ANZ—MELBOURNE INSTITUTE
Health Sector Report

The future of the medical workforce

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About the Report

The aim of this report is to examine the current trends likely to influence the future of the medical practitioner workforce. The report focuses on the implications of the increase in the number of doctors and changes in workforce composition for several key areas: the extent and nature of competition in the medical sector; doctors' earnings; the role of the private sector; and technological change, data and information.

Key findings and trends

GROWTH OF THE MEDICAL WORKFORCE AND INCREASED COMPETITION

- The medical workforce continues to expand at 5.3 percent per year: 2.7 per cent above population growth.
- Junior doctor numbers have increased by 8.9 percent per year since 2005. Increased supply can lead to greater competition within the training pipeline and through to unsupervised clinical public and private practice.
- A more competitive career ladder creates incentives for increased effort to reach fellowship, while at the same time increasing the proportion of doctors who might change their career goals or even exit the profession. This is placing increased pressure on junior doctors who are reporting burnout, stress, mental health problems, bullying and discrimination. Though these pressures have existed for a long time, additional competition is unlikely to be helping. An improved culture could increase productivity, team work and patient safety.
- Policy responses are aimed at making effective use of the increased doctor supply by improving the distribution of doctors and reducing reliance on international medical graduates (IMGs).

EARNINGS ON THE RISE

- Although supply is increasing, doctors' earnings are growing at 1.8 per cent per year above inflation, with increases across all doctor types, most age groups, for males and females, and across most specialties. Doctors' earnings are unlikely to fall due to increased supply as long as demand for healthcare continues to increase.
- The gap in earnings between females and males is relatively constant with some evidence of narrowing since 2016. The growth in earnings for females aged over 45 is faster than that of males, who, unlike females, have been reducing their average hours of work. The gender gap in earnings could fall as more women complete training and if efforts to drive culture and improvements in gender equality succeed.

IMPACT ON THE PRIVATE MEDICAL SECTOR

- The increased supply of doctors is most likely to be absorbed by the private sector, rather than budget-constrained public hospitals. However, this depends on the community's perception of the value of private sector healthcare, with recent evidence showing a slowdown in the use of private hospitals.
- Private medical practices might respond to increased competition through consolidation, though this could also reduce consumer choice and raise prices as competition falls. The future could involve tighter regulation of the sector if this balance is seen to disadvantage patients.

FACING A DIGITAL AGE

- Technological change holds much promise for increasing the productivity of healthcare by improving information flows and better use of data, and by bringing doctors and patients together online to improve access to medical care. However, a number of barriers to change and uptake in the short-term will need to be resolved before benefits can be realised.

WHAT THE FUTURE LOOKS LIKE

In the future a larger, and so more expensive, medical workforce is likely to face increased competition, along with increasing pressures from within to change cultures and demonstrate improved value and productivity for patients, governments and private health insurers. Technology (and better information) needs to be used cautiously to ensure it can support the medical workforce in achieving this.

Background

The aim of this report is to discuss the key trends facing the medical workforce and examine the implications of these for the future of the medical sector. Healthcare is the largest part of the economy at 10.3 per cent of GDP, with total expenditure at $181 billion ($7,400 per person) in 2016–17 (AIHW, 2018a). As health expenditure continues to grow at 4.6 per cent per year above inflation, governments and health insurers are increasingly concerned about the sustainability of this growth in spending. This is not just about increasing costs and affordability, but also whether the health outcomes delivered to patients are improving.

The medical workforce plays a crucial role in delivering high-value healthcare. The care doctors provide drives costs and health outcomes and influences the provision of effective treatments and medical innovations, which can save lives as well as prevent and reduce chronic disease. However, the complexities of the system do not always support the medical workforce in meeting population needs. Health workforce reform is slow and often resisted, which can stifle innovation and the flexibility required to be 'fit for purpose' in the future. Against a background of changing patterns of disease and multiple morbidities, increasing concern about low-value care and waste, and increasing patient expectations and technological change, the medical workforce will need to adapt now in order to provide improved, value-based and more accessible healthcare in the future.

Trends and implications of the growth in the medical workforce

RECENT GROWTH

The medical workforce is growing due to a doubling in the annual number of medical graduates in the 2000s, from 1,400 in 1999 to 3,475 in 2017. Overall, the total number of doctors has increased by 5.3 per cent per year, from 59,359 in 2005 to just under 94,000 in 2017. This represents an increase of 2.7 per cent per year over and above population growth.
The number of GPs grew by 2.9 per cent per year whilst other specialists grew by 5.4 per cent per year. Figure 1 shows that since 2009 the number of non-GP specialists has exceeded that of GPs. This gap has increased rapidly from 119 in 2009 to 4,271 in 2017.

The number of junior doctors (doctors in pre-vocational and vocational training) has almost doubled in ten years, from 14,174 in 2005 to 28,028 in 2017, an increase of 8.9 per cent per year (Figure 1). This expansion has increased the proportion of junior doctors in the medical workforce from 23.9 per cent in 2005 to 29.9 per cent in 2017.

Although absolute doctor numbers have increased, average hours worked have fallen (Figure 2), particularly amongst males (male GPs, 44.6 to 41.6 hours per week; male non-GP specialists, 47.3 to 44.0 hours per week).

GROWTH OF SPECIALTY MEDICAL PRACTITIONERS

Using AHPRA registration data, which includes those in vocational training as well as qualified Fellows, the specialties with the highest average annual growth in the number of registered medical practitioners between 2011–12 and 2016–17 were: Emergency Medicine (13.6 percent), Geriatric Medicine (10.6 percent), Medical Oncology (10.1 percent), Infectious Diseases (8.4 percent), Paediatrics and Child Health (7.4 percent), and Palliative Medicine (7 percent). The number of surgeons grew by 2.7 per cent overall, with the highest growth in Oral and Maxillofacial Surgery (13.2 percent), Urology (4.4 percent), and Neurosurgery (3.9 percent) (AHPRA, 2018).

"The number of junior doctors (doctors in pre-vocational and vocational training) has almost doubled in ten years."

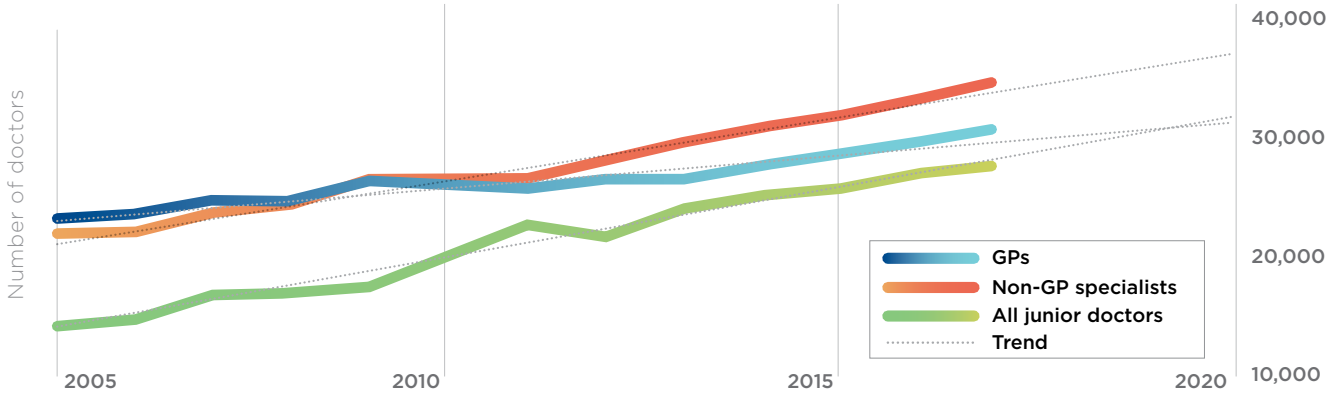


Figure 1. Number of doctors by doctor type, 2005 to 2020 (Forecasts between 2018 and 2020)

Source: AIHW (2005 to 2012) and Department of Health National Health Workforce Dataset (2013 to 2017).
Note a break in the series in 2010 where data are missing due to the move from state to national registration of doctors.
Data for 2010 are estimated as the mean of the data for 2009 and 2011. Linear trends are used to forecast up to 2020.

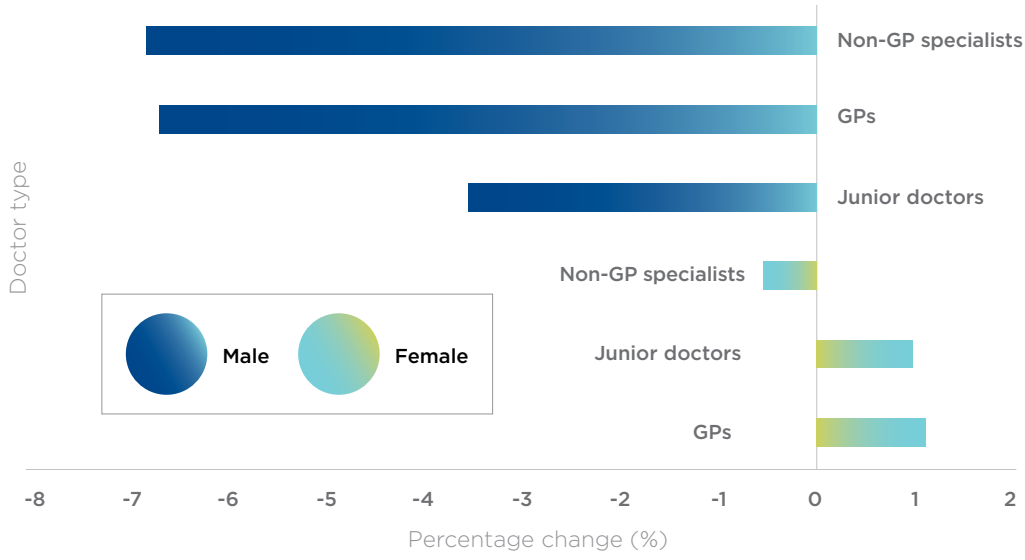


Figure 2. Change in mean hours worked per week by doctor type and gender (2008 and 2017)

Source: MABEL Survey

INCREASED COMPETITION FOR PLACES IN TRAINING

While medicine has always been a competitive profession demanding a high-quality workforce, the intensity of competition for coveted places in specialist vocational training programs has increased. The number of vocational training places is determined by the number of accredited hospital training posts that become vacant. Training posts are nominated by the jurisdictions which fund these positions, with medical colleges responsible for accrediting these posts, so responsibility for the number of positions is unclear. For example, the Royal Australasian College of Surgeons has published data on the number of new trainees accepted into its Surgical Education and Training (SET) program across nine surgical specialties (RACS, 2018). The number of acceptances was 208 in 2008, reached a peak of 276 in 2012, and has since fallen to 211 in 2018. The proportion of successful applications was 23 percent in 2017 and has not changed very much over time as the number of applications has remained around 1,000 (although this has fallen to 800–900 more recently due a new general surgical exam requirement). However, the number of doctors in pre-vocational training increased by 27 percent between 2008 and 2016, from 7,948 to 10,091. Health Workforce Australia predicted a potential shortage of 1,000 advanced vocational training positions by 2030 (Health Workforce Australia, 2014).

IMPLICATIONS FOR DOCTORS' MENTAL HEALTH

Increasing job insecurity and competitive pressures are widely thought to be adding to existing levels of stress, burnout and mental health issues amongst junior doctors (Beyond Blue, 2013). Another factor here is increased reporting of these issues by junior doctors in the context of more widespread acknowledgment that sexual harassment, gender discrimination and bullying are unacceptable (Choo et al, 2019). Many colleges and hospital employers are attempting to address these issues, though there is little research about the effectiveness of their interventions to address these behaviours (Petrie et al, 2018).

IMPLICATIONS FOR CAREER PATHS

Increased competitive pressures during training, and associated stress, burnout and bullying are likely to impact on doctors' career pathways and the type of doctors we have in the future. A more competitive career ladder is creating incentives for junior doctors to increase effort, including attaining more qualifications, undertaking research and taking advantage of networks and connections to move up to the next career stage (McGrail et al, 2019). It can also create incentives for doctors to alter their career goals. Some doctors will attain their goals more slowly than others, some may not achieve their preferred career goals and others may leave medicine—though there are no data on the extent to which this is happening.

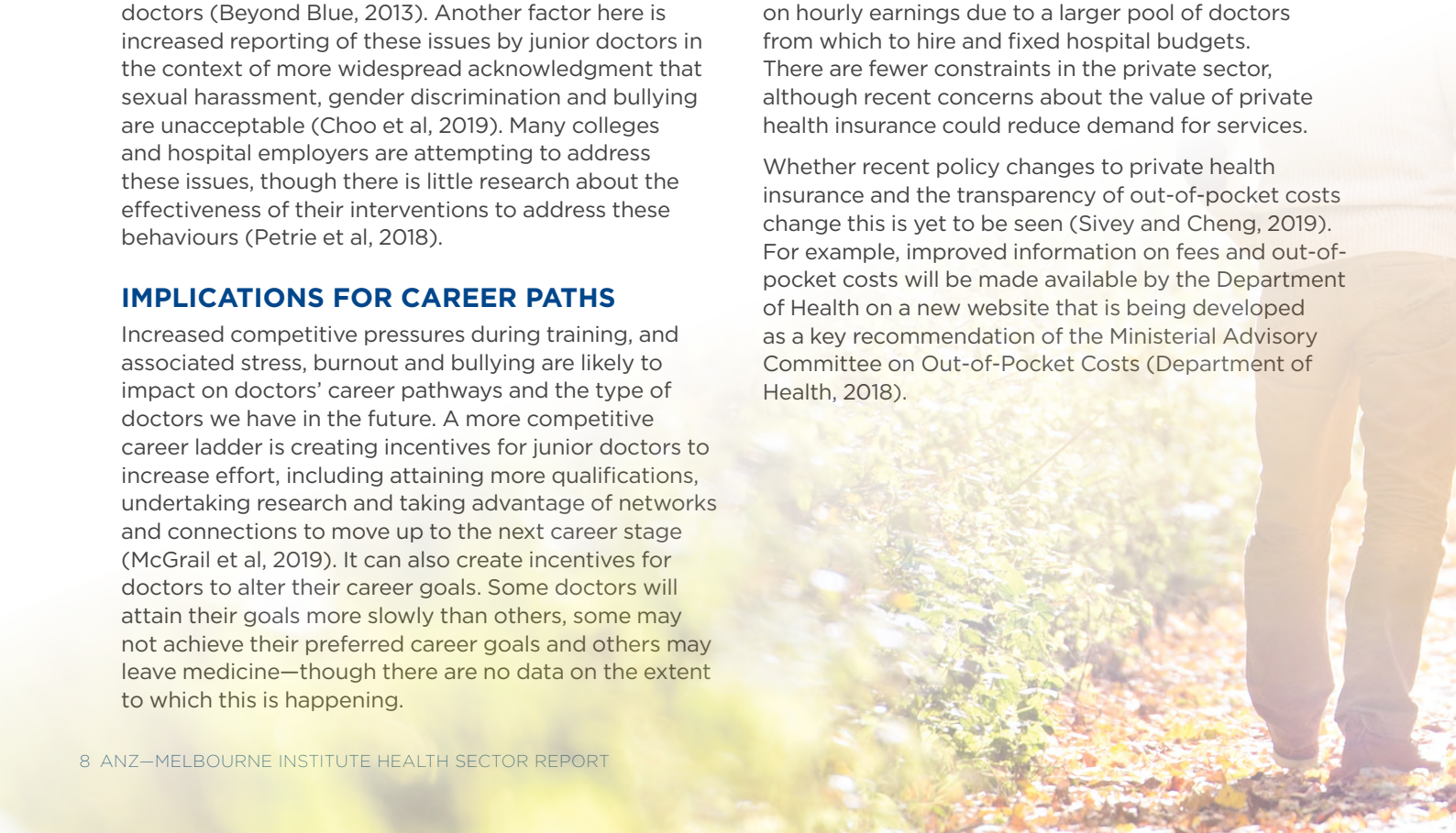
POLICY RESPONSES TO INCREASING WORKFORCE SUPPLY

Policymakers are aware of the increasing supply of doctors and are introducing policies with two main aims: (1) better distribution of doctors across Australia, and (2) greater self-sufficiency. Improved distribution is focused on providing doctors with clearer pathways to rural practice and Fellowship for GPs, including for IMGs working in metropolitan areas, as well as supporting more training in rural areas for GPs and specialists. Self-sufficiency is about trying to accommodate the increase in domestic supply by reducing the number of IMGs (O'Sullivan et al, 2019). These policies are largely focused on metropolitan areas as it is recognised that IMGs will remain a key part of rural medical workforce supply given the difficulties of getting domestic graduates to work outside metropolitan areas. The recent announcement of a new National Medical Workforce Strategy will help solidify these policy developments (COAG, 2019).

WILL AN INCREASED SUPPLY REDUCE DOCTORS' EARNINGS?

Basic economic theory suggests that an increase in supply and competition would reduce the hourly earnings of doctors. There are a number of reasons why this might not happen. First, the demand for medical care is likely to continue to increase as technology improves, the population grows and ages, and patient expectations expand. Second, the increase in the domestic supply of graduates could be offset, to an unknown but probably small extent, by reductions in new entrants from overseas and potentially increased attrition of doctors choosing non-clinical careers. In public hospitals there could be downward pressure on hourly earnings due to a larger pool of doctors from which to hire and fixed hospital budgets. There are fewer constraints in the private sector, although recent concerns about the value of private health insurance could reduce demand for services.

Whether recent policy changes to private health insurance and the transparency of out-of-pocket costs change this is yet to be seen (Sivey and Cheng, 2019). For example, improved information on fees and out-of-pocket costs will be made available by the Department of Health on a new website that is being developed as a key recommendation of the Ministerial Advisory Committee on Out-of-Pocket Costs (Department of Health, 2018).



This is designed to improve transparency, but it remains to be seen whether it will lead to a reduction in fees and out-of-pocket costs through competition. Evidence from other industries, such as retail petrol markets, suggests that publishing prices can lead to increases as providers, not consumers, are the main users of this information (Byrne and De Roos, 2018). Furthermore, without information on quality and outcomes as well as cost, patients are still unable to judge value and may equate higher fees with higher quality, when this may not be the case (Batten, 2018). Providers will generally not welcome these changes given the potential increased administrative costs in publishing out-of-pocket costs and fees, and of course the potential for reductions in revenue through price competition.

The effect of increased supply and competition on earnings is therefore difficult to predict, although on balance real earnings are unlikely to fall since, even if fees decline, earnings could grow or be maintained by increasing the volume of care provided—the main driver of health expenditures (Scott, 2018). Ultimately this is an empirical and research question. Existing evidence suggests that more competition amongst GPs leads to lower fees and higher bulk-billing (Gravelle et al, 2016) but there is no evidence on this issue for non-GP specialists, where the growth in supply is higher than for GPs.

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Recent trends in earnings

There is evidence that doctors' earnings are increasing over time. Overall earnings have increased above the rate of inflation across most age groups, for both males and females, as well as for junior doctors, GPs and non-GP specialists, and across most specialty groups. The size of the overall real increase (of 1.8 per cent per annum from $96.84 per hour in 2008 to $114.21 per hour in 2017) is consistent with the relatively low real wage growth in the broader Australian economy.

Earnings for non-GP specialists have grown more than those of GPs (Figure 3), with earnings for females growing slightly faster than those of males. Data on earnings growth by age show the highest growth was for females aged between 45 and 54 years, followed by females aged between 55 and 64 years (Figure 4). This could reflect increased demand for experienced female doctors as male GPs and non-GP specialists reduce their working hours, while the working hours of females are unchanged or increasing in some age groups, as shown in Figure 2.

The overall gap between male and female earnings has been largely unchanged over time, with a slight narrowing in recent years: male earnings were 43 to 55 per cent higher than female earnings up until 2015, with the gap narrowing to between 33 and 39 per cent in 2016 and 2017 respectively (Figure 5); it is unclear if this trend will continue. This pattern is broadly similar for other occupations (Workplace Gender Equality Agency, 2018). MABEL research shows that the gap remains at around 25 per cent after accounting for differences in time spent with patients and a range of other possible explanatory factors such as having children (Cheng et al, 2012). This gap exists across all age groups (Figure 6). There is evidence of a 'breadwinner' effect for males, as those with children earn more through self-employment, whilst females' earnings fall when they have children and are unlikely to recover when they return to work (Schurer et al, 2016).

While it is difficult to predict if overall earnings will fall in the future because of an increased doctor supply, differences in earnings between males and females could change with more women coming through the training pipeline, and with changes to the culture of medical training and practice that reduce sexual harassment and bullying and improve gender equality (AMA, 2016). Recent research from the United States suggests that such changes could improve career opportunities for female doctors and increase their earnings relative to men (Rao et al 2018).

Hourly earnings

CHANGE IN EARNINGS BY DOCTOR TYPE AND GENDER

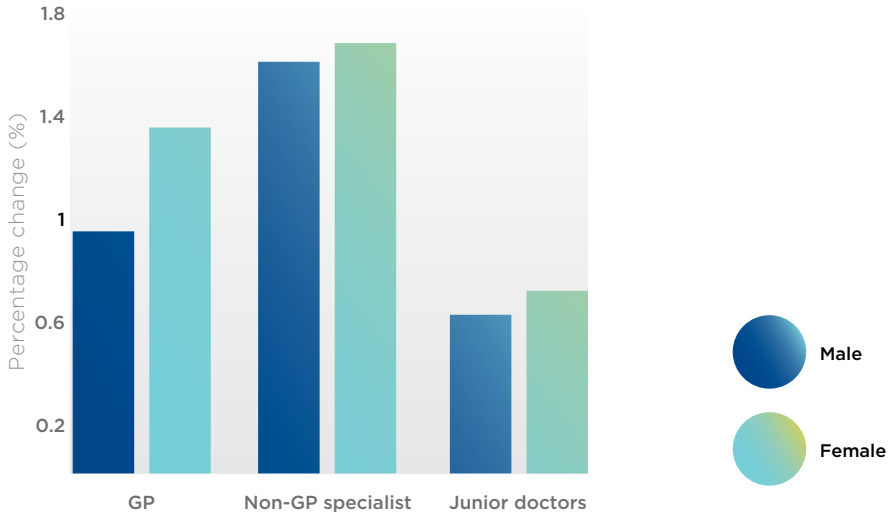

Figure 3. Annual percentage change in median earnings per hour adjusted for CPI, by doctor type and gender (2008 to 2017)

Source: MABEL Survey. Earnings are before tax but after practice expenses. Doctors' earnings include revenue from patients and Medicare for doctors in private practice, and salaries and other payments for doctors in public hospitals. For doctors in private practice earnings are net of practice costs.

CHANGE IN EARNINGS BY AGE AND GENDER

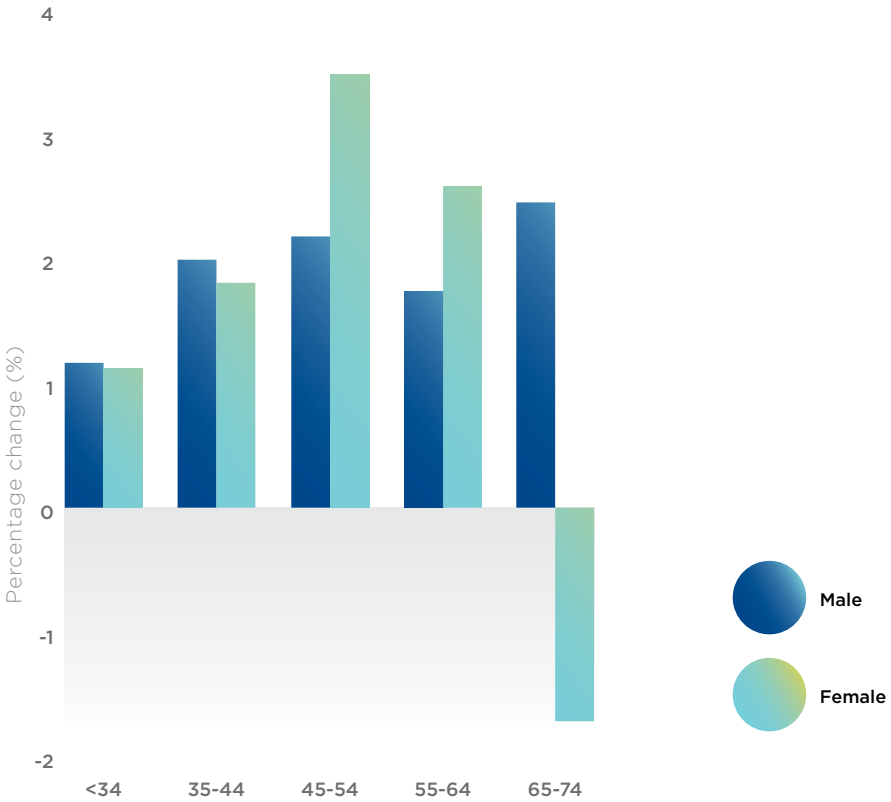

Figure 4. Annual percentage change in median hourly earnings adjusted for CPI, by age and gender (2008 to 2017).

Notes: Earnings are before tax but after practice expenses. Doctors' earnings include revenue from patients and Medicare for doctors in private practice, and salaries and other payments for doctors in public hospitals. For doctors in private practice earnings are net of practice costs.

HOURLY EARNINGS BY GENDER

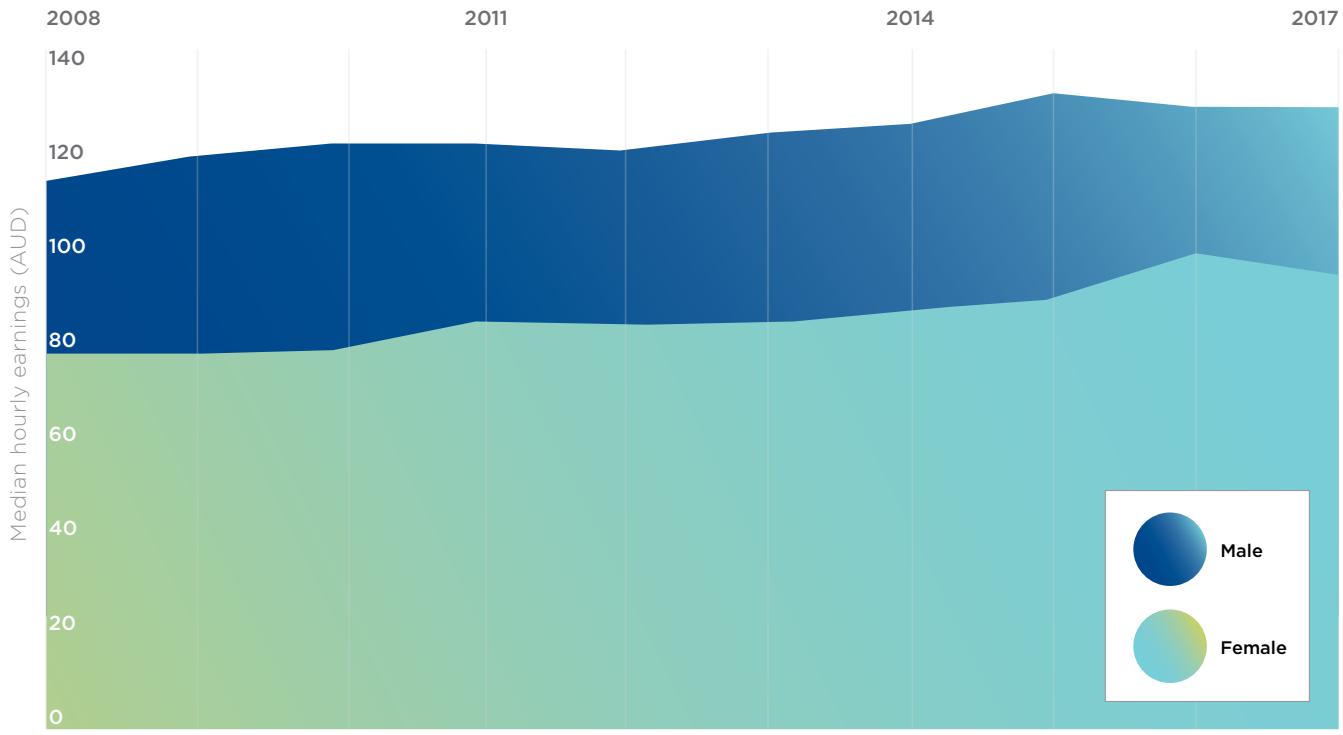

Figure 5. Median earnings per hour adjusted for CPI, by gender (2008 to 2017)

Source: MABEL Survey. Earnings are before tax but after practice expenses. Doctors' earnings include revenue from patients and Medicare for doctors in private practice, and salaries and other payments for doctors in public hospitals. For doctors in private practice earnings are net of practice costs.

HOURLY EARNINGS FOR ALL DOCTORS BY AGE AND GENDER

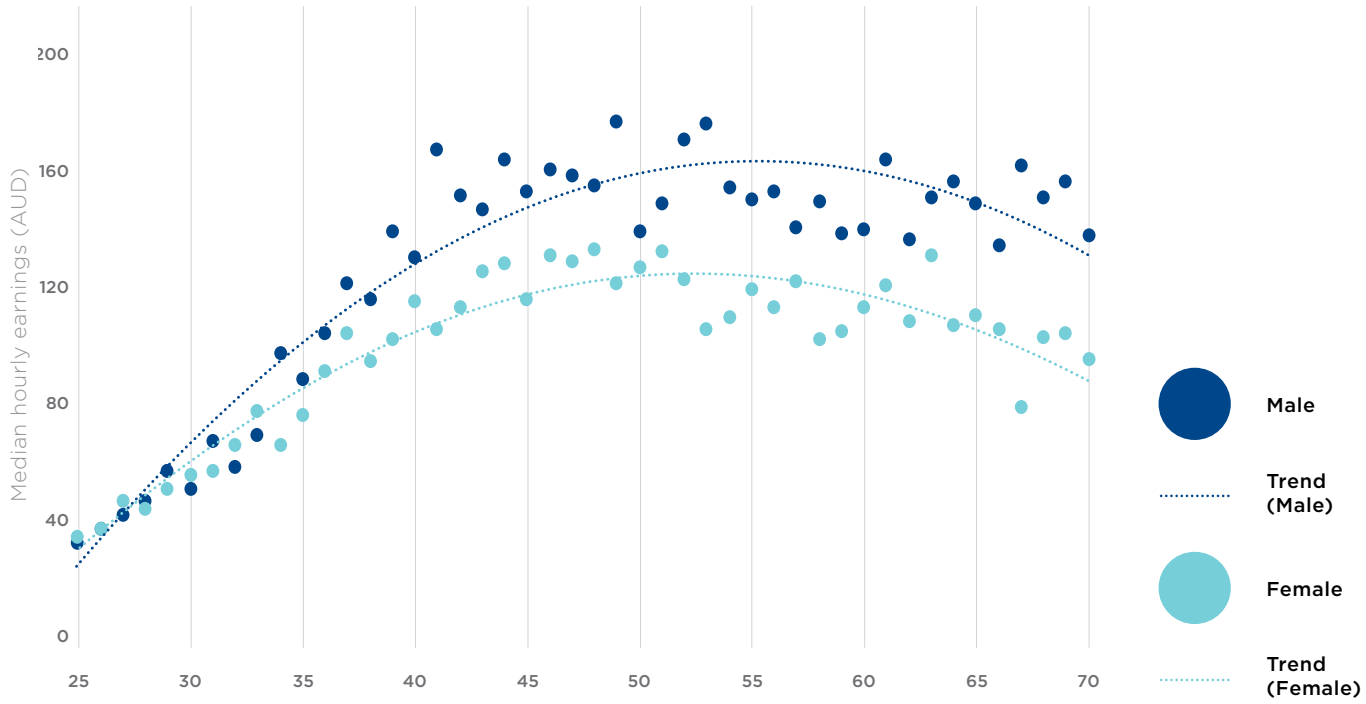

Figure 6. Median hourly earnings by age and gender, all doctors (2017)

Source: MABEL Survey. Each dot is the median hourly earnings for each year of age. Earnings are before tax but after practice expenses. Doctors' earnings include revenue from patients and Medicare for doctors in private practice, and salaries and other payments for doctors in public hospitals. For doctors in private practice earnings are net of practice costs.

CHANGE IN EARNINGS BY SPECIALTY

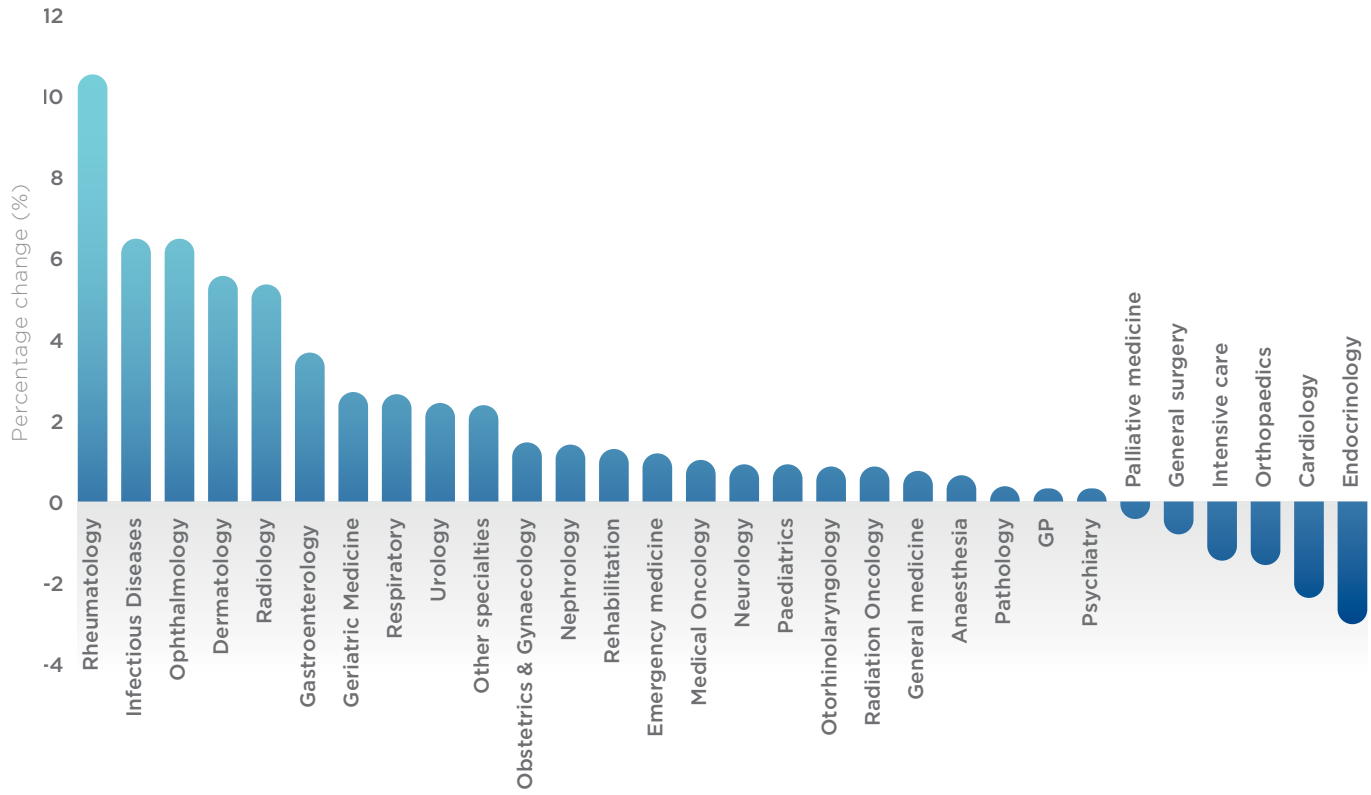

Figure 7. Annual percentage change in median hourly earnings adjusted for CPI, by specialty (2013 to 2017)

Source: MABEL Survey. Earnings are before tax but after practice expenses. Doctors' earnings include revenue from patients and Medicare for doctors in private practice, and salaries and other payments for doctors in public hospitals. For doctors in private practice earnings are net of practice costs. Specialties are included if they have more than 30 observations in 2017. The number of observations per specialty in 2017 varies from 30 (Urology) to 2,689 (GPs).

GROWTH IN MEDIAN HOURLY EARNINGS FOR SELECTED SPECIALTIES

Figure 7 shows the growth in median hourly earnings for selected specialties between 2013 and 2017. After adjusting for inflation, the majority of specialties experienced a real increase in hourly earnings, with the largest increases for Rheumatology, followed by Infectious Diseases, Ophthalmology, and Dermatology. Hourly earnings fell in real terms for General and Orthopaedic Surgery, Endocrinology, Cardiology and Intensive Care. These changes will reflect changes in demand and supply conditions within each specialty.

Changes to the private medical labour market

A key question for the future of the medical workforce is how increased supply will change the structure of the medical labour market. This includes the proportion of doctors working in the public and private sector and, with the latter, trends in the consolidation of private medical practices. Though the public–private mix of doctors has not changed much over time (Scott, 2018), in the future, budget-constrained public hospitals may be less able to absorb growth of the qualified medical workforce over and above inflationary increases in hospital funding. The majority of the increased supply of doctors who achieve Fellowship could spend more time in private practice.

DEMAND FOR PRIVATE HEALTHCARE

Governments play a role in funding private healthcare through private health insurance subsidies and Medicare but there are no volume caps on care provided – as there are through activity-based funding in public hospitals. On average, the number of separations in private hospitals continues to grow each year, though the rate of growth has fallen from 4.7 percent in 2014–15 to 2.3 percent in 2016–17 (compared to 4.7 per cent and 5 percent for public hospitals, respectively). There has also been a fall in the number of separations in private freestanding day hospitals between 2015–16 and 2016–17 of 2.1 per cent (AIHW, 2017). Reports of some obstetric wards in private hospitals being closed are reflected in the national data, where separations involving childbirth have fallen by an average of 3.1 percent each year since 2012–13 compared with growth in public hospitals of 0.9 percent. Meanwhile, participation in private health insurance is falling, largely amongst those under 30 years old. In combination with private insurers reducing coverage and a lack of transparency in out-of-pocket costs, there have been mounting questions over the value of private healthcare. If these trends continue in the longer term and translate into lower utilisation of private healthcare, then there could be insufficient demand in the private sector to absorb the increase in the number of doctors.

CONSOLIDATION OF PRIVATE MEDICAL PRACTICES

Private medical practices can respond to competition through consolidation, which is thought to help reduce costs. Up to a point, there could also be gains in quality of care, but there is little evidence about this. Consolidation here refers to the aggregation through merger or acquisition of private medical practices that occurs when new larger practices are established.

The consolidation of GP practices has been occurring for some time (Figure 8). There are several likely reasons for this, including economies of scale considerations where sole practitioners and doctors in small practices (with relatively high unit costs) grow or merge in order to spread fixed costs, including new capital costs associated with creating modern facilities to meet patient expectations. There may also have been pressure for consolidation from the Medicare fee freeze that began in 2013, as revenue from Medicare rebates fell in real terms. In the past, government policies have also encouraged larger sized practices through GP Superclinics, grants for practice infrastructure, and the accreditation required to access payments from the Practice Incentive Program where payments are paid to practices rather than GPs. Unfortunately, there are no data on changes in corporate ownership over time. Previous estimates suggest that between 10 and 15 percent of all practices are owned by large corporate entities (Department of Health and Ageing, 2012; Erny-Albrecht and Bywood, 2016).

Consolidation could also be driven by the search for a better work–life balance by younger doctors. In the future, doctors may want to work fewer hours and prefer a salaried position more than being a business owner. This could make it easier for corporates to recruit doctors, open new practices, and contribute to the growth of the sector. There is little information on consolidation amongst non-GP specialists in private practice, for whom there are no government incentives to consolidate and no practice-level accreditation requirements. Having said this, economies of scale considerations and preferences for work–life balance could still be playing a role in some sectors such as Ophthalmology and Orthopaedics.

Even though consolidation can help reduce practice costs for corporates, for consumers the existence of fewer practices could reduce choice and lead to higher prices as competition falls (Gravelle et al, 2016). Evidence from hospital mergers in the United States suggests that this is the case (Gaynor, 2019). Hence, as the medical sector continues to consolidate, careful regulatory oversight is needed to balance the interests of patients with those of the corporate sector.

INCREASING SIZE OF PRIVATE MEDICAL PRACTICES

In 2017 only 4.6 percent of GPs reported being in a solo practice, down from 11.6 percent in 2008, whereas the proportion of GPs in practices with ten or more GPs has increased from 15.5 percent in 2008 to 27.3 percent in 2017.

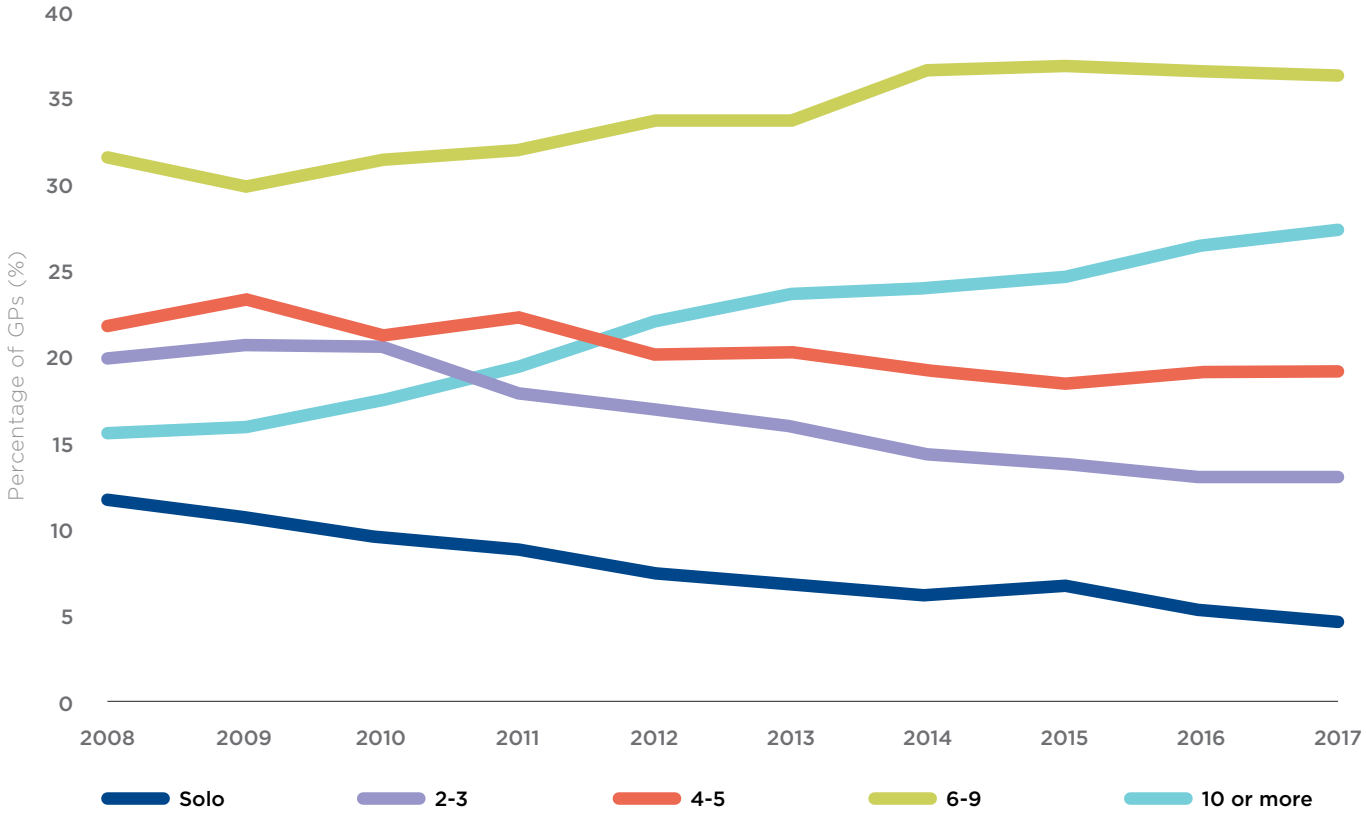

Figure 8. Proportion of GPs in different size practices (2008 to 2017)

Source: MABEL Survey

"Though the public–private mix of doctors has not changed much over time, in the future, budget-constrained public hospitals may be less able to absorb growth of the qualified medical workforce over and above inflationary increases in hospital funding."

Facing the digital age

The evolution of the medical workforce will also be influenced by continued improvements in technology, information and data. Technological developments and improvements in information drive consumer expectations. The uptake of digital technology by doctors is likely to increase since the junior doctors of today have grown up using and interacting with it. Yet, this could take time in an industry where there is still widespread use of fax machines rather than email, as well as a range of privacy and medico-legal concerns about the storage and use of data, and treatments provided using new technology. These issues present a barrier to uptake in the short-term. In the longer-term technology could have a range of impacts on the medical workforce.

CHANGES IN SKILL MIX AND PRODUCTIVITY

New innovative tests and treatments require different sets of skills, roles and tasks, and thus a different combination of health professionals to deliver the same level of medical care. If new tests and treatments are properly evaluated before adoption they are likely to be safer, more effective and accurate, less invasive and, importantly, take doctors less time to perform and interpret. There are many examples, including the debate in 2010 around the reduction in time for a cataract operation and how the Medicare rebate should be reduced to reflect this. Another is the use of stents in heart surgery, which reduces the need for cardio-thoracic surgeons who previously undertook coronary artery bypass grafts. These changes often provide challenges that are resisted by the medical profession, as funding also needs to be reduced for some activities to reflect increased productivity, or a different skill mix.

Machine learning and artificial intelligence (AI) are relatively new tools that can lead to some tasks and decisions becoming automated, such as making diagnoses, interpreting diagnostic test results or predicting the risk of disease (Oakden-Rayner, 2017). However, the outright potential for AI to replace human decision-making and judgement in medical care is limited. This is because it ignores the reality that decisions are made in partnership with patients and their families, and needs to take into account many factors that cannot be reduced to an algorithm—no matter how 'big' the data.

The role of other health professionals in the delivery of medical care (e.g. nurse endoscopy, pharmacists, nurse practitioners) remains controversial and needs to be carefully evaluated, though an increase in medical workforce supply will create fewer incentives to delegate tasks to other health professionals.

IMPROVEMENTS IN INFORMATION FLOWS AND THE BETTER USE OF DATA

There is pressure for doctors to keep up-to-date with the latest evidence and change their practice accordingly. Most healthcare providers are not routinely made aware of the outcomes of their actions with a view to improving the quality of care. Digital decision support systems, such as electronic dashboards and clinical guidelines built into medical software, are an important vehicle for ensuring the uptake of new clinical evidence; providing support and guidance in medical decision-making; and reducing medical practice variations and low-value care. However, automatic reminders and predictive algorithms in computer systems can disrupt workflow, so uptake remains an issue in time-limited consultations (Laranjo et al, 2017).

There are costs to ensuring that data are high quality, can be interpreted correctly, creates information and knowledge, and is accessible to inform the decisions of patients or providers. Therefore, even though technology can drive the production and presentation of information (e.g. dashboards and electronic decision support algorithms), making sure the information is useful and interpretable is costly and may represent a barrier to uptake.

Technology also provides patients with greater access to information about their own health via smart phones and wearables, and enables health data (such as blood pressure) to be transmitted to doctors without a test or a visit. This is in addition to the widespread availability of information on the internet which still requires careful interpretation to be useful. More information does not necessarily equal more knowledge.

Digital health records, such as MyHealth Record, have the potential to make a step change in reducing waste and inefficiency in healthcare. The ability to share medical records has the potential to reduce duplicate ordering of diagnostic tests, consultation times, investigations and medication errors, as well as improve patient safety and care co-ordination for patients across different healthcare providers (Tang et al 2006). However, good evidence on these effects has yet to be produced. Although government policy now allows people to opt out, more than 90 per cent of the population have a MyHealth record, more than 15,000 healthcare provider organisations are registered, and more than 11 million documents have been uploaded (ADHA, 2019). Still, the extent to which patients and providers are actively using these records is unclear.

BRINGING DOCTORS AND PATIENTS TOGETHER TO IMPROVE ACCESS

Technology can bring doctors and patients together online through teleconsultations. There are currently Medicare items funding specialist video consultations for patients outside of major cities where distance may prohibit face-to-face consultations, as well as where the patient and specialist are at least 15km apart. There are also items for residential aged care facilities, and for mental health. However, uptake of these Medicare items has been relatively low (Figure 9), and barriers to uptake are complex (Greenhalgh, 2018). There is large potential for telemedicine to solve rural access issues, with systematic reviews suggesting it is as effective as face-to-face care, however, evidence on the cost-effectiveness of this practice remains weak (Henderson et al, 2013). Fully private online consultations are already available from some private providers in Australia, but GP–patient online consultations do not attract Medicare rebates. This is more widespread in other countries where some public funding as well as private investment is available (Marshall et al, 2018). There is concern from funders and GPs that online consultations with patients may be of lower quality in some cases (where physical examination could help diagnosis), and that private providers would increase competition for existing GP practices (Marshall et al, 2018). There are also legal and ethical issues being tested by the existence of new online providers, with evidence from the United Kingdom showing that the vast majority of private providers do not meet regulatory standards related to quality (Marshall et al, 2018). It is important that such services are properly evaluated before adoption.

WHAT THE FUTURE LOOKS LIKE

The current increase in medical workforce supply is playing a key role in shaping the future of the healthcare system. Intense competition, job insecurity and increasing awareness of bullying and harassment, could change the nature of medical training and how junior doctors are supported through the pipeline. Cultural change and greater gender equality, combined with technological development and support could mean that, in the future, doctors will be more productive and motivated – even if they are working fewer hours. Though the supply of doctors is growing, their earnings continue to increase over time in line with general wage growth in the economy, and with some weak evidence that female doctors' earnings are catching up. The private sector may benefit most from the increased supply, but only if the value proposition of private healthcare improves and there continues to be adequate demand. Technological change and access to better information could help create value through disruption, proactive adoption and use. However, careful evaluation is needed to ensure the benefits of technology are real and delivered to those most in need of healthcare.

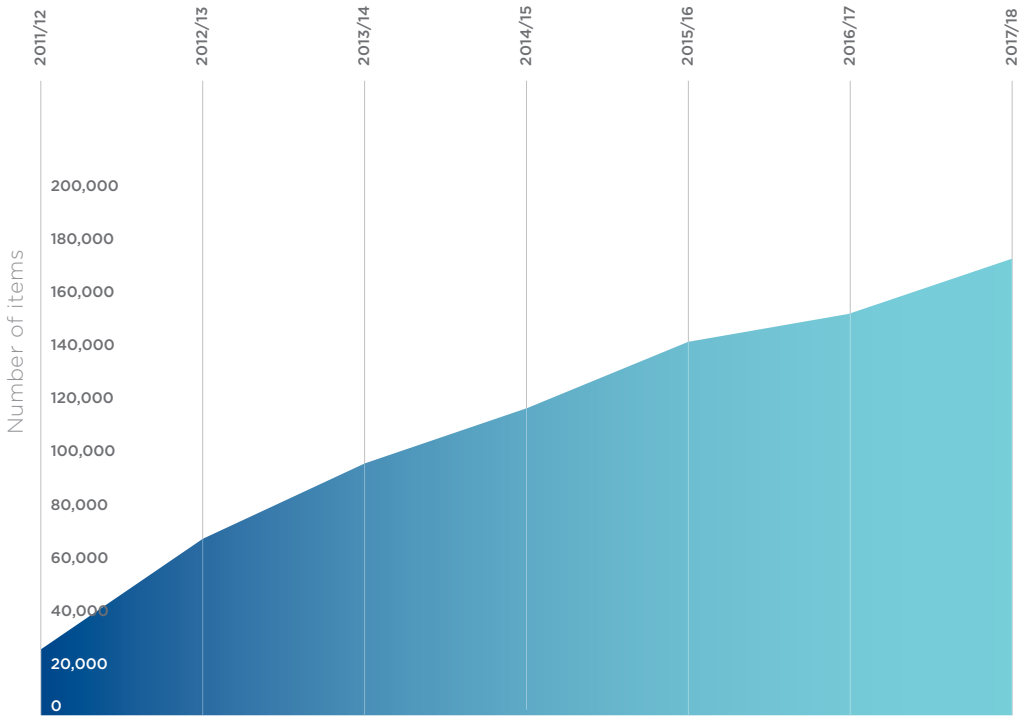

Figure 9. Number of telehealth MBS items (2011–12 to 2017–18)

Source: MBS Statistics

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ABOUT THE DATA

This report uses publicly available data from the Australian Institute of Health and Welfare. Additional data come from the Medicine in Australia: Balancing Employment and Life (MABEL) longitudinal survey of doctors (http://mabel.org.au/). MABEL has been collecting data from about 20 percent of all Australian doctors since 2008. The sample is broadly representative of the population of doctors in terms of age, gender, location, and hours worked. All analyses of MABEL data in this report use cross-sectional weights to ensure data for each year represent the broader doctor population in terms of key variables. Details of the construction of weights are included in the MABEL User Manual.

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 Ms Sandie-Marie Szawlowski of the Melbourne Institute: Applied Economic & Social Research at The University of Melbourne.

ISBN 978 0 7340 5537 8