females in GP provided an average of 3,375 service each in 2024 against 5,097 for males. DoH Primary care GP Statistics.

[53] Australian-trained GP Specialists 2024

	20-34	35-44	45-54	55-64	65-74	75+	Total
Male	919	2,264	1,645	2,082	1,886	512	9,308
Female	1,319	3,590	2,354	1,975	946	97	10,283

[54] 38% of GPs in training were listed as part time in 2024. https://hwd.health.gov.au/met-primary/index.html.

[55] GP trainees provided an average of 3,374 services each in 2024 against 5097 for VR GPs. DoH Primary care GP Statistics.

[56] The GP training program has been consistently undersubscribed by (satisfactorily entrance tested) candidates, despite substantial overseas entry. The shortfall from 2019 to 2024 was 1,493 places (RACGP Health of the Nation annual reports). The reported entrance for 2025 was 1,544 and AI offers 1,772 for 2026. These numbers include several modified pathways for overseas doctors The 'Fellowship support program' for overseas recruits placed directly into rural practice numbered around 496 in 2025 but this category ('non-Vocationally registered') has hugely reduced in number (DoH GP statistics).

[57] DoH HWD Datatool. The proportion of overseas graduates working in GP remained at 24% from 1984 to 1994, but rose to 28% in 2004, 36% in 2014 and 44% in 2024. DoH GP statistics 2014, 2018, 2020 and 2024. The non-vocationally registered GP category, mostly overseas recruits working in locations of need, numbered 5,581 in 2014 but reduced to 1,618 in 2024. GP registrars in training accessing GP Medicare rebates increased from 2,830 to 6,200 over the same period (24% are part time, mostly female), so probably include.

[58] Overseas recruits miss the first year generalist hospital rotation. Experience in emergency and paediatric medicine is essential for safe General Practice. Around two thirds of GP trainees have this experience either in ED or in paediatric units. Williames S et al 'Are we preparing Victorian general practice registrars to be confident in all aspects of primary care paediatrics?' AJGP V49,11 November 2020.

required periods, initially under supervision, in Areas of Need.[59] An analysis of age cohorts appears to show significant dropout (Table 2) over the decade from the GP workforce in the 40-54 age group, probably of overseas recruits who had not obtained specialist fellowship.[60]

Age cohorts, increases and exits. The 35-40 year working life of onshore graduates.

On-shore graduate output has increased enormously this century. Around 89,000 graduates have been trained in Australia since 1980 (both domestic and international fee-paying).[61] Of these 62,598 (70%) graduated from 2005 to 2024 and 83,793 (94%) were working in 2024 in Australia, including first year postgraduates. Among them 50,608 (60%) were working as specialists, 39% were GPs and 61% non-GPs. 47% were Female. Medical school output has been steadily increasing, yielding an increase in first year hospital entry of 31% for the last decade over the one previous.[62] Hospitals on the other hand have not waited for graduates to come through but have been recruiting ad hoc from overseas to fill newly created later year positions.[63]

Table 2: Australian working Medical Workforce age cohorts 2014 and 2024

	Prov/Lim	20-34	35-44	45-54	55-64	65-74	75+	Total		
2014	8,447	20,531	23,941	19,693	14,804	7,084	1,700	96,200	**Input**	**54,895**
2024	12,549	30,855	36,924	27,486	18,688	9,506	2,571	138,579	**Increase**	**42,379**
Change			+16,393	+3,545	-1,005	-5,298	-4,513	-1,700	**Retired**	**12,516**

Sources: DoH Health Workforce Datatool, AHPRA quarterly medical registrant data. ***Notes***: All graduates inside and outside Australia are included. Prov/Lim indicates Provisional and Limited Registrants (excluded from datatool), for whom age analysis is not available, and who are mostly under age 45. Retirement is calculated from decrease of age cohort 10 years on.

Workforce planning requires monitoring of retirements. The total input is calculated here by adding estimated retirements from older age groups to the observed increase in numbers. Any Australian-trained attrition at a younger age is disguised by the input of older overseas doctors. [64] Table 2 compares 2014 and 2024 by age cohorts. Provisional and Limited registrant ages, (16,374 in 2024) are not included for want of data. Working workforce input was 54,895 for the decade with retirements of 12,516, yielding the increase of 42,379. Similar tables can be drawn up for workforce categories such as domestic, overseas, and all (GP and non-GP) specialists.

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[59] Areas of need are currently described as ‘Distribution Priority Area’ for GPs and ‘District of Workforce Shortage’ for non-GP specialists. They include outer metropolitan areas and are subject to annual review. Required service is 5-10 years depending on remoteness.

[60] See Table 2. This has not occurred in the fellow GP group.

[61] Medical Training Review Panel and Medical Education and Training Reports.

[62] For the decade to 2024 First year entry to Public hospitals was 34,538 compared to 23,914 in the 2005-2014 decade. Fee-paying international students not obtaining the mandatory year position and presumably returning to their own countries for it were 2,391 for the 2015-24 decade ad 1,755 for 2005-2014. Medical Training Review Panel and Medical Education and Training reports.

[63] The nature of salaried hospital workforces is to increase its number by all means, including by workplace behaviours to place pressure on supply chains. Specialists gain extra time for (allowed) private medical work by increasing their team size. The system had 5 years’ notice, from medical school intakes, that the so-called ‘tsunami’ of graduates was coming, but ignored the eventuality. States were induced to increase funding for the purpose and to rely on the Commonwealth to make up shortfalls.

[64] From 2014 to 2024 the increase in non-Australian trained MWF, net of attrition and return overseas, was 3,529 in the 35-44 age cohort, 2,941 for 45-54, and 265 for 55-64.

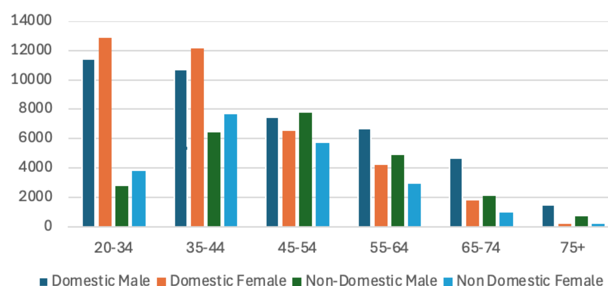
Table 3: Working, all GP (Doctors accessing GP rebates) age cohorts 2014 and 2024

	0-39	40-54	55-64	65-74	75+	Total		
2014	8,337	12,721	7,682	3,446	574	32,760	Input	17,879
2024	10,275	15,640	8,182	5.180	1,097	40,375	Increase	7,615
Change		+7,303	-4,539	2,502	2,349	574	Exited	10,264

Source: DoH Primary Care GP workforce Statistics 2021 and 2024. ***Notes***: This includes all doctors accessing non-referred Medicare GP rebates, namely GP registrars in training, non-vocationally registered GPs, and vocationally registered GPs (mostly fellows). The DoH Primary care section uses a different age break up from that used by the Health Workforce Data section published in the HWD datatool. 4,539 attrition from the 40-54 age group is noted, which might include international medical graduates who have not obtained GP fellowship. 65-74 and 75+ age numbers calculated using HWD Datatool data of over 75 age full registrants to allow comparison with Table 2.

The pattern in general practice has been different. A summary (Table 3) for the 2014 to 2024, decade reveals a 4,500 headcount drop from the 40-54 age group leading into the 55-64 age group. This is at odds both with the pattern for the general workforce (Table 2) and for GP specialists.[65] Attrition of overseas recruits not successful in passing the GP fellowship examination might be part of this. The corresponding number of 'non-vocationally registered' doctors in general practice (virtually all from overseas), training in area-of-need supervised practice dwindled to less than a third over the decade.[66] This decrease was compensated for by a doubling of GP trainees.[67] The headcount of the GP workforce with basic training overseas still increased by 4,905 over the decade, from 39% to 44% of all doctors accessing GP Medicare rebates. *The number of doctors with basic training in Australia and accessing GP rebates increased by only 2,710, a figure which is worryingly low.*[68]

Figure 2. 2024 Working Australian medical workforce *headcount* by age group, gender and origin of training. DoH online health workforce datatool.



Because of high levels of graduate output during the last two decades, (females exceeding males), the Australian-trained medical workforce is young (Figure 2), females predominating, with age group numbers much lower in subsequent age groups[69] The overseas-derived doctor age groups, because of their entry at all ages, form a bell-shaped curve, females peaking at a younger age than males. The 10 year cohorts can be imagined moving to the right over the next decade.

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[65] DoH Primary Care GP statistics published 2020 and 2024. This data base uses different age groupings of 0-39, 40-54, 55-64 and 65+.

[66] 'Non-VR' doctors in GP fell from 5,499 in 2014 to 1,618 in 2024. DoH Primary Care GP statistics.

[67] Note GP specialists were underestimated in the National Health Workforce Dataset (Datatool) until 2020, although recognised by the AHPRA in 2011, and as a result 10 year comparisons will be better made in 2030 from DoH data for Vocationally Registered GPs, who have been fulfilling this role since 1990. At that point also the retirement patterns of males and females could be compared using Datatool data.

[68] Doctors accessing GP rebates listed as trained in Australia rose 14% from 19,986 in 2014 to 22,696 in 2024. Their overseas counterparts increased 38% from 12,774 to 17,679. DoH Primary Care GP statistics 2021 and 2024.

[69] Medical school intake further rose 11% from 2014 to 2024. There was a major fall in intake in 2024 post-pandemic

Hours worked: males reducing, females fairly stable.

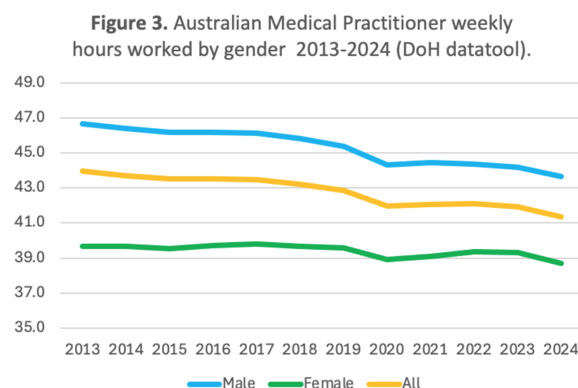
Full-time equivalence (FTE) for doctors was adjusted from 45 to 40 hours per week in 2008.[70] Hours worked are an indication of but not a direct measure of productivity. Productivity is a matter of the efficiency with which time is used, which in Healthcare is not readily assessed.[71] Hours have reduced since 1996 (Table 4). Calculations made for this study indicate a 2.4 hour drop per week in the decade to 2024, yielding an overall 16% increase of FTE supply. Males still work longer hours but female hours have been more stable and appear to have increased since 2004. FTE provides an effective indication of supply for the population

Table 4: Weekly hours worked by doctors by gender 2004 – 2024. Calculated FTE$^{40\ hours}$ supply and 2024 part-time rate.

	Male	Female	All	AT	Non AT	Total FTE^{40}	FTE^{40}/1000 Pop.
1996	53.2	41.4	49.8			59,364	3.24
2004	47.1	37.6	44.0			64,904	3.23
2014	46.7	39.2	43.7	43.6	43.9	95,326	4.12
2024	44.0	38.8	41.3	41.5	41.0	129,591	4.76
% Part-time 2024	19	36	27	28	25		

Sources: 1996 from AIHW data, 2004 from AIHW report, 2014 and 2024 from online datatool data.
Notes: AT, non-AT – (non) Australian trained, FTE^{40} (full time equivalent) reckoned at 40 hours per week.
Part time = 35 or less hours per week. Analysed workforce is fully registered and does not include 12,549 Provisional and Limited Registrants in 2014 and 2024.

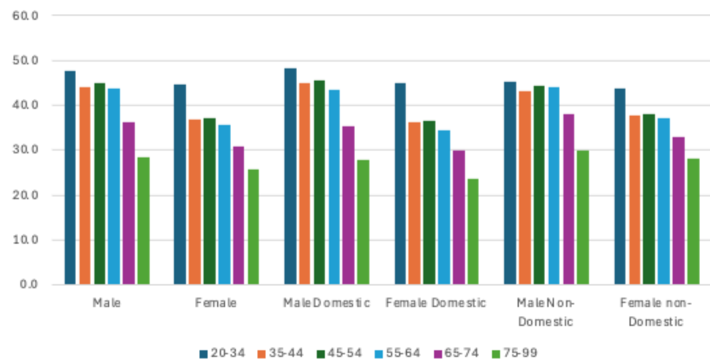
Hours dropped further for all medical practitioners during the pandemic (Figure 3) both for males and females, and it remains to be seen whether they will recover. The pattern was similar in all States and Territories. It is also similar to that seen in the European Union.[72] Working hours hold up well until the retirement years. Younger Australian-trained doctors work slightly longer hours while doctors from overseas work longer in the older age groups (Figure 4).



Part time rates (35 hours or less) are much higher among females (36%) than males (19%). Australian and non-Australian graduates work fairly similar hours, with more of the

[70] Medical workforce Hours are self-assessed and reported in annual registration questionnaires. This yields reasonably consistent data.
[71] There is multiple anecdote concerning 1 item GP consultations. From the author's own experience it is not uncommon to deal with 5-10 items in each consultation.
[72] Reduction of FTE hours worked per week in the EU for the 2012-22 decade was 44.3 to 43.2 for males and 40.0 to 39.5 for females. OECD Health at a Glance 2025 Doctors (overall number and distribution).

Australian-trained working part time. As a subset, female Australian-trained GPs work 31 hours weekly while their overseas-trained female counterparts work 35 hours.[73]



Hospital-based non-GP specialists work longer hours than those in the community but these were reduced from 45.9 to 42.4 per week over the 2014-2024 decade, the reduction being mainly among males. With respect to reports of longer hospital hours, all hospital MWF weekly hours worked reduced from an average of 47.7 to 45.4 per doctor and the 57% increase in headcount (excluding provisional and limited registrants) would include adjustments to maintain services.

Medical Workforce balance, capability and disposition

Fifty-two percent of the Australian population live in the central (as opposed to fringe) parts of the 5 major cities. Forty percent live in fringe metropolitan areas and surrounding inner regional areas and minor cities. Just 8% live in the vast hinterland. All areas need accessible GPs but for logistical reasons the 85% or so of non-GP specialties are available in total only in major cities, with a variable proportion in smaller agglomerations. The vast load of illness demands use of GPs. The more isolated a location is, the more important it is that treating doctors are able to address a wide variety of conditions and to initiate management at the very least. In other words they need to have what is termed a 'generalist' capability. This includes first nations medicine, especially above the 26th parallel.[74]

Though not named as such until more recently, Medical Generalism appeared as a theme in university curricula in the 1990s and continues with a 4-5 specialty rotation in the first post graduate year. It is an emphasised aspect of the 2021-31 national MWF strategy.[75] The need for generalist capability was taken up by Queensland in 2005, with formal recognition of *Rural (Generalist) Medicine* as a specialty in 2008.[76] This led eventually to national approval for the Australian College of Rural and Remote Medicine after some decades of robust debate.

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[73] There have been moves to define the FTE GP working week as 36 hours. Currently the RACGP uses 38 hours. GP studies, including MABEL 'Medicine in Australia, Balancing Employment and Life', used 40 hours. The DoH uses its own metric GPFTE, one of a series over the years, to quantitate GP productivity.

[74] Although there is a major policy objective for aboriginal health care to be controlled by their own organisations, only 45 of 719 identified native-born aboriginal doctors were working in such services in 2024. DoH HWD Datatool. This means that medical care for first nations persons will be provided by non-aboriginal doctors in the foreseeable future.

[75] https://www.health.gov.au/our-work/national-medical-workforce-strategy-2021-2031?language=en

[76] The Queensland approval of Rural Medicine as an entity stemmed from the circumstances surrounding Dr Jayant Patel at Bundaberg in 2005.

Location

The reluctance of doctors in Australia to work outside the central parts of major cities has been a major influence on workforce policy, in part responsible for the major expansion of overseas recruitment seen since 2004. The Modified Monash Model (MMM was developed for medical workforce distribution. [77] Whole (fully registered) workforce FTE supply increased very considerably over the 2014-24 decade in the major cities (MMM 1) but decreased in other Monash model categories (Table 5).

Table 5: 2014 and 2024 Modified Monash Model categories all FTE MWF supply per 1,000 population.

MMM	1	2	3	4	5	6	7	All
Location size	Major city	<50K	15-50K	5-15K	<5K RA2-3	RA 4	RA 5	
2014	4.53	6.11	5.55	2.99	1.57	3.59	1.80	4.06
2024	5.56	5.59	5.00	2.78	1.44	3.10	2.86	5.06
Popn. 2024 m	19.5	2.3	1.7	1.0	1.9	0.3	0.2	26.8

Sources: DoH Health Workforce online datatool (number of registered practitioners, hours worked). DoH Primary Care GP statistics (to calculate population used by DoH from total services and services per capita). Notes: RA = Remoteness Area classification. Supply decreased in MM2-6. Population has increased in all categories except MMM 7. Provisional and Limited registrants (12,549 in 2024) are not included in workforce counts and are not reported by MMM category. DoH has its own estimates for 'GPFTE', based on services rendered, which show MMM 2-5 increases for the decade, suggesting a shortening of GP consultation length.

Population itself is growing in all but MMM category 7.[78] Compulsory service in areas of need for overseas recruits has compensated for a much higher proportion of onshore graduates in the major cities, although MMM 6 remain~~s~~ popular with domestic graduates.[79] Fulltime equivalent GP ('GPFTE') supply increased in all MMM categories over the decade except in MMM category 6.[80] FTE[40] for the non-GP specialist workforce, as expected, falls significantly outside the major cities and is negligible in towns of under 15,000.[81] The female workforce proportion is lower in MMM categories 3-5 but higher in MMM 6-7. It increased 7-10% in all MMM categories over the decade.[82]

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[77] The ABS remoteness area classification or Major City, Inner and outer regional , remote and very remote came to be modified for rural MWF into the MMM system through the work of Humphrey's et al. 'Who should receive recruitment and retention incentives' Aust. J. Rural Health (2012) 20, 3-10. The seven categories are 1. Major Cities, 2. Other cities of over 50,000, 3. Towns of 15-50,000, 4. those of 5-15,000, 5. all other smaller rural towns (RA 2-3), 6. remote areas (RA 4), and 7. very remote areas (RA 5).

[78] MMM Populations are not published but as used by DoH can be estimated from total GP Medicare services and services per capita population. Primary Care GP statistics by Calendar year. 2024 populations m (10 year % Growth) were 19.484 (9), 2.309 (9), 1.685 (11), 1.008 (7), 1.851 (9), 0.298 (2), 0.212 (-4).

[79] Australian-trained workforce % in MMM 1-7 in 2024 was 66, 56, 54, 56, 55, 63 and 71.

[80] 'GPFT' per 1,000 pop. DoH Primary Care GP Statistics.

MMM	1	2	3	4	5	6	7	All
2014	1.07	0.98	1.17	1.19	0.72	0.72	0.59	1.05
2024	1.11	1.12	1.23	1.28	0.81	0.68	0.72	1.17

[81] Non-GP Spec. FTE[40] /k . DoH HWD Datatool/ Pops

MMM	1	2	3	4	5	6	7	All
2014	1.77	1.34	1.15	0.19	0.04	0.53	0.09	1.46
2024	2.06	1.62	1.42	0.21	0.09	0.66	0.16	1.85

[82] Female medical workforce % in MMM 1-7 (all) in 2014 was 41, 39, 36, 37, 37, 44, 36 and total 41, and in 2024 was 47, 47, 44, 44, 45, 50, 48 and total 47. Females comprise 50% of GP workforce but only 43% of GPFTE

Medical Services Cost, Goal income

The annual cost of medical services in 2023-24 was $54.2b (Table 6). This was 21% of $254b reported recurrent health cost. It rose 61% over the 2014-24 decade.[83] It includes out-of-pocket cost, pathology and imaging. For the decade inflation was 31% and population increase 18%, which would have necessitated a 50% increase in total recurrent Health Expenditure to maintain 2014 levels. The actual increase was 75%.[84] Table 6 summarises costs for main medical categories.[85]

Table 6: Total Medical Services Cost $m, and FTE headcount increase 2014-24 by Category

	Non-Referred	Referred	Salaried HMO	Visiting HMO	OOP (Gap)	HIF	Total
2013-14	8,694	12,182	6,990	1,257	3,270	1,374	33,767
2023-24	11,450	16,178	15,410	2,083	7,131	1,991	54,243
T Cost % +	32	33	120	66	118	45	61
FTE[40] % +	21	37	61	nr			

Sources: AIHW Health Expenditure and Hospital resources annual reports (T 4.5 '13-14 and T 2.6 '23-4), DoH GP Data, HWD Datatool, ***Notes***: Non-referred = GP, referred = Non-GP. Except for Salaried and Visiting HMO (Hospital Medical Officer), totals are Gross and include business expenses, staffing, retirement benefits, imaging and pathology. Salaried HMO income includes employed specialist income but not their income from private work. FTE[40] %+ = decade increase in full time equivalent workforce. OOP = gap fees paid to doctors by the public. HIF = Health Insurance fund payments. Total was 23.8% of $145.6b total recurrent health expenditure in 2013-14 and 21%of $254.3b in 2023-24.

The OECD monitors (non-GP) specialist and GP incomes in member countries, which it compares with the average population income of each. (In Australia this rose by 35% during the decade.)[86] GP income in 2023 remained at 1.9x (from 1.8x in 2013) that of average Australian population income of $75,000 in 2013 and $102,000 in 2023. Far from rising, Non-GP specialist income in Australia fell from 3.9x to 3.2 x average income, reflecting greatly increased numbers, a rise in female proportion and a fall in hours worked.[87]

The total cost of salaried medical officers in Public Hospitals, specialist and non-specialist together, rose by 120% from $7.0b in 2014 to $15.4b in 2024.[88] Total fulltime equivalence in Public Hospitals increased by 61%. Average FTE[40] Hospital Medical Officer salary for the decade rose by 41% (to $264k).[89] Measured by inpatient load (overnight days per 1,000

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[83] The 2023-24 medical services proportion of 21.3% of total recurrent Health Expenditure was a drop from 23.8% in 2013-14. Other Health services have been increasing in cost at a faster rate than medical services, which were 22% of total in 2019-20. AIHW Health expenditure annual report. Tables A3 (2023) and A1 (2013).

[84] Total recurrent health expenditure rose from $145.6b in 2013-14 to $254.3b in 2023-24. AIHW annual Total Health expenditure A tables.

[85] For GPs (non-referred services) cost increase was 38%, for non-GP specialists (referred services) 44%, and for hospital doctors 33%.

[86] Ibid OECD 'Health at a Glance' 2025, figure 8.11. Specialists fell from 3.9 to 3.2 times national average income between 2013 and 2023, falling from 9th to 12th in the OECD. This brought it down to a level parallel with the Netherlands, Switzerland and the UK, but well above the Nordic countries. Norway specialists and GPs earn the same amount.

[87] OECD 'Health at a Glance' 2025 (for 2023 Fig. 8.11) and 2015 (for 2013). In listed countries GPs rose from 18th to 13th but stayed at 1.9 times average income from 1.8.

[88] FTE (Fulltime equivalence) was calculated at 45 hours per week in 1996 but has been 40 hours per week since 2007. In 2022 there were a reported 56,744 FTE Hospital (specialist and non-specialist) Medical Officers with a corresponding headcount of 47,334. Average FTE HMO salary was reported as $91,178 in 1996 (AIHW Hospital resources 1996 Table 3.3). For 2022-23 the reported average FTE HMO salary was $252,295 (AIHW Hospital Resources 2022-23 Table 3.3). This does not include earnings from private work, which all salaried hospital specialists are allowed to conduct. Additional payments to visiting medical officers rose from $1.2b to $1.9b, a total rise of 122%. AIHW Recurrent expenditure ($'000), public and psychiatric hospitals, Table 4.22, States and Territories.

[89] Average FTE income calculated from AIHW Hospital Resources 2022-23: Australian Hospital Statistics. Tables 2.6 and 3.2.

population, leaving day procedures aside), hospital workload increased by just 6% over the decade.[90] Published income does not include the private work allowed for all hospital specialists.[91] Male non-GP hospital specialists weekly hours fell by 3.7 and female by 1.4. There has been insufficient attention paid to productivity in Public Hospitals.[92] Public Hospital costs doubled over the decade,[93] with States pressuring the Commonwealth to meet cost over-runns.[94]

Total out-of-pocket '*Gap' Fees* charged by fee-for-service doctors increased by 118%, 144% for GPs and 111% for non-GPs over the decade (Table 6).[95] A significant proportion of specialists charge over three times the schedule fee.[96] Non-salaried medical income levels spread far from either side of the mean. A significant number of GPs realise over $1m in gross income.[97] By and large doctors have their own *goal incomes* towards which they adjust their work and billing patterns.[98] Gap fees rise when income is felt to be inadequate, so that, once there are adequate doctor numbers to meet disease load, counterintuitively and contrary to accepted wisdom, *gap charges tend to be directly proportional to workforce supply,* rather than inversely proportional, so that excess non-GP specialist supply probably accounts for the substantial rise in gap fees over the decade.[99]

Bulk-billing rates reduced continuously throughout the pandemic for GPs, Non-GPs and all Medicare, after an initial spike. This allowed workload reduction while maintaining income, and slowed the rise in gap fees. Bulk-billing rates remained the same from 2024 to the end of 2025.[100] GPs substantially reduced their number of services while reporting no change in hours worked, and also maintained income.[101]

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[90] There was a slight shift discernible from private to public hospitals with a 6% rise in total public and private patient days, 7% in separations, and a 5% drop in overnight stays per 1,000 pop. Average length of hospital stay was fractionally increased. AIHW admitted patient care data against EOFY population. There are multiple claims from the medical industry that workload is vastly increased.

[91] FTE public hospital Specialist details have only been published in hospital statistics lately, $414k in 2022-23. Private work is covered in 'referred services'.

[92] Ibid Robinson. Salaried payment is not conducive to productivity. While the DRG system puts the onus onto hospitals, the runaway increase in hospital medical workforce indicates that public hospitals do not have the tools to maintain productivity or, in the context of States meeting their costs, are not willing to undergo the tough decisions to control numbers.

[93] Public Hospital cost in 2013-14 was $45,725k and in 2023-24 $90,800k. AIHW total health expenditure, current prices.

[94] 'Prime Minister tells states to spend less on hospitals' ABC 18.11 25. A compromise has since been reached.

[95] Individual out-of-pocket expenses (paid for gap fees) over the decade for GP rose 144% to $1,672m and for non-GPs rose 111% to $5,459m.

[96] Improving Australians' access to Specialist care'. Breadon P et al. Gratton Institute June 2025. Table 6.1 for specialist incomes, ranging up to $660,000 for ophthalmologists (this being *average* taxable income per specialty).

[97] Simple arithmetic reveals that a gross of $1m could be achieved by a GP without attracting oversight attention even prior to the present increase in funding. GP Data leaked onto the internet at one point but is protected under secrecy legislation, so was removed.

[98] At the two extremes of normal distribution there are doctors who are income indifferent and income avid. In the higher range compulsive over-servicing appears and excess billing patterns are investigated by the Professional Services Review.

[99] Robinson J C 'Theory and practice in the design of physician payment incentives' Millbank Quarterly Vol 79 No 2 2001: P 156 "…… there is nothing more expensive than an underemployed specialist". This has been cited by the Productivity Commission. 'Shifting the dial'. 2017 Supporting paper no 1. P62.

[100] Medicare Statistics 2025-26 Jul-Dec YTD. GP BB rate remains at 79% compared to 86% pre-pandemic. The effect of the new rates for GPs remains to be seen.

[101] GP services peaked at 194m in 2021 and fell back to 173m in 2024-25. Annual services per GP were 4,950 in 2021, falling back to 4,151 in 2024-25. Self-estimated GP hours worked were 36.3 in 2021 and 36.5 in 2024. Gross income per GP rose from $278K in 2021 to $282 in 2023.

Healthcare Effectiveness: Australia ranks highly in the world.

Measured objectively, the standard of Australian healthcare is high. Australia ranked 7th in the OECD and worldwide in 2019 on the Healthcare Access and Quality Index (HAQI), a gold standard for country Healthcare standards, based on mortality rates (Footnote 4). Australia ranked 17th for child, and 12th for working age but 1st for the 65-75 year old, age groups. See Table 6. In 1990 the rankings were 6th, 8th, 8th and 9th.[102] This indicates a subsequent swing in Australia of emphasis towards aged care, with a fall in rank for working age and child care. To an extent HAQ rank runs in parallel with life expectancy ranking. Australia was 8th in 2019 prior to the pandemic and the changes that it wrought (Table 7).[103]

Table 7: 2019 HAQ Index and Life Expectancy Ranking: top 10 and other notable countries (all OECD) compared with Medical Workforce supply

Age Group	Ice	Swi	Neth	Can	Nor	Swed	Aus	Ire	Spain	Italy	Japan	Fin	USA
HAQ Rank 2019	1	2	3	4	5	6	7	8	9	10	16	15	34
0-14y	2	7	12	13	3	5	17	4	14	19	32	1	40
15-64y	2	1	3	4	8	11	12	9	6	7	14	25	34
65-74y	5	6	10	2	13	19	1	20	11	12	3	15	17
Life E. Rank '19	6	2	14	15	9	7	8	11	3	4	1	16	27
MWF/k 2023	4.5	4.5	3.9	2.7	5.0	4.5	4.9[1]	3.8	4.4	5.4[2]	2.6	2.9	2.7

Sources: Haakenstad HAQI 2019, OECD Health at a Glance 2019. ***Notes***: other listed countries with top 3 ranking included and the poor status of the USA is given for comparison. HAQ ranking includes some small States like Andorra (11th). USA higher ranking for care of the elderly related to medical insurance rates. Non-OECD countries with higher life expectancy are Monaco, Singapore, San Marino, Malta and Andorra. *Abbreviations*: L. Exp. – Life Expectancy 2019 (Pre-Pandemic) of OECD countries, MWF/k – working Medical workforce per 1,000 population. Ice – Iceland, Swi – Switzerland, Neth – Netherlands, Can – Canada, Nor – Norway, Swed – Sweden, Aus – Australia, Ire – Ireland, Fin – Finland. [1] Australia supply adjusted to include supervised interns and overseas doctors as per all other listed countries. [2]Italy added residents and interns in 2020. MWF/k = Medical workforce supply per 1,000 population. South Korea ranks 3rs = with Japan in the 65-74 age group.

High numbers of doctors per se do not appear to ensure low mortality rates (Table 7).[104] Australia's medical workforce supply rose steeply all century and through the pandemic (Figure 1).[105] In other HAQI top 10 countries, the medical workforce supply held steady over the pandemic period after rising in the previous six years. On average the top 10 countries are in the upper range for MWF supply (Table 7) but 4th HAQI ranking has been achieved by Canada with a small medical workforce and 3rd by the Netherlands with an average sized workforce.[106] Italy in 2020 for the first time included residents and Interns in its workforce total, jumping to the highest supplied, together with Norway, ahead of Australia for MWF supply, (after adding in limited and Provisional registrants for Australia, the only OECD country now not to include them in its reporting).

[102] These rankings were achieved well before the 1996 commencement of compulsory specialisation for access to Medicare rebates.

[103] The Top 10 OECD countries for life expectancy in 2019 in order were Japan, Switzerland, Spain, Italy, Korea, Iceland, Sweden, Australia (8th), Norway and France, 7 of these being in the HAQI top 10. OECD Health at a Glance 2021 Figure 3.1.

[104] The 10 highest supplied OECD listed countries for MWF in 2019 (HAQI rank in brackets) were Greece (27th) 6.2, Austria (13th) 5.3, Portugal (28th) 5.3, Norway (5th) 5.0, Lithuania (51st) 4.6, Spain (9th) 4.4, Germany (20th) 4.4, Switzerland (2nd) 4.4, Sweden (5th) 4.3, Denmark (25th) 4.2.

[105] OECD Health at a Glance 2021 Figure 8.4.

[106] Average OECD MWF supply in 2013 was 3.3 per 1,000 population and in 2023, 3.9.

Comments

Medical workforce supply in Australia is underestimated and is near highest in the OECD, despite also having nearly the highest rate of population expansion. Its supply is probably in excess, despite current sentiment to the contrary.[107] Ooi has demonstrated how excess workforce can be counterproductive to good healthcare.[108] Australia's high supply, combining overseas recruitment with on-shore training, has been intentional.[109] The continued rise of gap fees, charged in addition to Government-set standard consultation rates by doctors, as explained, is related to oversupply and the pursuit of goal income (see Footnote 99 Robinson).

Excess acute overnight hospitalisation,[110] the main hospital cost item,[111] drives the hospital workforce increase while not contributing to HAQ Index ranking (Table 1, page 3). This in turn increases non-GP specialist training,[112] which deprives General Practice of Australian-trained graduates.[113] GP capability may have declined, as suggested by a continuous increase, in all age groups, in the rate against population of high acuity presentation to emergency departments (ED),.[114] As illustrated in Table 3, a significant number of overseas recruits in GP may not have proceeded to specialist fellowship. [115]

Australian Health Care nonetheless is pretty effective. In 2019 it was 7th in the top 10 Healthcare Access and Quality Index countries by virtue of its first place performance in the 65-74 year age group.[116] Pre-Covid it ranked 8th in the OECD for Life expectancy.[117] Canada, with a very much smaller MWF and equivalent heath expenditure per capita, [118] was 4th on

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[107] 'Independent review of Australia's regulatory settings relating to overseas health practitioners'. Kruk R. August 2023. Executive Summary.

[108] Oversupply of doctors leads to overprovision of healthcare in general. 30% of Healthcare is said to be of low value or to be unnecessary. Kanny Ooi. The Pitfalls of Overtreatment: Why More Care is not Necessarily Beneficial. Asian Bioeth Rev. 2020 Aug 19;12(4):399–417.

[109] https://www.health.gov.au/ministers/the-hon-mark-butler-mp/media/one-doctor-every-hour-most-new-doctors-in-more-than-a-decade?language=en. "(The) record was beaten in 2023-24 when 9,240 new doctors registered to practise". 58% of these were from overseas.

[110] In the top 10 HAQ Index countries, 2023 **curative' (acute) care discharge rates** per 1,000 population were, in order, Iceland 104, Switzerland 147, **Netherlands 80, Canada 75,** Norway 145, Sweden 120, **Australia 162**, Ireland 153, Spain 107, **Italy 95.** OECD Health at a Glance 2025 Figure 5.22. Australia is near highest in the OECD for this metric., 6th behind Bulgaria, Germany, Austria, China and Romania.

[111] An analysis of overnight and same-day hospitalisation costs were provided in round 19 of the NHCDC Cost Report for 2014-15. Table 5 showed over night to be 7.6x that of same day and 1.7x per day, with much greater cost for admissions via ED. Independent Hospital Pricing Authority.

[112] As an example, the department of health was unable to control excess training of Emergency Physicians after pointing out that Emergency Physician workforce was heading to 100% oversupply. DoH 'Australia's Future Health Workforce: Emergency Medicine'. November 2017. The number of advanced trainees remained unaltered from 2018 to 2024 (1,546 to 1,543). https://hwd.health.gov.au/met-primary/index.html. Headcount of Emergency specialist fellows increased by 137% in the 2014-24 decade.

[113] Only 56% of doctors in General Practice had had basic training in Australia in 2024, a decrease from 61% in 2014. DoH National summary of Primary Care GP workforce 2021 and 2024. The supply of male Australian-trained GP specialists in particular has dwindled, increasing by only 1,242 between 2014 and 2024.

[114] '**Emergency Department attendance** by triage category: what the data suggests. Moynihan M TAPRI 21.2.24. https://tapri.org.au/. Data for age by triage category became available only in 2017, after which the rise in all age groups was apparent.

[115] DoH Primary Care GP statistics published 2020 and 2024 as discussed in text. See Table 2.

[116] Ibid Lozano. See footnote 4.

[117] OECD Health at a Glance 2023 Figure 3.1

[118] **Per capita Health Expenditure** top 10 HAQI $USk ppp. Iceland 6.7, Switzerland 10.0, Netherlands 8.4, Canada 7.3, Norway 9.4, Sweden 7.9, Australia 7.5, Ireland 7.8, Spain 5.3, Italy 5.2 (USA 14.9). OECD Health at a Glance 2025 Figure 7.4.

the HAQI, and 2nd for care of the elderly, though 16th for Life Expectancy, probably because of its higher proportion of first nations people.[119]

Lower rates of acute overnight hospitalisation are being achieved in a number of OECD countries through the provision of effective community based acute care in 'Hospital at Home' (HaH) programs (Table 1). Scrutiny of OECD hospitalisation rates reveals a variety of trends.[120] The Netherlands (89 overnight discharges/1,000 population) has been low all century. Italy has reduced from 163 to 100/1,000. Canada has continuously reduced from 110/1,000 first reported in 1995 to 82 in 2019. Australian rates have increased this century from 154 to 164/1,000 despite its 'Hospital in the Home' (HITH) program.[121]

In conclusion, this study has identified a lack of home-based acute care as underlying an over-sized hospital system in Australia, a system that is generating excess medical workforce. Any change needs to be systemic if hospitalisations are to be significantly reduced and long term control of medical workforce size achieved.[122] Walk-in and urgent care clinics here and there are not enough.[123] Widespread well-resourced HaH/HITH programs operating 24/7 and coordinated with local General Practice would be required. State and Commonwealth obligations would have to be revised. Medical school output requires oversight. Unrestricted recruitment of medical workforce to hospitals from overseas needs to cease.[124] Properly implemented, lowered hospitalisations would not affect Healthcare Access and Quality (and likely enhance it).

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[119] First Nations population in Canada is 5% (Statistique Canada) compared to 3.2% for Australia ABS 2021 Census data).
[120] Scrutiny of tabulated country data reveals the countries more successful in reducing hospitalisations (OECD Data explorer, Hospital Aggregates, Curative care, Hospital discharges per 100,000 persons). Australia's 'Hospital in the Home' (HiTH) program does not appear to be significantly reducing hospitalisation. Between 2012-13 and 2022-23 acute overnight separations (hospitalisations) per 1,000 relevant population in all public and private hospitals, in the 0-14 age group fell from 93 to 88 in males and from 77 to 74 in females, in the 15-64 age group from 105 to 90 in males and from 153 to 138 in females, in the 65 and over age group from 470 to 373 in males and from 389 to 346 in females, and overall 175 to 165 in males and 162 to 153 in females. AIHW Admitted Patient Care annual reports. Italy reduced acute overnight hospitalisations from 173/1000 in 1996 to 95/1,000 in 2023. For Canada the reduction was from 110/1000 in 1995 to 75/1,000 in 2023.
[121] The Australian HITH program operates only in working hours on weekdays. Patients tend to be classified as Hospital inpatients but there is no reporting of data. Overall numbers in 19 hospitals amounted to only 3.7% of total acute hospitalisations. Montalto et al. 'Home ward bound features of hospital in the home use by major Australian hospitals, 2011–2017'. Med J Aust 2020; 213 (1): 22-27. || doi: 10.5694/mja2.50599.
[122] The gold standard is the Netherlands 'primary-care cooperative' system, providing district walk-in clinics serviced on a compulsory basis by local GPs. Van der Horst H and de Witt N, 'Redefining the core values and tasks of GPs in the Netherlands (Woudschoten 2019)'. British Journal of General Practice, January 2020. Referral is made from these clinics to the longstanding HaH system.
[123] The recent appearance of urgent care clinics in Australia does not represent an adequate response to the problem of high hospitalisation rates. It is also likely to lead in the same direction taken by New Zealand, which has its own College of Urgent Care Physicians. https://rnzcuc.org.nz/.
[124] States were warned to curtail hospital expenditure in November 2025 and received only $5b more annually for 5 years in the January 2026 agreement https://www.abc.net.au/news/2025-11-17/anthony-albanese-tells-states-to-rein-in-hospital-spending/106017654.