Reform and Sustainable Funding of Healthcare

Speech at the Healthcare Leaders Forum, 3 August 2021

Michael Brennan, Chair

Thank you for having me here at the healthcare leaders conference.

As a representative of the Productivity Commission and former Treasury official, I feel like the economist from central casting.

But, after all, in the context of COVID, health and economics have become more closely intertwined.

Through the last year and a bit, the health and economic debate has mainly focused on the here and now, as it should.

But there is also a need for us to more closely integrate health and economic policy as we think about recovery and the medium term.

My contention is that our long-term fiscal pressures, the rising prevalence of chronic disease and the promise of technology are converging to force a conversation about how we will shape our health system for the future.

That conversation has to be about more than the effectiveness of our health care, but also its efficiency.

Put another way, how do we improve the way we deliver health – the health business model – to maintain a high quality, affordable system?

My starting point is the *Inter-generational Report* (IGR) released by the Treasurer in late June.

It shows that future spending pressures will make it hard for us achieve a balanced budget in the future, though we may be able to stabilise our debt as a percentage of GDP.

The biggest spending pressures relate to health (Commonwealth health spending projected to rise from 4.1 per cent of GDP to 6.2 per cent by 2061) and aged care (from 1.2 per cent of GDP to 2.1 per cent by 2061).

But the IGR prompts us to think about whether that trajectory is really sustainable. Each IGR is, and should be, a catalyst for policy debate.

This IGR has prompted a debate on economy-wide productivity growth, but it should also prompt debate about productivity growth in the health sector itself.

Of the projected rise in health costs over the next 40 years, less than half is due to demographic change – older people needing more and costlier health services.

The rest is due to non-demographic factors, primarily technology – the tendency for new and often more costly treatments, diagnostic techniques and equipment.

In other words, while other sectors of the economy are embracing technology in large part to *cut* costs, in Health we talk about technology as a driver of *increased* costs.

So what exactly is going on here?

It comes back to what we mean when we talk about productivity growth. In its simplest form, productivity growth means getting more from less.

But you could think of the fruits of productivity growth as coming in three main forms:

- Real cost reductions – that is, the things that get cheaper over time in real terms – usually measured against the value of a worker's time.
- Quality improvements – the things that get better (in measured and unmeasured ways).
- New things – inventions so novel that they can be said not to have existed before and perhaps were not even conceived of by most people, but which create new value for society.

Of course, one could quibble as to whether the third category is really distinct from the other two or just an extreme case of cost reduction and quality improvement.

Economic progress produces (or consists of) a combination of these things, and individual goods and services evolve in different ways.

A car today is much cheaper in real terms than it was 40 years ago but has also improved significantly in its quality: speed, comfort and safety.

Over the same time period, air travel has changed less in terms of quality, but has become radically cheaper.

Health sits at the other extreme – huge improvements in quality, in part because of new technological breakthroughs, but not much cost reduction.

It is as though we have come to accept that health costs will inevitably take up an ever-larger share of the economy.

That has been the pattern, and in fairness, it has brought significant benefits.

Life expectancy has risen dramatically: a male baby born in 1886 had a life expectancy of 47 years. Today it is more like 81.

Moreover life expectancy in Australia today is higher than would be predicted purely from our health spend – implying we get good value for the dollars spent.

And it's not as though medical technology never cuts costs.

In 2005 the Productivity Commission looked at the impact of various health technologies and some – like asthma medications – reduced hospital admissions. Others, like improved surgical techniques led to shorter hospital stays, but more procedures, hence had a neutral effect on overall cost.

But overwhelmingly, medical technology was found to be a driver of increased cost.

Should we simply accept the inevitability of increasing cost pressures in health as the price to be paid for better outcomes?

One can point out that health is a so-called 'superior' good – the demand for which rises as we get richer, such that costs increase disproportionately with rising income.

This may be true, but we should also remember that this rising real income is simply the result of productivity gains elsewhere in the economy.

Should health be forever exempt from the sorts of real cost reductions that have occurred in other sectors – largely through technological advance?

I think it is time to question that basic assumption.

In a recent piece of work, we illustrated the scale of real cost reductions in the general economy by going back to 1900 and looking at how long the average worker would need to work in order to afford certain items.

For example, we found that an average worker in 1900 would need to work 30 minutes to afford a litre of milk. Today it would take more like 5 minutes.

And a bicycle – the main form of transport in 1900 – would cost the average worker 527 hours of toil compared with 18 hours – a thirtieth of the time a century ago.

We didn't calculate the cost of health services in 1900 vs the modern day, but here is an educated guess.

Whatever the cost was in 1900 of spending, say, 15 minutes with a doctor – measured in terms of the average wage – the cost today would be very similar.

That cost would be determined by the relative wage of the doctor compared with that of the average worker.

Assuming that relativity hasn't changed much, there is no real cost reduction at all, because the main cost is the GP's time – the value of which keeps rising as society gets richer.

As already noted, there is a radical difference in *quality* between a 15-minute consultation with a doctor today and a doctor in 1900.

The doctor today knows more, has better equipment and can refer the patient off for a full range of diagnostic tests.

Those are productivity improvements, but they are on the quality rather than the cost dimension.

Again, this is not to say that GPs have not invested in some labour-saving technology in their practices.

But overwhelmingly, the central point holds: we have been much better at using new technology to enhance clinical outcomes than we have been at using it to disrupt or adapt the basic business model of medicine.

And as long as the one-on-one consultation remains the staple of the system (or the hospital with its beds, wards and nurse-patient ratios) it will be very hard to drive real cost reductions in the health system.

Which means the inter-generational report of 2061 would look very similar to that of 2021, with the same reference to technology driving health costs up, not down.

History suggests that we cannot rely on medical technology to drive cost reductions across the system.

To cut the real cost of health services, we need to find ways to better use clinicians' time without sacrificing quality.

This issue was well described by Rohan Mead from Australian Unity in a piece he wrote for CEDA some 5 years ago and an op-ed in the *Sydney Morning Herald*.

He asked us to imagine that we could summon Alexander Graham Bell – inventor of the telephone – from the grave and present him with a modern smart phone.

Bell would barely recognise the item in his hand and would struggle to see his own invention as its ancestor.

On the other hand, Mead asks us to imagine Florence Nightingale coming into a modern Australian hospital. He says:

> After an hour's in-service Florence is almost ready to clock on for a shift. She has identified the nurses' station, oriented herself to a familiar set of patient beds…and has identified that familiar (still rankling) socially conveyed demarcation between doctors and nursing staff. Florence isn't just almost ready for work, she feels at home.

Rohan Mead goes on to say:

> Healthcare providers have innovated procedural clinical interventions, curative molecules, diagnostic capacities, treatment possibilities and so on, but their managerial and business systems have been glacial in their rate of change and innovation…The mainstream of activity in the sector has not been transformed.

Why has this been the pattern?

It could be that cultural issues play a role – that healthcare by its nature is provider-centric, with a tendency to prioritise medical advances over the sorts of innovations that will reduce costs or make the system more consumer focused.

Perhaps in the 20th century breakthroughs like antibiotics, statins and radiology just developed faster than anything that could economise on clinicians' time, and perhaps some will argue that you don't get to pick and choose what technological discoveries get made (though there is some evidence that even this is driven partly by incentives).

But health policy is almost certainly playing a role.

The way we adopt medical innovation is fundamentally different to the way we diffuse business innovation.

We have clear processes to incorporate a lot of sophisticated medical technology into our system:

- PBAC can assess new drugs for listing.
- Likewise ATAGI for vaccines.
- MSAC for medical services.
- State governments make purchasing decisions for new hospital equipment.

On the other hand, we have no such formal processes to diffuse business or organisational innovations across the health sector, like ones that dramatically improve the customer interface and save dollars.

In other sectors, that diffusion would occur via market forces, as successful models get copied or adapted, and rewarded or penalised in the market.

It is difficult for market forces to operate in heavily government funded sectors, where the funding model greatly influences the business model.

Our volume-based funding models – fee for service MBS for primary, specialist and private hospital medical costs, and activity based funding for public hospitals – for all their advantages in encouraging activity and cost containment, have also helped lock in established business models, like the one-on-one GP consultation in primary care and the use of public hospitals as the default option for a broad range of health problems.

That has arguably made it hard to explore cheaper, more innovative ways to deliver health care and maintain a healthy community.

One way of seeing this is that for all our successes in health, we are some distance from the productivity frontier.

There are now two big forces challenging the efficacy of those traditional business models: one a threat and the other an opportunity.

The threat is the rising prevalence of chronic disease. The opportunity is the emergence of digital technologies.

An estimated 9.2 million Australians have at least one physical chronic condition.

- This includes over half of Australians between 45 and 64 and more than 70 per cent of those over 65.
- Around $38 billion is spent each year to care for those with chronic conditions.
- Thirty-nine per cent of that was spent in public hospitals and a further 22 per cent was in private hospitals – both high-cost settings.
- Around $2.3 billion is spent each year on preventable hospital admissions arising from chronic disease.
- About half of people who have chronic conditions find it difficult to adhere to long term treatment plans.

So a lot depends on the ability of the system to support people to effectively self-manage, and pro-actively identify people at risk. Neither of which is a central feature of the Australian health system.

Our system is effective at diagnosing, treating and curing.

But you don’t cure chronic disease. You manage it.

And chronic disease has arguably exposed some of the weaknesses of our system.

As we found in our *Mental Health* inquiry, the in-community services needed to support someone with a chronic mental health issue are largely missing. For too many Australians there is nothing between the GP and the emergency ward when they feel their health deteriorating.

And then there's the opportunity: digital technologies perhaps represent the first big wave of technological change that can actually transform the consumer interface and the mode of service delivery to deliver better quality at lower cost.

And you don't need a PhD to be an innovator in this space.

To illustrate, I will refer briefly to some work the PC has recently done – in our *Mental Health* inquiry and in another report on *Innovations in Chronic Health Care*.

They highlight the ability of technology to deliver value – not just in higher quality, but also in lower cost.

In *Mental Health*, we looked at the use of supported online treatment for people with mild to moderate mental ill health.

These treatments, such as Mindspot, Mental Health Online and THIS WAY UP, combine clinical support with education and interactive exercises which can be accessed flexibly and regularly (unlike physical consultations with a psychologist, which occur at set, pre-determined times).

Not only are these services available as and when people need them, but they offer an anonymity sometimes desired, allow people (in urban and non-urban areas) ready access to the relevant specialist when they cannot leave home, are low cost to the consumer and can be tailored to overcome cultural and language barriers.

There is evidence that these treatments offer an effective intervention for a range of people with mental ill-health – and not just for mild and moderate disorders but also complementing specialist clinician treatment for complex mental illnesses.

Importantly, without a reduction in consumer outcomes, they optimise and hence economise on clinicians' time. And they allow a far broader range of people across the country to access the expertise of specialists.

The average amount of clinician time spent on a Mindspot participant is 2-3 hours, compared with up to 8 hours for 10 sessions for the equivalent face to face cognitive behaviour therapy under the MBS-funded Better Access program.

THIS WAY UP found that its use of clinician time was no more than 16 per cent of what it would be for face-to-face treatment.

Of course, supported online treatment, while effective for many, is not appropriate for everyone dealing with mental ill health.

But where it is appropriate, it transforms the health delivery business model. It allows practitioners more time to focus on individuals with more complex and severe conditions.

This represents what I referred to earlier as a real cost reduction.

Our work on chronic health innovations also found some success stories.

For this project, rather than making top-down recommendations about how to improve the system, we went out and looked at what successful innovations were already occurring out there on the ground.

We found some remarkable efforts by remarkable people, and we tried to tell their story.

Many of them are breathtakingly simple.

And yet, at the same time, they are quite radical in the context of our system.

The innovations we looked at did a number of important things, but for today, I will focus on a couple that go to my central theme – how technology can economise on clinicians' time to reduce overall cost.

We looked at Nellie – an automated SMS based system that supports self-care for people with chronic conditions.

Nellie has been pioneered by the Southeast Melbourne PHN and it is based on a UK model called Florence.

People opt in to the system and get reminders about what they need to do to manage their condition, and reply with information about how they are going.

GPs worked with the PHN to develop the action plans on which the SMS messages are based.

GPs and consumers work together so that Nellie can improve consumer outcomes through better self-management, while freeing up GP time.

Another model of outreach is Monash Watch, delivered by Monash Health, which is a telephone-based service.

It starts by identifying people at risk of repeated hospital admissions via an algorithm.

Participants get a phone call from a person known as a Care Guide – a non-clinical staff member who asks a simple set of questions.

The responses are coded into a decision support system that can generate alerts where additional intervention might be required.

Health Coaches – typically nurses or allied health professionals then triage calls, visit selected participants, provide coaching and often broker additional services.

It is early days, but interim evaluations suggest a 20 to 25% reduction in hospital acute emergency bed days for the targeted group (relative to a counterfactual).

The program has also recorded high participant satisfaction.

Again, one of the big gains – aside from the pro-active outreach – is that it economises on the valuable time of health professionals.

The Health Coaches (the health professionals in the program) can support about 90 participants each at any time.

Another data-driven initiative we looked at was Primary Sense – on the Gold Coast – which is a software tool to extract data from GPs' information systems to identify people at risk of chronic disease and hospitalisation.

The program was developed by the PHN and has now been installed in 83 General Practices.

It creates prompts for GPs, to identify those who might be in need of a particular service or are receiving high risk medications.

The information can also feed into care plans.

Again, one of the hallmarks of the program is its relative simplicity.

It is reportedly easy to use and generates alerts in real time.

Importantly, Primary Sense makes use of existing GP information.

It is not a complex data linkage project. It extracts the valuable information currently sitting untapped and turns it into a predictive tool to generate a more proactive approach.

All these case studies illustrate that governments, hospitals, GPs and health professionals are doing a lot of good things, but for the most part these initiatives are:

- small
- not widely known
- often swimming against huge system inertia
- a bit serendipitous: relying on an individual with drive, or a particular relationship to foster cooperation.

Where does this leave us? What should we do?

As a society we need to better balance the continued improvements in the quality of health care with more cost-effective ways to deliver that care.

There is no single large lever that fixes all problems. But technology and innovation have a key role to play in improving our health business model.

And there are signs of change.

The last Budget committed significant new funds for digital mental health services, for the services themselves and for the initial development of a national mental health digital platform and for the development of quality standards.

The pandemic has seen increased use and availability of telehealth, which could become a basis for further innovation in health service delivery.

Several PHNs have proven to be innovators in delivering more integrated, data-driven and tech-enabled care, particularly in respect of chronic health conditions.

Small amounts of untied funding could further foster this emerging eco-system of innovation.

Some reforms to funding models are needed to complement technological innovation.

So continuing to explore the reform of reimbursement models is important. The Health Care Homes trial, despite its challenges, was a worthwhile attempt to explore alternatives to the dominant fee for service model for identified groups.

Arguably the experience of Aboriginal Controlled Community Health Organisations (ACCHOs) show what can be done by moving away from fee for service and adopting a more holistic community-based approach.

Healthlinks – a cooperative initiative between the Commonwealth and Victorian governments to ‘cash out’ components of activity-based hospital funding and provide it in the form of capitation payments – has a lot of potential to reshape incentives and encourage lower cost, high quality care.

There is a strong case to unshackle private health insurance from the restraints of the current risk equalisation model, which penalises health funds that provide effective preventative care.

Equally, there are grounds to lessen the restrictions on the potential role of health funds in primary health.

This doesn't have to be a radical change: on both fronts, our *Shifting the Dial* report and the submissions to our *Mental Health* report illustrated sensible incremental steps that could be taken.

In a similar vein, incremental liberalisation of life insurance to offer some preventative health services to members could encourage more experimentation and innovation in the way health services are delivered.

Innovation is, by its nature, hard to contrive or manufacture.

But you can create space and a conducive environment for it. Right now, it seems the rigidities of our funding models and our regulatory settings make it hard for new, cost-saving models of health care to get established and grow.

But as the IGR reflects, we cannot afford to close the door on cost saving technology and innovation in health.

If we do – and simply rely on real cost reductions in other parts of the economy – our model will eventually prove unsustainable.

We need technology and innovation in health to deliver the double: better quality *and* lower costs, just like it has done across other sectors over the last 200 years.