ANZ-MELBOURNE INSTITUTE Health Sector Report

The evolution of the medical workforce

PROFESSOR ANTHONY SCOTT

Melbourne Institute: Applied Economic & Social Research, The University of Melbourne



Disclaimer: The views in this report are those of the author and not the Australia and New Zealand Banking Group Limited

Contents

Background and key findings	4
Growth in the medical workforce	6
Is self-sufficiency realistic?	8
Not enough GPs, too many non-GP specialists?	9
Doctor's earnings	10
Bulk billing and fees rising	11
Telehealth use falling	12
Conclusions	17
References	18





BACKGROUND

During the past 18 months, many doctors have experienced significant changes to their workload and practice patterns. Most successfully pivoted their working practices and business models to adjust to the pandemic, and many have bounced back but recognise that much has changed. Though Australia has been less affected by COVID-19 than other countries, many issues have been raised about flexibility and adaptation of health care providers to ensure the appropriate supply of medical care in 'business as usual' times, as well as during future pandemics and natural disasters.

This report examines some key trends for the medical workforce after around 20 years of expansion in supply (Geffen, 2014). In an era of increased medical workforce supply, it is essential to ensure that additional doctors are used to meet population needs for healthcare, rather than reinforcing a paradox of overtreatment and overdiagnosis for some of the population existing alongside undertreatment for those most in need. This includes trying to get the 'right' balance of the medical workforce between urban and rural areas, between specialties, and between generalism and specialised care. Flexibility and adaptation are central to this, and are key ongoing themes of the new National Medical Workforce Strategy (Department of Health, 2019). The Strategy has recognised the problems with the current way the medical workforce is trained, organised and funded, and how these difficulties significantly reduce the ability of the medical workforce to meet population needs for healthcare.

KEY FINDINGS

- The number of doctors continues to grow, with the number of non-GP specialists growing faster than the number of GPs.
- Higher numbers of doctors in training and non-GP specialists are beginning to spill over into rural areas. More doctors are working outside of major metropolitan areas. Growth in the number of doctors outside major metropolitan areas outstrips the growth inside these areas for all doctors except for GPs. This is despite decades of policy targeted to persuade more GPs to go rural.
- Spillovers into rural and regional areas could be caused by increased supply and competition pushing doctors out of major cities. There has also been increased investment in regional training of GPs and non-GP specialists and other policies that help pull doctors away from major cities. In addition, spillovers could be caused by existing non-GP specialists spending more time in public hospitals reducing job opportunities for newly qualified non-GP specialists in major cities.
- A stated national policy objective is self-sufficiency of the medical workforce, but the number of international medical graduates (GPs and non-GP specialists) continued to grow faster than the number of domestically trained GPs and non-GP specialists until the end of 2019. COVID-19, however, has sharply reduced total immigration into Australia, though medical practitioners remain on the new Priority Migration Skilled Occupation List introduced in late 2020.

- Specialty choice remains an issue, as applications for GP training places fall and the number of specialists continues to grow faster than GPs. Non-GP specialists earned almost twice as much as GPs, with their earnings growing twice as fast such that the gap between GP and non-GP specialist earnings has widened over time, probably aided by the Medicare Fee Freeze. The earnings gap is likely to widen further as there are no specific national policies to address this.
- Annual fee revenue per doctor has been falling over time. The most likely reason is that the number of GPs and non-GP specialists (supply) has been growing leading to more competition, whilst the number of patients per doctor (demand) has been falling even as the population increases. The Medicare fee freeze and fall in growth of private hospital care could have contributed to this.
- Whilst fee revenue has been falling, doctors' selfreported annual earnings (after practice costs and before tax) have been increasing. This suggests that doctors are managing to maintain their take home pay by either reducing practice costs per doctor or increasing income in other ways.
- Doctors have also been slowly changing their billing patterns over time, with higher rates of bulk billing, especially for non-GP specialists, as well as higher fees charged for non-bulk billed services. This is likely to reflect lower fees and more bulk billing for less affluent patients balanced out by higher fees for more affluent patients.



- Telehealth consultations continue to be used and funding has been extended to the end of 2021, but their use overall has been slowly falling. Video consultations are still used much less than telephone, though are more likely to be used by non-GP specialists.
- For GPs, the proportion of attendances using telehealth for GP Mental Health Plans and Chronic Disease Management Plans are slightly lower than for usual GP visits, suggesting no additional need for telehealth for these specific patient populations. Level A (short) telehealth consultations remain high and are much more likely to be phone calls. Medicare telehealth funding is expected to be continued in the longer term where there is a need from patients, and higher rebates for video consultations could help to increase their use by GPs. However, there remains little evidence on the appropriateness of telehealth.

Medical practitioners have continued to adapt to significant increases in medical workforce supply as well as COVID-19. Increased supply leads to more competition, and the effects of this are beginning to be seen as doctors spill over into rural and regional areas and increasing pressure on fee revenue. But after 20 years, issues such as specialty choice have not been addressed, rural practice needs continued support, and the benefits of telehealth need to be better utilised.



Source: Health Workforce Planning Tool, Department of Health

GROWTH IN THE MEDICAL WORKFORCE

For the first time, the number of doctors in clinical practice exceeded 100.000 in 2019 (Figure 1), a growth of 3.9 per cent over the 5 years 2014 to 2019 whilst population growth was 1.6 per cent per year. The number of hospital non-specialists, including interns and doctors in training who have yet to enter specialty training, exhibited the fastest growth of 5.5 per cent per year over the same period.

The number of non-GP specialists continues to grow faster (4.5 per cent per year) than the number of GPs (3.5 per cent per year). In 2014 there were 3,143 more specialists than GPs, and this grew to 5,283 in 2019. This is despite the growing burden of chronic disease and a recognised need for more generalist doctors (with a wide range of skills across different disease areas) inside, but especially outside, of major cities. At this aggregate level, there is no evidence of increasing generalism in the Australian medical workforce - indeed the contrary seems to be the case.

More doctors outside of cities

The proposed solution to medical workforce maldistribution was thought to be 'flooding the market' to achieve self-sufficiency, with a more than doubling of medical graduates from the early 2000s, fuelling the growth of doctor numbers in Figure 1 (Australian Health Ministers Council, 2004). The expectation was that excess doctors in overserved areas would eventually spill over into underserved rural and regional areas and lower socioeconomic status areas in major cities. Such a policy ignores the costs of a general expansion in the doctor supply and ignores the strong preferences of most doctors to remain in major cities and affluent areas that we have found in our research (McIsaac et al., 2015; Scott et al., 2013).

It has been difficult to implement the required complementary policies to change career pathways, medical training, and models of care that encourage doctors to work in underserved areas. Though much has been done including financial incentives, rural pathways for GPs, as well as regional training hubs for non-GP specialists, many of the issues have not been solved and there remains uncertainty about their effectiveness. There are currently no national policies to encourage doctors to practice in disadvantaged areas within major cities.

There is some evidence of an increase in the proportion of doctors working outside of major cities. In 2019, 79.543 doctors were working in major cities in Australia. compared to 23,470 outside of major cities. Since 2013, the number of doctors working outside of major cities has grown by 4.8 per cent - faster than the growth in the number of doctors in major cities of 3.9 per cent over the same period. This has contributed to a slight increase in the percentage of all doctors working outside major cities from 22 per cent in 2013 to 22.8 per cent in 2019.

Figure 2 shows the average annual growth in the number of doctors working outside of major cities compared to the growth of those in major cities. For all doctors except GPs, growth in the number of doctors is faster outside of major cities. For hospital non-specialists and specialists





Source: Health Workforce Planning Tool, Department of Health. Major cities defined as Modified Monash Model 1.

in training, this provides evidence that training has been successfully shifted outside of main metropolitan tertiary hospitals which have a fixed capacity and may have been unable to absorb the sharp increase in medical graduates. National policies have also included training doctors in private hospitals. The growth in the numbers of non-GP specialists outside of capital cities is more surprising and could reflect an oversupply of doctors in major cities beginning to spill over into large regional towns.

However, despite the efforts by policy makers to persuade more GPs to go rural, the per centage of GPs outside of major cities areas has fallen slightly from 29.2 per cent in 2013 to 28.7 per cent in 2019. This is because the growth in the number of GPs in major cities (3.9 per cent between 2013 and 2019) has been slightly higher than the growth in the number of GPs outside of major cities (3.4 per cent per year between 2013 and 2019). This is not necessarily evidence of policy failure as it could be that without these policies, the situation might be much worse.

Though the number of GPs is growing, it is their distribution that matters most to improving access to populations most in need. Some policies have been introduced only recently, such as rural generalist training pathways and will not yet show an effect, but other policies such as financial incentives have been in place for a long time. Evidence shows that financial incentives may not be effective (Scott et al., 2013), or if they are it is only for GP Registrars who are the most mobile (Yong et al., 2018) whilst financial support for locum relief may be particularly effective (Li et al., 2014).

Figure 2. Average annual percentage increase in the number of doctors working

Major cities Outside major cities



IS SELF-SUFFICIENCY REALISTIC?

A key aspect of medical workforce distribution policy over the past 15-20 years has been self-sufficiency (O'Sullivan et al., 2019). This includes not only increasing domestic supply but at the same time reducing the immigration of doctors from other countries to ensure training positions and jobs are available for the increased domestic supply.

In 2018 changes to the temporary skilled visa program made it more difficult for visa holders to stay permanently in Australia. In 2019, additional policies as part of the 'Stronger Rural Health Strategy' included proposals to reduce immigration intakes for GPs and resident medical officers (primarily working in hospitals in major cities). This was intended to help create opportunities for locally trained doctors in training to practice in rural and regional areas. However, a new Priority Migration Skilled Occupation List introduced in 2020 during COVID-19 seems to have reversed this policy as it includes GPs, Resident Medical Officers, Psychiatrists, and Other Medical Practitioners.

The reliance on international medical graduates (IMGs) in rural and regional areas is likely to continue as long as domestically trained doctors have strong preferences to work in major cities. Still, COVID-19 might have unexpectedly accelerated the policy of self-sufficiency because of restrictions on international travel reducing immigration and leaving 'space' for domestically trained doctors. However, this could also potentially make it more difficult to recruit doctors to rural and regional areas if city doctors do not want to move.

International medical graduates (IMGs) comprised 35.1 per cent of the total Australian medical workforce in clinical practice in 2019, a fall from 37.5 per cent in 2013 because of faster growth in domestic supply rather than falls in immigration (4.9 per cent per year compared to 2.8 per cent per year for IMGs). Figure 3 shows that the overall number of GPs and non-GP specialists who are IMGs has continued to increase steadily over time, by 4.5 per cent and 6 per cent respectively, whilst the number of IMGs who are doctors in training has fallen. Combined with increased domestic supply of doctors in training, this has contributed to a fall in the proportion of hospital non-specialists who are IMGs (this group includes medical officers) from 39.3 per cent in 2013 to 26.3 per cent in 2019, with a similar fall in this percentage for specialists in training (39.3 per cent to 28.1 per cent).

For both GPs and non-GP specialists, continuing immigration means that the growth in numbers of IMGs has been higher than the growth in the number of Australian-trained doctors. The proportion of specialists who are IMGs continued to increase from 30.8 per cent in 2013 to 32.9 per cent in 2019. This is because the growth in the number of IMG non-GP specialists (6 per cent per year) continues to outstrip the growth in the numbers of Australian trained non-GP specialists (3.9 per cent). The percentage of GPs who are IMGs has grown slightly from 43.1 per cent in 2013 to 44.8 per cent in 2019.

Despite some policy changes designed to reduce immigration, IMGs continue to represent a very flexible and cost-effective solution for employers in rural and regional areas who often drive temporary immigration through sponsorship of visas. Even with an increase in Figure 3. Number of doctors who are international medical graduates, by doctor type (2013 to 2019).



domestic supply, many employers - including public hospitals as well as medical practices - wish to maintain flexibility in hiring IMGs to fill gaps. The fall in the number and percentage of junior doctors who are IMGs should eventually flow through to the qualified medical workforce in the future provided the number of new IMGs does not increase.

COVID-19 might have at least temporarily reduced the pre-COVID-19 increase in IMGs, whilst overall immigration to Australia fell by around 90 per cent in 2020. However, doctors have been added to the Priority Migration Skilled Occupation List since late 2020, suggesting a continuing reliance on IMGs to fill gaps in supply. It remains to be seen whether Australia's reputation as a COVID free country continues to increase immigration to Australia in the future once international travel restrictions are gradually lifted.

NOT ENOUGH GPS, TOO MANY NON-GP SPECIALISTS?

Figure 1 shows that a higher proportion of junior doctors are continuing to choose non-GP specialty training, as the number of specialists grows faster than the number of GPs. Over the past 20 years there have been no explicit policies designed to alter specialty choices. More GP training places do not alter doctors' preferences or the relative attractiveness of general practice. There is recent evidence that the number of GP training places are not being filled, with falls in the numbers of applicants for GP training (RACGP, 2020).

Our previous research has shown that relative earnings can play a key role in specialty choice (Sivey et al., 2012). Doctors' annual earnings (annual income from all medical work after practice costs but before tax) are increasing in real terms, by an average of 1.1 per cent per year for GPs and by 2.2 per cent for non-GP specialists. This is similar to wage growth in the rest of the economy.

But what is the evidence that if GP earnings were higher, more doctors would choose to become a GP? Our previous review of evidence of medical career choices suggest a range of factors play a role, with advice from supervisors and senior doctors playing a major role (Scott et al., 2014). MABEL research found that expected future earnings was an important factor, along with opportunities for procedural work, hours worked, control over hours worked, on-call, opportunities for academic work and continuity of care (Sivey et al., 2012). Future earnings were more important for the 33 per cent of junior doctors reporting any educational debt.

Our research simulated that if GP earnings were to increase by \$50 000 per year (around \$280,000 in 2020 prices), the percentage of junior doctors choosing general practice would increase by 10.5 percentage points (Figure 4). More procedural work and academic work had similar sized effects (13.1 and 7.9 percentage

Figure 4. The increase in the probability of junior doctors choosing GP training under specific scenarios.



If procedural work increased from 'none' to 'some'

If opportunities for academic work increased from 'poor' to 'average'

Source: Sivey et al (2012).

point increases) as a \$50,000 increase in earnings, suggesting that other factors matter at least as much as earnings (Sivey et al., 2012).

Figure 5 shows that the remuneration of non-GP specialists remains high relative to GPs. In 2018, non-GP specialists earned almost double as much as GPs. Importantly, this gap has widened over time. These trends are similar if we adjust for differences in hours worked. In 2008 mean GPs earnings were \$189,574 per year, increasing by 10.7 per cent to \$209,938 in 2018. Non-GP specialists mean annual earnings were \$338,554 in 2008, with this increasing by 21.5 per cent to \$411,575 in 2018 – double the rate of earnings growth for GPs. Where earnings matter, this is making it more difficult to persuade more junior doctors to become GPs.

Policies such as the Medicare fee freeze, where the indexing of Medicare rebates in line with inflation was frozen between 2014 and 2018, are likely to have widened the gap in earnings, compounding these issues. Though the fee freeze was applied to all doctors, this was more likely to have adversely affected the remuneration and morale of GPs, since they bulk-bill more and face more competition (Gravelle et al., 2016) compared to non-GP specialists, potentially further widening the gap in remuneration and reducing the attractiveness of general practice as a speciality. More generally, policies that attempt to reduce Medicare spending on GPs will likely mean fewer junior doctors will end up choosing general practice training.



DOCTORS' EARNINGS Fee revenue per doctor falling

Figure 5 also includes data on fee revenue per doctor. Using data from Medicare, this is the total fee revenue from private practice each year divided by the number of doctors. This includes revenue received from Medicare benefits plus patients' out of pocket costs (and for non-GP specialists, from private health insurers who may cover patient's in-hospital out of pocket costs using gap cover). Note that for GPs, fee revenue does not include revenue paid to the practice from the Practice Incentive Program (around 10 per cent of revenue), and so this line is an underestimate of the level of fee revenue per GP. Doctors may also receive other revenue not captured here such as rent paid by pathology companies. For non-GP specialists working across both public hospitals and

private practice, income received from public hospitals is included in the self-reported earnings data, whilst fee revenue includes only revenue from private practice.

Fee revenue per doctor has been falling over time after adjusting for CPI. This downward trend remains, but is slightly flatter, after we adjust for a fall in hours worked over time. This squeeze in revenue could be due to a combination of several factors. First, this could partly be a function of the Medicare fee freeze that started in July 2014, especially for GPs, but the fall starts before that. Second, there is evidence of a reduction in the growth in the volume of private hospital care after 2016, when the fall in private health insurance membership started and debate about egregious fees and high out of pocket costs began (Bai et al., 2020). But the fall in annual revenue begins in 2013, before these issues started.

Third, and most likely, is that the fall of fee revenue over time could be because of the increasing number of doctors over time (Figure 1) leading to increased competition. The overall number of patients and services per patient grew between 2009-2010 and 2019-2020 (both by 1.8 per cent per year), but this growth was much slower than the growth in the number of GPs (3.5 per cent) and non-GP specialists (4.5 per cent). This seems to be the case: the total number of patients using Medicare per doctor (GP plus non-GP specialist) peaked in 2011 at 384 and fell by 1.9 per cent per year to 327 by 2019. Similarly, the number of Medicare services per doctor fell by 0.8 per cent, from 7,002 in 2009 to 6,320 in 2019. Supply has been increasing faster than demand suggesting there were fewer patients to go around.

Figure 5. Annual earnings and fee revenue of GPs and Non-GP specialists, 2008 to 2018 (weighted and adjusted for CPI).



Source: Self-reported annual income is from the Medicine in Australia: Balancing Employment of Life (MABEL) survey on annual income before tax but after practice costs - essentially gross take home pay. This uses data from between 1,813 and 3,270 GPs per year, and from between 2,206 to 4,261 non-GP specialists per year, and is adjusted for CPI, and also weighted to be representative of the doctor population. Fee revenue reported is from Medicare data linked to MABEL survey respondents who consented to data linkage. For GPs, this does not include practice-level payments from the Practice Incentive Program (which would add about 10 per cent to these figures) or other sources of income. Fee revenue data are from between 661 and 988 GPs per year, and between 713 and 943 non-GP specialists per year, and is adjusted for CPI, and also weighted to be representative of the doctor population. The findings are very similar if we use the same doctors for the MABEL self-repo earnings as for the fee revenue.

In the context of falling fee revenue per doctor, the only way that doctors can maintain their self-reported earnings (after practice costs but before tax) in Figure 5 is if practice owners are reducing costs to maintain their take home pay, or if they are earning more medical income from other sources.

Unfortunately, no data are routinely collected on practice costs. Some cost reductions could have been achieved through practices becoming larger over time (Scott, 2017) such that the sharing of fixed costs across more GPs could lead to lower practice costs per doctor (economies of scale).

For non-GP specialists in Figure 5, self-reported earnings are for work in both public hospitals and the private sector, whilst fee revenue is only for private work from the MBS. Figure 4 shows that the gap between fee revenue and self-reported earnings is widening over time, suggesting an increasing share of earnings from their work in the public sector over time, and/ or reductions in practice costs. This is consistent with evidence showing that non-GP specialists have been spending a higher proportion of their time in public hospitals since 2015 (Bai et al., 2020).

If non-GP specialists have been spending more time in public hospitals, this also has implications for the availability of public hospital positions for newly qualified specialists, which might also explain the increasing share of non-GP specialists working outside of major cities in Figure 2. There is also anecdotal evidence that non-GP specialists are forming into larger groups with corporate ownership, again possibly leading to lower costs per doctor enabling them to maintain earnings after practice costs whilst fee revenue declines.





2009-10 2019-20

Source: Own calculations from 'MBS statistics financial year 2019-2020 Geo.xls' downloaded from: https://www1.health.gov.au/internet/main/publishing.nsf/ Content/32CC6EB4BCC0BB1CCA257BF0001FEB92/\$File/MBS%20Statistics%20Financial%20Year%202019-20%20Geo.xlsx. GP bulk-billing rate includes out-of-hospital unreferred attendances. Non-GP specialist bulk billing rate includes specialist attendances, obstetrics, anaesthetics, and operations (excludes pathology, diagnostic imaging, radiotherapy and therapeutic nuclear medicine)

BULK BILLING AND FEES RISING

Against a backdrop of lower fee revenue, decisions such as changing the fees charged, including choosing whether to bulk bill and choosing whether to use gap cover arrangements with private health insurers, are important business decisions for influencing revenue but are also decisions that impact on patients' access to healthcare. The balance between maintaining the number of patients seen and what they are charged can be difficult, more so for GPs who face more competition.

Figure 6 shows that bulk-billed services, where there is no out of pocket cost to the patient, as a percentage of all Medicare services have increased from 74.3 per cent in 2009-2010 to 80.1 per cent in 2019-2020. Bulk billing rates for non-GP specialists (including specialist attendances, obstetrics, anaesthetics, operations) remain much lower than for GPs (35.6 per cent compared to 87.7 per cent), though have increased at a faster rate compared to those for GPs, by 23.9 per cent over the period compared to 7.7 per cent for GPs.

The increase in bulk billing rates reduces revenue per service, but this can be balanced by an increase in fees for non-bulk billed services, as shown in Figure 7. More affluent patients are still likely to attend if fees rise, whilst increasing bulk billing may lead to an increase in utilisation for patients who are less well-off. There is evidence that some doctors care about their patients' financial circumstances (Ge et al., 2019), and that doctors in less affluent areas of Australia charge lower fees (Gravelle et al., 2016; Johar, 2012; Johar et al., 2017).

Figure 6. Percentage of services bulk billed, 2009-2010 to 2019-2020.



TELEHEALTH USE FALLING

During COVID-19 there were high hopes that telehealth might become part of routine care. The rapid introduction of telehealth brought the future slightly closer as many healthcare providers and patients had a taste for how this could work. Telehealth can potentially solve not only issues arising during pandemics, but also how to improve access to healthcare for vulnerable and underserved populations. The use of telehealth would also make the system more responsive and flexible to patients' needs.

New telehealth items were funded from March 2020 to help protect patients and providers from COVID-19, as well as help circumvent the fall in demand for healthcare that led to substantial falls in income for many providers in 2020 (Scott, 2020). Since then, the use of telehealth

has fallen overall as the pandemic in Australia has subsided. Figures 8 and 9 show the use of telehealth MBS items between March 2020 and March 2021.

The use of telehealth reached its peak in April 2020 when 36 per cent of all Medicare consultation items for GPs and non-GP specialists were conducted using telehealth. Figure 8 for GPs and Figure 9 for other specialists show a gradual fall in the use of telehealth since then. By March 2021, the proportion of GP attendances using telehealth had fallen at 21.6 per cent, and to 13.4 per cent for other specialists. These are still very large proportions at a time when Australia is essentially free of COVID-19, but the trend is still downward, and it is unclear when it will stabilise and find its 'natural' rate. Partly this will be determined by expectations and the exact details of policy changes beyond 2021.

Figure 7. Fee charged per non-bulk-billed service, adjusted for CPI, 2009-2010 to 2019-2020.



Source: Own calculations from 'MBS statistics financial year 2019-2020 Geo.xls' downloaded from: https://www1.health.gov.au/internet/main/publishing.nsf/ Content/32CC6EB4BCC0BB1CCA257BF0001FEB92/\$File/MBS%20Statistics%20Financial%20Year%202019-20%20Geo.xlsx. GP data include out-of-hospital unreferred attendances. Non-GP specialist data include specialist attendances, obstetrics, anaesthetics, and operations (excludes pathology, diagnostic imaging radiotherapy and therapeutic nuclear medicine). Fee charged per non-bulk billed service = (Fee charged – Benefit paid) / (All services – Bulk billed services).

Figure 8. Number of MBS items claimed for GP attendances, November 2019 to March 2021.





Figure 10. Percentage of attendances using video conferencing, June 2019 to March 2021.



Source: MBS Statistics Item Reports: http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp using telehealth item numbers: http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/news-2020-03-29-latest-news-March.

The use of video has been much lower for GPs as a proportion of total attendances compared to other specialists. In April 2020, 1.3 per cent of all GP attendances used video, and this had fell to 0.32 per cent by March 2021. For non-GP specialists in private practice, use has been much higher than GPs, with 6.8 per cent of attendances using video in April 2020, falling to 2.1 per cent by March 2021.

Video consultations remain low

Though there was much promise about the increased use of telehealth heralding advances in technology, the vast majority of telehealth consultations used phone calls rather than video, especially for GPs. Department of Health guidance states that video is the preferred method of conducting a telehealth consultation, yet the use of video has remained stubbornly low and is falling (Figure 8 and 9).

Figure 10 shows the proportion of attendances using video conferencing for GPs and specialists.

Before COVID-19, non-GP specialists could already claim MBS items for video consultations for patients in rural and regional areas, and GPs as well could access some items for aged care. Interestingly, Figure 10 also shows that the proportion of specialist attendances using these 'old' telehealth items seems to have increased, compared to before COVID-19, suggesting better access to care for patients in rural and regional areas. However, our previous research during COVID-19 showed that the

use of new telehealth items by GPs in May 2020 was no higher for patients in rural and regional areas compared to those in major cities (Scott et al., 2021).

In terms of the low use of video consultations, especially by GPs, our previous research showed that a lack of infrastructure may be an important the reason for this (Scott et al., 2021). A continuing lack of certainty about the permanence of Medicare funding could have discouraged GP practices to invest in this infrastructure during 2020. Furthermore, our research showed that GPs with a higher share of elderly patients were less likely to use video consultations, presumably because of difficulties for some elderly patients, who are perhaps those most in need, in using this technology and so preferring the phone. The MBS rebates for video and phone consultations are also the same, and so there is scope to change financial incentives to encourage a higher proportion of video consultations.



Use of video for specific populations

For specific population groups that could be more in need, the use of telehealth was lower than usual GP consultations. This is shown in Figure 11 that highlights a declining trend in the proportion on mental health and chronic disease items using telehealth, no different from the fall in use for GP attendances overall.

Though there is a focus on higher quality video conferencing, there also seems to be a role for short telephone consultations, used to provide follow-up to patients for test results or repeat prescriptions and referrals, and for shorter acute presentations that do not require a physical examination or non-verbal communication. This is work that some GPs may have

March 2020 to March 2021.





Source: MBS Statistics Item Reports: http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp using telehealth item numbers. http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/news-2020-03-29-latest-news-March

Data for the use of telehealth for specific populations shows that in March 2021, telehealth was used in 14 per cent of GP Mental Health plans and 14.9 of GP Chronic Disease Management Plans. This compares to the use of telehealth in 21.6 per cent of all GP attendances.

undertaken before COVID-19 to an extent but did not receive a fee, with other GPs requesting that the patient visited the practice to receive a fee.

The further development of policy around the use of telehealth beyond the end of 2021 needs to be supported by more clear evidence of benefit for population sub-groups. For GPs, encouraging the higher use of video and the value of short consultations over the phone seem to be clear and of benefit to patients. There are no national data on the use of telehealth by non-GP specialists for public hospital outpatient appointments. The need for telehealth to remain available for any further disease outbreaks is important, even though there has been a steady fall in utilisation over time.

Figure 11. Percentage of GP Mental Health and Chronic Disease Management Plans using telehealth,

Figure 12 shows that Level A (short) consultations make up almost 50 per cent of all telehealth consultations and remain quite high in March 2021, and that the share of Level B, C and D telehealth consultations are much lower. In March 2021 there were 225,542 Level A face to face GP consultations, a similar level compared to before COVID-19, and 435,314 Level A GP telehealth consultations (4,270 using video). This suggests that the telehealth consultations are additional to what was previously undertaken.



Figure 12. Percentage of GP telehealth consultations which are Level A, B, C and D, March 2020 to March 2021.

Source: MBS Statistics Item Reports http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp using telehealth item numbers. http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/news-2020-03-29-latest-news-March.

CONCLUSIONS

The rapid expansion of the medical workforce has led to a number of policy issues about how best to direct the medical workforce to areas of highest need. Twenty years after this expansion began, including the introduction and then abolition of Health Workforce Australia, a National Medical Workforce Strategy has been developed to try and tackle some of these issues (Department of Health, 2019).

The strategy has five priorities with exact details and plans for implementation to be published: i) collaborate on planning and design, ii) rebalance supply and distribution, iii) reform the training pathway, iv) building the generalist capability of the medical workforce, and v) a flexible and responsive medical workforce. These are lofty aims but do set out a clear vision for where to head. If the last 20 years is anything to go by, addressing these priorities will take time. Australia's fractured health care system has significantly delayed effective national policy action to help ensure the best use of the medical workforce.

Issues of specialty choice, rural and regional maldistribution, and self-sufficiency remain very important, with market forces continuing to dominate doctors' decisions about their specialty and location of practice. Doctor's decisions are underpinned by a largely unaltered fee-for-service payment model that rewards procedural work and sub-specialisation more than generalism and holistic care.

Our analysis suggests that, 20 years later, the increase in supply of medical practitioners is finally beginning to spill over to rural and regional areas, though this is not the case for GPs. This could be explained by the increased supply and competition that is eventually pushing doctors out of major cities, caused by the increased investment in regional training of GPs and non-GP specialists and other policies pulling doctors away from major cities, or caused by existing non-GP specialists spending more time in public hospitals reducing opportunities for newly qualified non-GP specialists in major cities. Regionally-based training should continue to be an essential part of all medical training. Self-sufficiency still seems a long way off as the number of international medical graduates continues to grow. The disruption to immigration due to COVID-19 may make it more difficult for rural and regional areas to fill vacant positions, but on the other hand could also create more vacancies in major cities that will prevent domestically trained doctors from going rural.

The widening gap between non-GP specialists' and GPs' earnings, exacerbated by the Medicare Fee Freeze, is important context in an area where there has been no national policy to correct the imbalance in the numbers of GPs and non-GP specialists in Australia. It is clear that over 20 years, the increased supply has disproportionately been funnelled away from primary care.

There is evidence that fee revenue per doctor is also now falling, likely due to increased supply as the growth in the number of doctors is higher than the growth in demand from patients. Whilst doctors' earnings (after practice costs) are still increasing, falls in fee revenue per doctor suggest that practice costs per doctor are falling and/or income is increasing in other ways.

How doctors in private practice manage their billing and workload is a key issue. Doctors are continuing to increase their bulk-billing rates, especially for non-GP specialists, to help maintain volume, whilst fees for nonbulk billed services increase. Whilst discretion on setting fees has provided some flexibility, there is only so much that can be done if there are fewer patients to go around.

The impact of COVID-19 on some of these long term trends is still unclear but has highlighted how flexible the medical workforce (and the health care system) needs to be to meet patients' needs in an uncertain world. Though patterns of disease have remained largely the same, the introduction of telehealth has changed how the population interacts with doctors and going back to what it was before COVID-19 does not seem to be an option. Flexibility and adaptation is the key to ensuring that the population's changing health needs are met.

REFERENCES

- Australian Health Ministers' Council. 2004. National Health Workforce Strategic Framework. Australian Health Ministers Council, Sydney.
- Bai, T., Mendez, S., Scott, A., Yong, J., 2020. The falling growth in the use of private hospitals in Australia. Working Paper 18/20, The University of Melbourne, Melbourne.
- 3. Department of Health, 2019. Scoping Framework for the National Medical Workforce Strategy, 2019, Australian Government, Canberra.
- 4. Ge, G., Godager, G., Wang, J., 2019. Ge, Ge & Godager, Geir & Wang, Jian, 2019. "Do physicians care about patients' utility? Evidence from an experimental study of treatment choices under demand-side cost sharing,", University of Oslo, Health Economics Research Programme., Universirty of Oslo, Oslo.
- Gravelle, H., Scott, A., Sivey, P., Yong, J., 2016. Competition, prices and quality in the market for physician consultations. The Journal of Industrial Economics, 64(1), 135-169.
- 6. Johar, M., 2012. Do doctors charge high income patients more? Economics Letters, 117, 596-599.
- Johar, M., Mu, C., Van Gool, K., Wong, C.Y., 2017. Bleeding Hearts, Profiteers, or Both: Specialist Physician Fees in an Unregulated Market. Health Economics, 26(4), 528-535.
- Li, J.H., Scott, A., McGrail, M., Humphreys, J., Witt, J., 2014. Retaining rural doctors: Doctors' preferences for rural medical workforce incentives. Social Science & Medicine, 121, 56-64.
- McIsaac, M., Scott, A., Kalb, G., 2015. The supply of general practitioners across local areas: accounting for spatial heterogeneity. BMC Health Services Research, 15(1).
- O'Sullivan, B., Russell, D.J., McGrail, M.R., Scott, A., 2019. Reviewing reliance on overseas-trained doctors in rural Australia and planning for self-sufficiency: applying 10 years' MABEL evidence. Human Resources for Health, 17(1), 8.

- Scott, A., 2017. General Practice Trends. ANZ-Melbourne Institue Health Sector Report, Melbourne Institute: Applied Economic and Social Research, The University of Melbourne, Melbourne.
- Scott, A., 2020. The impact of COVID-19 on GPs and non-GP specialists. ANZ-Melbourne Institute Health Sector Report, Melbourne Institute: Aplied Economic and Social Research, The University of Melbourne, Melbourne.
- Scott, A., Bai, T., Zhang, Y., 2021. Association between telehealth use and general practitioner characteristics during COVID-19: findings from a nationally representative survey of Australian doctors. BMJ Open, 11(3), e046857.
- 14. Scott, A., Joyce, C., Cheng, T., Wang, W., 2014. Medical Career Path Decision Making: A Rapid Review. Evidence Check Review, Sax Institute, Sydney.
- Scott, A., Witt, J., Humphreys, J., Joyce, C., Kalb, G., Jeon, S.H., McGrail, M., 2013. Getting doctors into the bush: General Practitioners' preferences for rural location. Social Science & Medicine, 96, 33-44.
- Sivey, P., Scott, A., Witt, J., Joyce, C., Humphreys, J., 2012. Junior doctors' preferences for specialty choice. Journal of Health Economics, 31(6), 813-823.
- Yong, J., Scott, A., Gravelle, H., Sivey, P., McGrail, M., 2018. Do rural incentives payments affect entries and exits of general practitioners? Social Science & Medicine, 214, 197-205.
- Geffen, L. 2014. A brief history of medical education and training in Australia. Medical Journal of Australia, 201 (1): S19-S22



ACKNOWLEDGEMENT

This report was funded by Australia and New Zealand Banking Group Limited. Funding for MABEL comes from the National Health and Medical Research Council (2007 to 2016: 454799 and 1019605); the Australian Department of Health and Ageing (2008); Health Workforce Australia (2013); and in 2017 The University of Melbourne, Medibank Better Health Foundation, the NSW Ministry of Health, and the Victorian Department of Health and Human Services. This report was prepared by Professor Anthony Scott with assistance from Mr Terence Bai of the Melbourne Institute: Applied Economic & Social Research at The University of Melbourne.





© 2021 Melbourne Institute: Applied Economic & Social Research