Australia's health workforce — a future looking perspective

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It may sound trite, but it has to be said: it is an enormous privilege to deliver this talk in honour of John Deeble.

John Deeble represents the best in Australian public policy: elite intellect, clear sighted commitment to evidence-based policy and a preparedness to think big. Perhaps most important of all, an unwavering commitment to the public good.

Many of you knew John through various institutional connections: the AHHA and Deeble Institute; the Australian Institute of Health and Welfare; the Department of Health; the Melbourne Institute and the Peter Mac.

I did not. But what I can say is that John was well known to the Productivity Commission, having participated actively in a number of the Commission's projects, via formal submissions and other inputs.

Some weeks ago, a colleague of mine approached me in the office kitchen. He heard that I would be giving this talk. He told me about the lasting impression John had made on him, when providing input on a Commission project back in 2012 which compared the efficiency of public and private hospitals.

John made a formal submission — still there on the public record — following the publication of our draft report. It was, as you would expect, strong on technical detail and in-depth knowledge of the sector. What is more striking is the tone: it was educative in the best sense — pointing out where our analysis could be sharpened, and our estimates improved.

He was a giant; and we, mere mortals; but he couched his suggestions in a way that was supportive and encouraging. My colleague recalled talking to John on the margins of one of our public hearings and had quite a lengthy chat about health policy. He said this about John:

> [John] was willing to discuss the economics of Australian healthcare with me personally, and I really appreciated that at the time. In this way he was an inspiration — soon after this work, I went and started a Masters of Public Health in order to further my understanding.

John's policy legacy is well known, but there was clearly something more. In his humility and his generosity, he inspired other young policy officers — creating a multiplier effect of inestimable value.

Today as much as ever, we need health policy thinking that is rational, fearless and prepared to grapple with big realities: the aftershocks of COVID, demand pressures from an ageing population and supply pressures due to workforce issues.

As if that wasn't enough, I wish to add one more: the slowing of productivity growth in Australia and much of the developed world. I want to put to you that this is an issue with significant bearing on health policy that warrants our attention, particularly in the context of health workforce issues.
[I can sense some groans — yes, productivity growth can be a dry topic, but let me try and put it on a larger canvas.]

For the last 200 years, in western Europe and in the European community in Australia and North America, living standards rose at a rate unprecedented in human history. As our own recent interim report states, this rapid advance came as a result of the:

> … ongoing discovery and spread of new, useful ideas. Some took the form of new technology — like electricity or antibiotics. Others were new business models like mass production or ride sharing. Still others were institutional innovations like accounting standards, capital markets or free trade.

The change was felt across all sectors of the economy: agriculture, transport, manufacturing, retail and, of course, health. Two of the most significant gains of the late 19th and early 20th century were the dramatic fall in infant mortality and death from infectious diseases. We sometimes describe this as the output (or outcome) of the health sector — I have described it in that shorthand — but that is not entirely right.

Not all of the improvement in health outcomes can be attributed to the 'health sector' per se. Much of it was unrelated to increased public or private spending on doctors and hospitals: some of the major contributors were things like clean running water, sewerage systems and refrigeration.

But it is true that the *practice* of medicine was also transformed, from a state (say) 250 years ago based on what could be described as folk remedies and localised quackery, into a profession (or more accurately a group of professions) which more closely cohered around scientific disciplines and rigorous training.

Hospitals were transformed from places of infection and disease towards their modern status as places where advanced medicine is performed; illnesses treated and cured.

A broad, stylised fact is that the advances in health largely came in the form of improved quality — better health outcomes, longer life expectancy, less pain, fuller lives — rather than reductions in cost.

Whereas the productivity growth in several *other* industries, including agriculture and manufacturing, saw a dramatic fall in the real cost of producing the everyday goods that households purchase largely via a reduction in the amount of labour required to produce increasing amount of output.

We have estimated that in 1901 a bicycle would cost the average worker 473 hours of labour at the average wage. Today it would take just six hours. This is a very stark demonstration of the way productivity growth can lead to dramatic cost reduction in common items for the average person, albeit over a long-time horizon.

Wherever that happened — wherever less labour was required to produce basic household goods — there has been a tendency for employment to shift toward other sectors, satisfying other human wants and needs.

Agriculture employed a quarter of the workforce in 1900, compared with less than 5 per cent today. The trajectory in services (including health) went in the opposite direction. This is one of the big economic stories of the last several decades: the steady shift of employment into the services

sector, with health leading the way. We can attribute this to a change in people's preferences, but that isn't the whole story: partly it reflects cost reductions in other parts of the economy.

Australia's economy is now 80 per cent services; and 90 per cent of employment is in service industries. To be a high-income country today requires a high productivity service sector. Future productivity and income growth relies more than ever on productivity growth within the services sector. And that turns out to be a significant challenge.

It's not just that productivity growth is a less intuitive concept in many services than it is in goods sectors like agriculture, manufacturing and mining, though that is true. It is also that many of the forces the drove productivity gains in those goods industries — large scale substitution of labour by capital, mass production and economies of scale, cheaper energy — are, on the whole, likely to be less applicable to services.

Many services are delivered in person. They are often bespoke by nature and there is an important sense in which they are 'co-produced' between the provider and the consumer. Even in health, much of the innovation that does occur is on what one might describe as the manufacturing or R&D side of the business: the new drugs, devices and equipment and diagnostic tests. Less so on the service side: new business models or configurations of service delivery.

The health sector is a leading-edge innovator when it comes to medical technology; less so when it comes to the use of general technology (say digital communications or data analytics) to support innovative new business models. This is likely to be part of the reason that health innovation tends to be quality-enhancing rather than cost-reducing on average.

The *Inter-generational* report tells us about the cost pressures that we face on the demand side: due in part to an ageing population, with forecast health spending by the Australian Government to increase by about 1.6 percentage points of GDP from 2021-22 to 2060-61. State and territory spending will add further pressures on government spending, probably by an additional 1 percentage point.

This collectively may not sound like much, but for the Australian Government alone these pressures amount to an estimated $800 billion of additional spending over this period in constant 2020-21 prices.

But there is another truth that is much less well understood: namely that a similar cost pressure operates on the supply side. It goes like this: when productivity growth in the economy is uneven — with some sectors finding ways to reduce real costs rapidly and others less so or not at all — then (perhaps ironically) it is the sectors with *low* productivity growth that end up comprising an increasing share of employment and nominal GDP.

This is the phenomenon known as cost disease. In many ways a market economy operates to transfer resources in a positive way: to those firms and activities which are most efficient, offer the highest quality at the lowest prices and innovate to do so. But the cost disease story highlights another tendency: in the face of uneven productivity growth, resources (notably labour) flow to those sectors with relatively slow productivity improvement.

Unless that pattern changes, economy-wide productivity growth can face ever increasing headwinds. As economist Charles Jones put it:

> Economic growth is determined not by what we are good at, but rather what is essential but hard to improve.

In Australia, the non-market sector (comprising health, social assistance, education and other public services) has increased its share of employment (hours worked) from 20 per cent to 25 per cent in the last two decades. Much of that growth has been in the last 12 years.

If that growth continued unabated out to 2060, the non-market share of employment could get closer to 40 per cent. It would almost certainly intensify our current workforce shortages and fiscal pressures.

Of course, productivity growth in the non-market sector is not zero across the board. But it is notoriously hard to estimate; outcomes can be somewhat intangible or hard to observe, and quality is often the main dimension of improvement, and it can be highly subjective.

There are ongoing advances in health. And medical technology promises yet more: the expanding role of wearable technologies, genomic sequencing and broader applications of messenger RNA for instance. But it is hard in health to know whether those advances (measured in better quality health outcomes say) are being achieved faster than the growth in inputs.

In other non-market services, like school education, it is harder to make the case that there has been productivity growth over the last two decades. The main path out is to achieve some productivity growth in the non-market sector itself; and to complement quality improvements with some real cost reduction where possible.

None of this is easy, but in many ways, it represents one of the big economic challenges of our day. Two observations stand out.

First, the unevenness of productivity growth can be overcome via general purpose technologies — those that have broad application, like digital technology or AI, for instance. It means that when such technological waves come along, we need all sectors to put that technology to good use.

Second, in those services, like health, which rely heavily on a highly skilled workforce, it is vital that the workforce be well deployed — to maximum efficiency and effectiveness. Not least because where technology (whether health-specific or general) is introduced, it tends to change job design and, in extremis, the role of a particular profession. If we stick rigidly to existing occupational contours, we will miss opportunities.

We should look at these issues through a positive lens: there are worthwhile opportunities in healthcare and a major role of the workforce in achieving those.

Let's start with something subtle about health care quality — the word 'patient'. It's an interesting word that suggests something about our expectations of people using the system. The Commission has estimated that the avoidable hidden costs of just waiting in doctors' offices amount to about $1 billion a year.

A US clinician summed up an alternative approach with a provocative title to his book: 'The Patient Will See You Now'. That idea brings into focus the much broader issue of person-centred care and how the health workforce's attitudes to people can improve outcomes and experiences.

Measurement of performance of the healthcare system is one crucial aspect of this centredness, hence the growing importance of PREMs and PROMs.

But little things matter to change how a healthcare workforce interacts with people. In the Commission's study of innovations in care for chronic health conditions, the Perth homeless Healthcare Team established a patient reference group, comprising people experiencing homelessness — an incredibly vulnerable and disadvantaged group — to give their views on the most effective ways of providing services to them and to help plan new services.

One 265 bed community hospital took the concept of a person-centred approach to heart. It looked at every feature of their operations from a consumer perspective. Leadership from all of its workforce was critical, with a person assigned to focus the workplace culture on person-centred care. Patients, their families and the community are now involved in the governance of the hospital. Throughout the hospital, large posters urge patients and family members to 'speak up, ask questions'.

The key lesson is that a healthcare workforce's skills go well beyond purely clinical dimensions. In a way, this hospital's model of healthcare expanded its workforce to include the people it served. Taking to heart that earlier point about co-production between the producer and consumer of a service.

In some other service sectors — notably retail — the path of innovation and progress has involved bringing the consumer more and more into the 'production' process. First by having the customer walk the aisle and pick their own goods from the shelves. More recently by having them scan items.

This role of the 'patient' is explicitly being used via the increasing role of peer workers in mental healthcare. Peer workers can be particularly useful for some groups who find it hard to engage with mainstream services, such as those in the LGBTIQ community.

Technology may also give the patient greater scope to take charge of their own healthcare needs, with a reduced role for an omnipresent healthcare worker. This approach means scarce healthcare workers can help more people, an outcome that is particularly valuable in regional and remote areas where labour shortages seem particularly severe. It also offers the potential to reduce burnout and stress on harried health workers and can promote better outcomes for patients.

The technology does not have to be complex. The Commission recently examined an automated SMS-based persona — charmingly named as Nellie — to promote self-care for people with chronic conditions. It is used widely by the South-Eastern Melbourne Primary Health network to great effect. Nellie is highly versatile. Some GPs used for remote monitoring of blood pressure; others for promoting increased physical activity.

A good example of the more sophisticated use of consumer-led technology is the use of online services for the treatment of mental health conditions, particularly cognitive behavioural therapy for people experiencing affective disorders (depression and anxiety).

In the Commission's inquiry into mental health, we found that supported online treatment was highly effective for many people. Meta analysis showed that online treatment was not inferior to face-to-face care, and when compared with clinician-alone services, had more uniform results.

It promotes large productivity improvements for mental health workers. For example, THIS WAY UP found that clinicians only used 10 minutes per fortnight for supported online treatment compared with 1 to 2 hours for face-to-face treatment, because in the online service the practitioner's time is being complemented with other content and interactive tools.

There is a quality and a convenience dimension too. Like all workers, healthcare workers having varying proficiency; software does not. Software can't do everything, but where is has efficacy, it can provide a consistent quality of service.

Online approaches also address some of the concerns about stigma in face-to-face models of care. It is available throughout Australia and at times when normal services would never be available, such as between 6 pm and 10 pm and can be provided at low cost. In some instance, no referrals are required, and the person can interact anonymously. Even some standalone (unguided or non-supported) CBT services through smartphone apps have been shown to be effective.

A degree of self-service, for some types of healthcare, provides scope for the consumer to be in charge. It won't suit everyone, but it will suit many.

In other cases, technology might largely be about assisting clinicians. For example, there seems to be promise in model-informed precision dosing, which software is good at. Similarly, artificial intelligence algorithms can support radiologists in identifying abnormalities in radiological images. Google has shown that computers can perform well in examining retinal images of diabetics (who are at high risk of ophthalmic disorders).

These are opportunities, not threats. For the most part, technology tends to replace tasks rather than jobs. Hence it augments skilled labour rather than superseding it. But it does allow humans to focus their efforts and attentions on those uniquely human skills like judgment, synthesis of complex information, empathy and innovation.

So, technology can play a significant role in person-centred care, and in substituting low for high-cost services.

There are other substitution possibilities that rely on expanding the scope of practice of the healthcare workforce broadly defined. Unwarranted scope of practice restrictions add to costs, reduces people's access to treatment, and constrains choice.

Stephen Duckett has rightly called the use of highly qualified practitioners for activities that require much lower qualifications as 'squandering skills in primary care'. He found that for a wide range of workforce groups, more than 90% saw scope for some workforce substitution. That substitution can be to a practitioner with lower skills. For instance, about 30 per cent of enrolled nurses thought they could shift some of their workload to cleaners. And satisfaction rates for healthcare workers would no doubt rise if they can avoid performing tasks that could be done by someone less qualified.

There appears to be significant and excessive caution about widening the roles of some healthcare workers. How far substitution can go relies on clinical evidence rather than intuition, and certainly should not be informed by what has been referred to as 'protected titles'.

The arbitrary nature of allowable scope of practice across developed economies, or even within them is telling. In California, nurse practitioners are recognised as primary healthcare providers, but must be supervised by a physician, while Oregon and Arizona have no such requirement. A large-scale study by the Federal Trade Commission on outcomes in US jurisdictions that required physician oversight and those that did not, found that the unrestricted model of care had no adverse impacts on the quality of care and indeed some health benefits for Medicare beneficiaries.

The scope of practice of the community pharmacist is one of the most contested areas. The COVID-19 epidemic saw pharmacists performing a key role in population vaccination, and they have proved their effectiveness in a range of other areas, such as opioid treatment. Some in that profession have sought wider roles in healthcare, such as embedding pharmacists in aged care facilities to better manage medications, and even more controversially, to divert non-urgent hospital emergency department presentations to pharmacists. Some obvious caution would be required before implementing the latter.

As much as some would argue for a bigger responsibility for community pharmacies, the existing model has many undesirable features, most particularly their unique role in the health care sector as retail outlets that sell notionally therapeutic goods with proven lack of efficacy, as well as many unjustifiable regulatory constraints on competition and prescription price discounting.

One attractive option is to extend the potential for pharmacists and other allied health professionals to play a bigger role in multidisciplinary care teams under integrated health care models. That said, a health system should not be about desperately seeking roles for its workers if there are better options. That will mostly just be about changing the tasks performed by the workforce, diverting them to others.

There are other forms of substitution between healthcare workers that the Australian healthcare system should aspire to accelerate. The hospital system is the monster of the healthcare system, accounting for about $84 billion in 2019-20. One can throw in about $5 billion of loose change for MBS and PBS services delivered in hospitals. There is a great deal of scope for shifting activity from hospitals to primary healthcare through better management of chronic diseases, including more coordination between primary and tertiary care. And that means that general practice and other primary forms of care — and their associated workforce — should play a bigger role.

As an illustration of outcomes, in its first two years of operation, the Bunbury Hospital Chronic Conditions Care Coordination Service in Western Australia saw a 56% reduction in emergency department presentations, a 16% fall in the length of hospital stay and savings of more than $1.5 million in avoided costs for people enrolled in this service.

None of these hospital avoidance measures will have immediate impacts on hospital costs, which will ultimately come from being able to delay the building of new hospitals and from reducing ongoing labour shortages. But the benefits for patients — rather people — will be felt a lot sooner.

Funding models clearly play a role. Pecuniary incentives aren't everything, but they do matter. And when we pay for primary care on the basis of time spent, or for hospital care on the basis of activity, we miss out on some opportunities for improvement.

Activity-based funding in hospitals was an important reform. It strongly encourages hospitals to be efficient in their activities. But it does not pay a hospital to reduce its activities by managing care better or by making investments in primary care. We know that in general practice, fee-for-service encourages high throughput, but it also encourages services.

In conclusion, there is much complexity in a system. More so when it's the health system. There is no single magic wand; no policy lever that, of itself, creates the necessary change. Large scale system architecture is part of the story, but only part.

We will continue to work within the broad policy structure that John Deeble envisioned. But within that, we will have to continue the quest for funding models that better align practitioner incentives with the public good and free up some room for genuine service innovation.

We need to think hard about the funding role of our private health insurers and, for that matter, life insurers, in the suite of patient-centred and preventative care. And, as mentioned earlier, the role of community pharmacy in the mix. We also need to foster and support a cultural shift — towards more integrated care, less siloed and more team-based, centred around the patient.

Nowhere is that patient-centred approach more salient than in relation to Aboriginal and Torres Strait Islander health, where Aboriginal and Torres Strait will legitimately demand a culturally safe environment — both in using health services, but also working in them. This is fundamentally important to closing the gap on health outcomes. So, growing and developing the Aboriginal and Torres Strait Islander health workforce is a high priority.

We will need a system with fewer boundaries, including those created by the Federation; one that makes use of practitioners' full scope of practice. We will increasingly rely on informed and

empowered consumers, supported by technology, both medical and general. New data (like PREMS and PROMS) and use of existing data will be central to that endeavour. We will need to showcase innovation and success stories where we find them.

Finally, we will need a bit of the ethos of John Deeble. That commitment to the public good: robust policy analysis aimed at meaningful real-world outcomes, with a passion for bringing others along.

I opened with a mention of John's interactions with the Productivity Commission — just a tiny fragment of his life's work in public policy. The submission he made to our study, having pointed out the technical gaps in our work and highlighted where improvements could be made, concluded thus:

> The comments set out here are not advanced as criticisms, only proposals that might lead to better and more understandable results. The Commission's report is a very important one on a difficult and complex subject. It is to be congratulated on what has been achieved in a very short time.

That paragraph alone tells us a great deal about why John Deeble had the influence he did: on policy and on people.