Special Commission of Inquiry

into Healthcare Funding

Before: The Commissioner,
Mr Richard Beasley SC

At Level 2, 121 Macquarie Street,
Sydney, New South Wales

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(Day 063)

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Also present:

Mr Hilbert Chiu SC with Ms Joanna Davidson for NSW Health

THE COMMISSIONER: Good morning. Good morning, Mr Muston.

MR MUSTON: The first witness we have this morning, Commissioner, is Jeffrey Braithwaite.

<JEFFREY BRAITHWAITE, affirmed [10.01 am]

THE COMMISSIONER: Please go ahead.

MR MUSTON: Professor Braithwaite, would you state your full name for the record, please?
A. Jeffrey Braithwaite.

Q. And you have assisted in the preparation of a submission made by the Australian Institute of Health Innovation at Macquarie University?
A. I did.

Q. Where you currently are employed?
A. Indeed.

Q. What role do you have within that institute?
A. So I'm the founding director and professor of health systems research.

Q. For the benefit of the Commission, could you just give us a snapshot of your experience and research within the health sector, what's brought you to the position that you're in today?
A. So I've been a health systems researcher for a couple of decades. Before that I was working in the health system in various policy and leadership roles. The Australian Institute of Health Innovation, which I run, has got about 300 people all doing health system research, receiving funding from the National Health and Medical Research Council, the Medical Research Future Fund and other sources where we do partner-based research. We examine health systems, looking at patient safety, how the health system functions and how it can function better, and use - and investigate and use tools such as big data, machine learning, AI and health economics, putting a health economic lens over our studies.

Q. Could I - I should probably ask you this first. Have you had an opportunity to review your submission prior to giving your evidence today?
A. I have.

Q. That's a submission dated 31 October 2023. You're satisfied that the views you've expressed in that submission remain true and correct today?
A. I am.

MR MUSTON: We might tender that in due course, Commissioner.

THE COMMISSIONER: Sure.

MR MUSTON: Just to set a bit of a baseline, could I test a few propositions with you. The first is obviously health and spending on health is a fundamentally important part of any government operations, but health is one of those bottomless buckets, as it were, where even if you had all of the efficiency in the world there would probably be things that with any amount of money you could spend within the health sector which would produce beneficial outcomes for patients and, as ideal as it would be to be able to spend as much money as you could possibly spend on producing those beneficial outcomes, there will always need to be a decision made about how much of the state's budget is going to be devoted to health? You'll have to answer out loud.
A. Sure. Yes.

Q. And that ultimately will mean decisions need to be made about which of the very many things you could do which would provide health benefits are the ones that should be prioritised in spending that more limited envelope of money that you have made available to you?
A. I agree.

Q. What I'm interested in exploring with you is both at a local level, so within LHDs, and also at a broader systemic level just how the system might best go about making those decisions and approaching that system management task so as to enable decisions to be made about what the health budget should ideally be spent on and where, and, equally, to perhaps create a greater transparency around or a greater visibility of the things that are not being included in that spend. So to the extent that that is something people think really ought be covered, then that either can result in further funding being provided or, alternatively, can result in a slightly more transparent reallocation or reprioritisation of the various services that are being

provided?
A. So I guess it depends on your starting point. So, if we think about that question more broadly, there's 8 million people plus in the population in New South Wales, and if you think about a starting point of the sustainable development goals of the United Nations, which Australia is a signatory to, then you start to think, "Okay, how do we keep the population healthy? How do we promote wellbeing," because when you focus in too narrowly, say, on the hospital system you're really talking about an illness system rather than a health and wellbeing system. So just stay broad. The remit I guess for Australia, for New South Wales and internationally is how do you keep your population healthy and with plenty of wellbeing. So that's a different starting point for funding than if you start with hospitals are really pressed, staff are burnt out, we don't have enough doctors, and we've got all those difficulties; how do we fund that.

So stay at the population level for a bit with me. If we start there, then we know some top-line numbers about the population. Some 60 per cent of the care that's delivered to them is in line with level 1 evidence or guidelines. That's the gold standard type way we should deliver care to the population.

MR MUSTON: Just can I ask you about that. Gold standard, does that effectively mean not only care that is delivered well and effectively but care that was genuinely required to be delivered to a particular individual?
A. It's a great question. So it's the care that has a randomised trial to suggest that that will be beneficial for the patient, it will deliver good outcomes, or it's the care that is delivered by the guidelines that expert clinicians say is the way care should be delivered for that condition. So about 60 per cent is in line with level 1 evidence or consensus-based guidelines, those two elements. Often the level 1 care is enshrined in the guidelines.

So that gives scope for more care to be delivered in line with the guidelines and level 1 evidence. Now, there's a whole lot of problems you may not want to go into about why doesn't care get delivered the way the guidelines suggest, or I can speak to that if you wish.

Q. If you in a nutshell?
A. In a nutshell, it's multifactorial, but there's

36 million papers in PubMed, that's the medical database of all the research that has ever been produced, and it takes on average 17 years for only 14 per cent of that evidence ever to get into practice - that's ever to get in practice - because there's a whole lot of clinical choices with patients that are made, which means that every patient doesn't get absolutely evidence-based care all the time. There's a time lag. There's a, "Is that the right care for this patient in this set of circumstances? Have we got the equipment, the new technology that would deliver that care the way the level 1 evidence suggests?" So there's all sorts of factors that inhibit that. Still, most experts would say if 60 per cent of care is in line with guidelines or level 1 evidence we could probably do better than that. However, health systems have struggled with that question.

The second number is 30 per cent. Thirty per cent of care is deemed at some level to be some sort of waste or not delivering good outcomes to patients, and that attracts people, including the Commission no doubt, because that's an area where we can be more efficient or make savings --

Q. That's what we heard described as low value care?
A. Low value care is one way of describing it, and there's a few things to do with the way the system's set up that inhibit us from - inhibit us from being efficient.

Q. Without wanting to pick on any particular example, are you able to, just to make it tangible for us, give an example of something that might fall into that 30 per cent?
A. A patient might move through the system very fast, we've taken some tests and the test results never get seen because the patient's now discharged. Or there's a lot of bureaucracy. You've got to go through lots of screens or lots of paperwork to deliver care. That's not adding value. It's necessary perhaps, but it's not actually directly adding value. We could maybe do that more efficiently. I'm sure that people working in the system could give you better examples, but that's the broad idea.

Q. So just the tests example that you put forward the first time at one level the fact that the tests have been done, the person's moved through the system and they're out the door before the results have been received obviously means that there's very limited value in that test because it hasn't influenced or informed in any way the treatment that the patient's received while they're there?

A. Sure.

Q. There might be a slight distinction to be drawn between the test that should have been done more quickly and should have been paid attention to which would have provided a better clinical outcome for the patient on the one hand or, on the other, a test which is being done because it's part of just routine practice but actually, having regard to the presentation of that patient, probably didn't need to be done at all?
A. Yes, and maybe the GP's just done a battery of tests but they don't get seen in the hospital when the patient's admitted, so there's opportunities for a more - I know you've heard this a lot - a more joined-up system, yes, where people can access data that's already been gathered.

Q. So that's our 30 per cent. Would --

THE COMMISSIONER: Is care that's provided but provided at a time where it's past the time that was clinically appropriate for that care an example of something in the 30 per cent?
A. Yes, yes.

MR MUSTON: Or maybe in the 10 per cent?
A. The 10 per cent is --

THE COMMISSIONER: Could be. Could be both.

MR MUSTON: We're about to hear about the 10 per cent, hopefully, if my maths is right?
A. The 10 per cent is harm. So 10 per cent - one in 10 inpatient admissions has some level of harm. A lot of it is not consequential for the patient, but there's a proportion which is significant. People will have talked to you about sentinel events or really serious harm that occurs. New South Wales and other health systems have tried really hard to reduce the level of harm to patients. There's some scarey evidence in New England Journal of Medicine - that's a major journal - I just released about six months ago which suggests in Massachusetts hospitals, which are not known for their lack of funding in Massachusetts in the US, had harm at the level of about 22 per cent of admissions. We don't know if that's the case in New South Wales or other wealthy health systems. But that's a very difficult number.

Q. How is that measured? How would we as a system measure that if --
A. We've done studies like that where you go in and look at the medical record and have a look at what care was delivered and have a look at incident reports. We're currently doing a large study out of South Australia on what actually happens with all the incident reports that are produced by their system and how people close the loop on that, which is very difficult.

Q. We could probably all imagine more extreme examples of harm that could occur within the health system: the patient who goes in to have a knee replacement of their left knee and gets the right knee, which was otherwise perfectly fine, operated on or --
A. And now they've got two problems.

Q. -- a pharmaceutical issue which has resulted in a --
A. Yes.

Q. -- medication mishap occurring that's caused some harm to them. But what is the broad range of things which are captured by that harm? Is it everything just at that extreme end, or is there a much wider spectrum?
A. There's a long tail, but the three crucial things are falls, medication safety harm and then maybe a patient not responding well, some level of complication to their care that maybe was anticipatable but quite frequently is not anticipatable.

Q. Medication safety, just to pick up on that example, we've heard some evidence from, it's called, Advanced Pharmacy Australia - it used to be the organisation that represented hospital pharmacists - who have told us about what they perceive to be the potential benefits of greater utilisation of pharmacists effectively at the bedside as part of a multidisciplinary team delivering care, and what they've told us is that charting errors, medication errors, where a pharmacist, who's, to use their words, I think, a bit of a pharmacy nerd, is actually the person doing that rather than the busy doctor, who is trying to think of everything else --
A. Yes.

Q. Could then produce a substantial reduction in those sort of medication errors. Is that - how does that fit into this equation?

A. I think that's right. I think that's right. The problem is every allied health professional group, if you have more of them, would contribute to safer care and better care. So if you had more physiotherapists or speech pathologists you'd have better care and probably safer care.

Q. But, coming back to another one of your examples, more allied health professionals, potentially less falls within hospitals?
A. Sure, but your problem is you've got an envelope of funding and you can't fund everything, and every specialist group is going to say, "We can make care safer in our area for the conditions that we treat." So it's the dilemma of health care, isn't it?

Q. Yes.
A. Yes.

Q. So can I maybe tease through those individually, starting with the 10 per cent, as you tell us. A system which identifies the 10 per cent or is able to identify the 10 per cent and make informed health and economic decisions around whether or not it would be beneficial to employ more, say, hospital pharmacists to be more involved in the care in a way that will reduce medication errors and the like would seem to be a good system. Whether that results in more pharmacist being employed or not ultimately is a decision to be made in an informed way, but - would that be right?
A. Sure. So I'm a scientist. I would treat that as a piece of science. So we could run a trial. So we could have - randomise some hospitals into receiving extra pharmaceutical expertise and some hospitals that didn't, and see if the medication error problem reduced. So --

Q. You could potentially collaborate with an economist, who could tell you what's - in a business case sense --
A. Yes.

Q. -- what are the pros and cons financially of paying for that extra allied health professional when compared with the costs borne by the system or by society of medication errors --
A. Yes.

Q. -- and to what extent does the available reduction of

those errors in a scientific sense produce potential economic benefit?
A. Yes, true. I think all I'm saying is I agree but I would test that. I would run some sort of a trial to see if it works first, because you can spend a lot of money on things - look, politicians - I don't want to - we're not here to critique our masters, our political masters, but politicians do that all the time. Someone comes to see them, they get a good idea from somewhere and they want to fund it because they believe fervently that it's good for the community, good for the system. But that's not a piece of science that tells you if it's actually going to work.

Q. So at a system level how do we embed that sort of science into the way we make decisions within the hospital system, within the healthcare system?
A. We and others do some of that by getting National Health and Medical Research - where I started from, you know, National Health and Medical Research Council grants to try and do research of that kind to see if a proposal that looks good on the surface is actually going to work in the real world. That's the problem with randomised trials, even drug trials, they work on a small proportion of the population that is enrolled in the study but how does it work in the real world of busy clinical practice, and often there's not a direct correspondence.

And may I say, if it pleases the Commission, that's going to be one of the problems with your recommendations: how do they get taken up? That's probably a story for you when you write your report later.

Q. If they do. So the starting point is the research. If we reach a point where through that process of research we conclude that there would be potential benefit and we identify what that potential benefit would be, how do we go about translating that into practice as part of overall healthcare system management?
A. So that's hard. I think implementation of even things that we know work well has proven difficult in complex systems like this. What's the take-up of the individual clinician level? How does the LHD manage that? How does the right policy settings get put in place by New South Wales Health? And then how does the take-up radiate across the whole of New South Wales, including in places where they may be resource strapped, staff are a bit burnt out, they haven't got the resources in the right place?

So what we've shown and others have shown is it's very hard even when you have all the right settings, the right policy, good recommendations from a commission and good people in place to actually get everything taken up uniformly across a system. Standardisation is very difficult in health care, standardised take-up of something that we know is beneficial.

Q. When you refer to standardisation, that doesn't necessarily mean decision making from the middle as to the way in which things will be done standardly across the system but rather - or, for example, what particular procedures will be done where in the system but, rather, who's - presumably, standardisation is more dealing with the way in which these concepts are picked up within decision making at - both centrally but also in local settings, where decisions might be being made based on particular factual scenarios as they crop up?
A. Yes. Yes.

Q. Starting again with the 10 per cent, one could readily see how a system informed by some scientific analysis of the type you refer to perhaps backed up with a bit of economic analysis should be capable of making decisions around whether or not it's worth, to take up the example that we've taken, spending some further money on allied health professionals because that spend will result in systemic benefits that will result in --
A. Yes, you get people out of hospital, for example.

Q. And will avoid harm.
A. Yes, yes.

Q. That's, one can see in the world of decisions, one of the easier ones that needs potentially to be made in health?
A. Yes.

Q. Properly informed, if harm can be avoided in a way that's economically beneficial and of obvious benefit to the patients, it would be good to try and systematise that. Let's come up now to the 30 per cent. The 30 per cent of care --
A. May I?

Q. Yes, please do.

A. Just on the 10 per cent, has the Commission read the six books that we've written on the 90 per cent?

Q. I have not. I won't speak for the Commissioner.
A. I'm teasing you. Sorry, I shouldn't do this from the --

THE COMMISSIONER: Someone will.
A. So everyone's focused across the world, including in New South Wales, heavily on the 10 per cent and said, "How do we have less harm," which is an absolutely legitimate question - how do we report incidents that occur, those really dramatic ones that make the Sydney Morning Herald's front page, through to lots of - you know, like the medication was missed or it didn't get delivered in the right dose or at the right time and it doesn't ultimately harm the patient but we could have done better. So there's lots of sort of types of harm.

So what we did about 10 years ago was started to rethink that, and the rethinking took the place of what we now call safety 2. All of that trying to reduce harm is called safety 1. We labelled it that way. So safety 2 is how come so much goes right in a system this complex and patients get really good care lots of times, like most of the time, like the vast majority of the time, considering how much could go wrong, and that's like a weird question to some extent, but it's a very powerful one.

So we were advocating and have been for about - more than 10 years for safety 2, looking at when things go right and trying to do more of it, and saying to clinicians, "We've noticed how much goes right," because what happens is clinicians, including in this Inquiry, essentially are the lightning rod for lots of criticism, even if it's guarded, like, you know, "We recommend this," but it's actually saying, "You're not doing well enough."

So we argued for let's look at the 90 per cent that goes well, really much more systematically, and try and do more of it. So when you do a root cause analysis - I'm sure the Commission's come across root cause analysis. There's an incident - it's like an inquiry like this on a smaller scale. Something goes wrong in the health system, so it's sufficiently worrying, concerning, that we cause a root cause analysis to occur. So budget people get together and say, "What was the ultimate cause of this?"

So we've argued that's actually perpetuating a wrong view of the system, which is there's harm all the time. There's not harm all the time, there's only harm some of the time, so why don't we do an RCA and when we do an RCA on things going wrong say, "How many times did this procedure go right, and what can we learn from that?" So it's a bit like if I was a researcher of marriage and I only researched divorce I wouldn't know what a happy marriage was. So I don't understand the health system if I just keep looking at when things go wrong and patients get harmed. I should understand the whole system and how it works and how it functions when it should, and that's a good news story, and New South Wales is one of the better health systems in the world, and we should therefore concentrate sometimes more than we do on what goes well.

Q. And by approaching it in the safety 2 way does that assist in working out how to systematise those changes that might need to be made to get the 10 per cent as low as it could possibly be?
A. Yes. It might be protective. We might do more good care, and that would reduce the amount of harm, the 10 per cent, that we do. So it's two sides of the coin. If we just focus on harm we're essentially always criticising the system for not doing well, and yet it does very well many, many times.

THE COMMISSIONER: Can I ask - and feel free to tell me this is either a stupid question or the wrong question, but I'm here to ask those sort of questions --
A. I understand that there's no stupid questions from the Commission or the Commissioner.

THE COMMISSIONER: Well, that's a good start, but you're not necessarily correct. That might be in the 10 per cent, whatever. Most of what the State spends money on in terms of health is for acute services in hospitals. But that's only a portion of population health, the population health that you spoke of in your very first answer. There are other aspects of health care that they might be spending money on, prevention for example, which might be some form of health care plan and long consultations with either a GP or a suitably experienced and qualified nurse or allied health with someone that's at risk of developing diabetes because of developing obesity, or it might be spending money on paediatric interventions in young children that

might have a health-related learning issue that is capable - they're capable of being assisted with.

Do health systems in terms of spending money and resources on that aspect of health care do anything that might be akin to some form of cost-benefit analysis? What I have in mind is, you know, if a property developer is going to buy land they'll do an analysis of what the quantity surveyors will tell them it might cost to build a development and they'll have an internal rate of return, which will guide them about what the return of the investment might be, taking into account the time value of money.

Does health - do any health systems, whether it's ours or any other health system you might be aware of, do an analysis, "If we spend X billion dollars on making sure that there's - for example, no child that's got some form of health-related disability always gets seen within a clinically appropriate time" - is there any modelling done that says, "Well, in 20 years or 30 years time the benefit to the economy from that population level intervention will mean that we've got this many more taxpayers and this many more economically active people such that the investment might have been 5 billion but, even taking into account the time value of money, the payoff for the economy in 20 years or 30 years will be 30 billion?" Of course, if it's 30 billion it sounds like a good investment to make. If it was only 4 billion, it sounds like - well, who knows? But is there that sort of --

A. Yes.

THE COMMISSIONER: Do health systems look at things that way?

A. It's a great question. I can't think of a study at the moment - and I'm not a health economist, okay?

THE COMMISSIONER: Yes, understood.

A. I can't think of a study at the moment, but let me answer it this way. So all those patients who aren't coming in to hospital now because of - let me give you the big four. Seat belts was a, you know --

THE COMMISSIONER: Massive, yes.

A. It cost very little. In fact, all the car manufacturers were required to do it and people were required to wear them. It was a legislative thing. So

seat belts. Pool fences.

THE COMMISSIONER: Yes.
A. Smoking cessation. When I was a kid it was 60 per cent - even some doctors smoked - and now it's hovering at about 12 per cent, and it's still tracking to go down. And you'll remember the Slip, Slop, Slap campaign. Any New South Wales kid --

THE COMMISSIONER: Yes, just a couple of years that. But, anyway, yes, you're right, I do remember it, yes.
A. But almost the benefits are not that measurable because - I suppose you can measure historically how many people now don't go through the windscreen because of their seat belts.

THE COMMISSIONER: Yes.
A. Or how many kids used to drown and now don't get drowned because of pool fences, and so on and so forth. So mostly the economic analysis as I see that's done afterwards to say, "Well, that decision we made those decades ago saved all these lives and all these hospitalisations."

THE COMMISSIONER: Yes.
A. I think it's very hard to do it prospectively because it's hard to know what --

THE COMMISSIONER: I'll probably ask other people as well.
A. Yes.

THE COMMISSIONER: I mean, the modelling might be hard.
A. Yes.

THE COMMISSIONER: Of course, the result of the modelling will be wrong, but it is a question of how close to right it might be, but --
A. And I mentioned PubMed. I would - immediately in a question like that I would go into PubMed and start interrogating the dataset and say, "What studies have been done in this area?"

THE COMMISSIONER: Yes.
A. Yes. Hope that helps.

THE COMMISSIONER: It does, yes, thanks.
A. I don't think there's a natural answer to your

question, but there's some illustrative examples. Yes.

THE COMMISSIONER: Yes. Thanks.

MR MUSTON: So I think we've covered off understand the 10 per cent. Move up to the 30 per cent.
A. Yes.

Q. Decision making around the 30 per cent, the effectively low value care. How as a system do we approach trying to make decisions which reduce ideally the amount of low value care which is being delivered?
A. So there's a number of initiatives underway, and no doubt the Commission has met some of these. There's an initiative called Choosing Wisely, which is a collaboration between clinicians, clinician groups and patients, and patients groups, to say, "Do we have a voice for the patient in care, and are we delivering care that's of high value rather than low value?" New South Wales has done a lot of work on low value care, and it's very good work.

Q. Just touching quickly on the Choosing Wisely, one can understand the value of increasing patient autonomy, enabling patients to make better informed decisions about their care and the extent to which they need or want it. But does that not potentially have the risk of tipping over the other way, where patients, if given a greater freedom of choice about whether they want particular procedures, that they from their perspective may think they want a procedure which ultimately when viewed objectively might be characterised as low value care?
A. Well, I think that could be true, but it's more likely that if you work with a patient to explain the benefits and disbenefits of, say, a particular surgical procedure and there's not that much benefit they're more likely to come to a more reasoned decision. Yes, treating patients not just as the object of the system to do stuff on but a co-creator of their care is - in the modern sort of idiom co-created care - we think has more benefits than disbenefits.

And choosing Wisely even coming up with a list of things that are a bit iffy about whether they deliver benefits is not the worst thing to have happened. New South Wales has done a lot of work - I'm not sure if that's been tendered by New South Wales Health - on low value care across I think, at last count, maybe more than 14 different

conditions where it did concerted effort over the last 10 years. We did a little bit of work on that project to look at the extent to which we can reduce the amount of low value care that's delivered, and that means informing patients and providers.

Q. At a much earlier time in the Commission I recall we were given some evidence about what seemed like an exceptionally long period of time it can take to change behaviour within the system --
A. Sure.

Q. -- to remove or reduce low value care. Clinicians who have provided a particular form of treatment or a particular procedure will continue to do it or want to continue to do it in circumstances where systemically a view might be taken that it's low value care, but that difficult balance between the autonomy of the clinician, the autonomy of the patient and the system means bringing that change about is not easy. Do you have any views about how systemically those changes could best be effected?
A. Yes, I think we're not very good in New South Wales or any modern health system in really measuring what long-term benefit or gain was produced. Doing more of that. You know, I think if we followed patients - this has been known for more than a hundred years, by the way. There's some famous work a hundred years ago where one of the luminaries in American health care said, "Why don't we follow patients after we've intervened and see what happens to them, and then feed that back into clinicians' knowledge," and health systems, despite that meme being a hundred years old, we still don't that very well.

I mean, BHI does that in a way by doing a big survey every now and again of patients' views, but targeting that to did that particular intervention or the kind that we envisaged, say, around diabetes or knee surgery or whatever it might be - did that deliver benefits and is the person then two years later functionally occupying a place in society or bedridden, we don't do that very well. There's a cost to that, though.

Q. Is that - well, the cost to that is the cost of collecting and collating the data?
A. Yes.

Q. We've reached a stage in our development as a society

where the collection of data is probably a cheaper exercise and an easier exercise than it was in the past. Are there opportunities that you see for better collection of data across the siloed systems that comprise the public health system in New South Wales?
A. Well, there's some tools. There's some very short instruments to find out if a patient, say, two years after they were discharged has got functional gain and they're actively contributing after their hip replacement or knee surgery or heart surgery or whatever. So there are fairly efficient tools to gather that information, and then we'd have to find good ways to feed it back to the particular clinician groups.

Q. Breaking that down into the two stages, do you think we're using those tools effectively at the moment or is there a lot of room for improvement?
A. There's room for improvement. In some places some of the time people do that well, not so much in others.

Q. In terms of the feeding back into the system, do you think that to the extent that it's being utilised there is an effective feedback mechanism which is adjusting practice within the system?
A. I can't answer that. I'm not on the ground in the system, so I don't know in New South Wales whether that's being done well. I suspect it's done well in some places and not others, and we could do better, we could improve.

Q. So ideally with perhaps a better data collection and collaboration between the different siloed parts of the health system we could be collecting - gathering that data, feeding it back into the health system in a way that might, if things are working well, drive change that reduces that 30 per cent of low value care as best as it can be reduced?
A. It would be a good strategy. You know, systems work well if they're given feedback and good data, trustworthy, credible data. That's why BHI, the Bureau of Health Innovation, is very important, because it tries to do that at a population level, at a systems level.

Q. We'll come back shortly to ways in which funding arrangements might be able to be utilised to drive some of that change as well. But before we do that I just want to come to the 60 per cent, the level 1 care, and, just picking up on where we started, a system which is operating perfectly and has reduced as much as can be reduced the

30 per cent of low value care and the 10 per cent of harm will nevertheless run up against a situation, will it not, where whatever amount of funding you choose to provide to the system there is level 1 care that could be delivered with that money and you have to make a choice within a limited budgetary envelope as to which pieces of level 1 care you are going to provide and which pieces you're not?
A. I wouldn't describe it that way. If I may?

Q. No, please.
A. What I would say is if we were so - if we project the Commission's work into the future, say, five or 10 years, the current trends are we won't be able to fund all of the care that's going to be needed. I don't think anybody disagrees with that. It's probably one of the reasons why the Special Commission came into existence, because if you just project into the future and extrapolate on the trends how do we deliver all the care with an aging population, with much more capacity for medicine to do things that it could never do before, you know, the equation just seems to be move into the future and how are we going to afford all of that, is it going to take 27 per cent of GDP instead of 10 per cent?

So will we be forced to explicitly ration or explicitly prioritise is a question many experts are thinking about. So there's been a couple of experiments about that, one in Oregon in the US 15, 20 years ago and one in New Zealand where they said, "Maybe what we should do is just provide core services to everybody and then the extra services you have to pay for," and many people who want the system to be delivering equitably don't like that at all, and most of us want a level of equity in our health system in Australia and in New South Wales. So that's really being wrestled with, and I think it's core to what the Special Commission is going to have to think about when it gets to the end.

THE COMMISSIONER: The example of Oregon went pear shaped, didn't it --
A. Yes.

THE COMMISSIONER: -- when a child needed --
A. Sure.

THE COMMISSIONER: -- some very expensive - I think it was a bone marrow --

A. As soon as you get the test case and if it's a kid, if it's a paediatric patient that goes on TV, the politicians change their mind.

THE COMMISSIONER: Yes, yes.
A. So it is extremely difficult to do this. It is very hard to ration. But we do ration. We ration by having waiting lists. That's the chief rationing device.

MR MUSTON: But let me test this. You identify the fact that the cost of delivering health care is increasing, the range of interventions that we can offer are ever increasing. No doubt many or a large proportion of those interventions would be categorised as level 1 care. They're things that would be of value to the patient?
A. Yes.

Q. But in circumstances where we have approximately 30 per cent of the state budget devoted to health historically, which figure was arrived at at some point in the past on the basis of a health system that no-one can presently recall, to the extent that that's the amount of money that was once sufficient to deliver on whatever the public health system was, if we could use that term, if the cost of delivering health care increases but the base or the extent of your funding doesn't increase, the gap between the two obviously is growing?
A. M'hmm.

Q. And in a practical sense what that really means is one of two things, isn't it: one, either the public health system, which is everything to everyone in a rather nebulous way, just gets spread thinner and thinner and thinner within that budgetary envelope until suddenly the entire system is under stress, which potentially results in not only workforce challenges but also exposes patients to risk of - increasing the 10 per cent of harm and perhaps doesn't deliver the care that would most ideally be provided - so that's the spreading thin option. The other option is it contracts and, whether it's something that's identified and spoken of or not, the reality is if the budgetary envelope available to deliver health care stays the same but the cost of delivering health care gets bigger then what comprises the public healthcare system will necessarily contract, won't it, in terms of what it has to offer?
A. That's true. So one question arising out of that is

how do we figure out how to treat health care as an investment in society's wellbeing and healthiness, fund those things or provide incentives for those things to be done that offer the best bang for the buck, and not emphasise, defund or de-implement those that don't.

Now, you need levers to do that. You need the levers of a special commission making recommendations to change the way funding works. But you also need levers to change clinical behaviour because - I'm just tracking back to what you said earlier about the clinician who has done this for 10 or 15 years, the same procedure. That's what they do. They're funded to do that. They've built a livelihood around that, and that's what they deliver. So that may require a generational change, and I'm sure the Special Commission has heard people talk to that because it's hard to change clinical behaviour.

Q. We also have - we heard some evidence yesterday about sort of doing - effectively doing things because it's the way we've always done them --
A. Yes.

Q. -- and the example that cropped up was --
A. The example that cropped up was the law. The entire law is based on that, isn't it, on precedent, if I may go into a territory I know nothing about. So my point is many professions do stuff that's got a time lag about it or maybe they could modernise or - but they continue on because, I don't know, it's what we've always done or it's got some benefit, and medicine's no different.

Q. Yes. So what I'm trying to get to the bottom of - maybe I'll pick up an example that the Commissioner gave and mix it with another. So we have an increased recognition within the population of children who either have neurodivergence or have developmental issues which with an intervention, timely intervention, could potentially change the trajectory of their lives, have it sorted out before they start school or before they fall behind at school. We see that potentially as being level 1 care. If you can identify that child, provide that intervention in a way that will turn the child's life around, that would be level 1 care, would it not?
A. I would just use level 1 care in the way that it's used technically by clinicians and researchers, which is that care which has a randomised trial - level 1 evidence

is where it has a randomised trial and demonstrates without any doubt that it would work.

Q. Yes, okay. So --
A. It's just a terminology issue.

Q. No, no, no, it's important.
A. Yes.

Q. So, in terms of these interventions that we might be making in this hypothetical paediatrics space, starting position is based on a randomised trial to the extent that they exist - and acknowledging it might be a difficult one to implement?
A. Yes.

Q. But nevertheless randomised trials, if there is an evidence basis to show an intervention at an early stage will have benefit in terms of the child's trajectory, life trajectory --
A. Yes.

Q. -- that becomes part of the 60 per cent of care that we could be providing at the moment, which is level 1 care. We then have elective surgery at the other end of the spectrum for a person who's into the second half of their life, has discomfort in their knee, for example, and they need a knee replacement to improve their quality of life, maybe improve their productivity, but it really depends on a range of very personal circumstances. But, again, if the intervention at that point is provided in a way that is beneficial to that patient and there's a randomised trial which tells us if we give this patient a knee replacement the outcome for them will be better, then that's also level 1 care. But within a system we might not have - particularly with this contraction of what is the public health system, we might not have enough money to do both, and I recognise they're probably not good examples to say one's in or one's out, but they're perhaps useful for the purposes of this discussion. How do we make a decision systemically about which one we do?
A. So if both have level 1 evidence and they're going to benefit the patient we're going to do both. We're always going to privilege kids and paediatric care because that's just the way humans are, isn't it? I mean - and there's lots of evidence to say if you do things for children in the first 1,000, 2,000, 5,000 days that's going to have

huge benefits for them, the economy, society, the health system later on.

Q. Can I test that one. What we do have within most of the service level agreements with the LHDs and the BHI measures, and we hear a lot about, is waiting times for elective surgery being within parameters?
A. Yes.

Q. And so to the extent that that person with the uncomfortable knees is deemed a suitable candidate for a knee replacement by a surgeon, they go onto a list and then we start the stopwatch, and that patient does, because we are incentivised to keep that timeframe to click the stopwatch off as quickly as we possibly can, get the procedure that they get or that they need. But with the child who might need the intervention, if we don't have any metrics which are holding us to account in terms of waiting lists to see a paediatrician, community paediatrician, for example, or waiting lists to receive care through a speech pathologist, then I'm not sure that it's right that we'll always treat the child and in the current system we are always treating the child, but I'm interested to hear what your response to that is?
A. So I don't think it's a tradeoff between those two. I don't think that's really ever made, even implicitly by the system. I think it's more a tradeoff of that distinction you were making earlier about low value and high value care. If I've got - if I'm in my 60s and I've been a runner for 30 years and looked after myself but now I've got osteoarthritis of the knee and I can't run anymore and I go to a surgeon, I might get the surgeon saying, "Well, we're going to operate on you," or, "You need a knee replacement." But if I go to a physiotherapist and get community-based physiotherapy I might just do as well, in that case I probably will do just as well - in fact, that's a real case, that's me - so I do just as well not having a knee operation and having effective physiotherapy regime, which is much less costly to New South Wales Health. I may pay for that physio privately, but the overall cost is much lower to the economy. That's a good outcome.

Q. We might not be implicitly making those decisions and certainly not explicitly making that choice between those two, but I just wonder whether unconsciously those choices are being made by the way in which funding structures operate and the way in which things like KPIs and

performance measures are implemented across the system? So funding for the knee replacement, there is activity generated by a knee replacement. The LHD gets money for doing that procedure?
A. Yes.

Q. It potentially complies with its KPI because the waiting time for that operation is something that we have a stopwatch on, whereas the waiting time for the child to present at and be seen and treated by a paediatrician or an allied health professional who they need to see is not being - whilst it may be being measured, it's not being measured in a way which is being used to hold the health system to account in any way. Maybe unconsciously we are actually making that choice through the systemic levers that we are pulling?
A. Yes, and even at the institutional level the way we fund hospitals or LHDs and then the way we fund Sydney Children's Hospitals Network we're making some societal level decisions that way, and then their ability to get philanthropic support in addition to the fundings they've got. So I think society is making some of those choices. I think absolutely you're right. Yes.

Q. Is there a way that we could adjust either the funding structure or the general discourse around the way in which system planning happens within health that could actually bring some of these potentially unconscious decisions more to the fore so they are in fact a little bit more obvious; that is to say by continuing to provide this service which for the 60-year-old runner may have some potential benefit, may not, as opposed to the child who needs this intervention, there's some benefit there, there may not be some benefit there, but ultimately if you have a limited budgetary envelope and you have to make a choice about which one you want to do, assuming that you can't do both or you can't do both properly within the existing funding envelope, is there a way we could adjust the system, do you think, that would perhaps flesh that out a little bit more so we know what we're doing in what choices we're making?
A. Yes. I mean, good data is going to be important there, and also criteria for making rational decisions is going to be crucial. So, I mean, if we think about the system, there's three bits to it, isn't there? There's how do people get into the system in the first place. I'm now not playing population game now. I'm just talking about New South Wales Health, the health system that you are

trying to work out the funding mechanism for.

Q. Just so I can understand, are we talking about the acute care setting or the delivery of health care across New South Wales through primary care, private settings, allied health and the acute care space?
A. We can talk about both, but how do people get in in the first place. So we published a paper in the Medical Journal of Australia in 2015 and we talk about the conveyor belt. So there's people in the community right now who are going about their New South Wales business, and something happens, they get to a GP, or they fall over in a shopping mall or something happens, they're in a car crash or something happens to them, and they get taken to an emergency department, and then a bit later they find themselves in an ICU bed, which is the most costly place you can put people. Was that the right place for them to be? Well, there's no master controller, no-one made a decision. The patient went through to Emergency via the ambulance system, and then somebody made a decision to put them in a ward, and then they deteriorated or something happened with them and they ended up in ICU.

Now, a third of patients die in ICU. So no intensivist, intensive care specialist, wants to be in intensive care and die. What they want to be is what we all want: at the end of life you want to be surrounded by your family, pain free, having had good palliative care services. So how do we stop that conveyer belt from getting people into the system and into the right place in the right - so that the patient gets treated in the right place at the right time for the right kind of care? That's the big question.

So you can have people on waiting lists, but do we have - and I don't know the answer to this in New South Wales - do we have people looking at those waiting lists and deciding, "That person would be much better off, rather than getting a knee operation, getting a good physiotherapy treatment," and I don't know that we have because the waiting lists, aren't they owned in New South Wales by the - I'll have to get advice on this - aren't they owned by the surgeons? And so where's the nexus between whether we can make a rational decision on care versus the clinical opinion that that person needs surgery? That's an example. So one question is how do people get into the system? Is it - are the right people getting into the system and

getting this expensive care? So that's one question.

Q. Does that not have another driver sort of in the middle of it, which is that patient who's in the acute setting, having been placed on the conveyor belt, who then ends up in an intensive care bed, the system sees itself as having succeeded in providing the right service at the right place because the patient who became very sick in that hospital or who deteriorated in that hospital was able to be moved immediately into an intensive care bed, so that incentivises building more intensive care beds?
A. True, but you know there's plenty of evidence that doctors get less care than anyone else?

Q. Through voluntary choice or --
A. Yes. They know more than the general public whether it's worthwhile having that particular treatment or whether - and they tend not to overmedicalise. They may - I'm not criticising the medical profession. It does a great job. But they can overmedicalise conditions and it gets treated, whereas they don't for themselves. That's very telling, isn't it? There's a saving if we could get everybody in society to get the same level of care that doctors got. There would be a saving to the system.

Q. I think I distracted you with that.
A. Yes. So one bit's how do you get into hospital, conveyor belt or, you know, what is the criteria? Another bit is what do we do when they're in there in terms of procedures or moving them out of hospital quickly into maybe the community and doing Hospital in the Home, and no doubt people have talked about that. And then the other bit is how do we discharge them, because - and I know you're having other people who were reporting to you about the difficulty, is we've got people, maybe 20 per cent - I don't know what the number is, maybe 20 per cent of people who are currently occupying a bed in New South Wales could safely be discharged into another setting, and that's a great saving to the system. There would be more - the waiting lists would go down, people would get better care who are waiting for it. So how do we do that? If you can provide some advice and recommendations and suggestions on that, that would be really very well received.

Q. So that requires in effect a bridging of the silos --
A. It does.

Q. -- of care both from a funding point of view and for --
A. You need the federal government at the table, and it's one of the limits of having an inquiry in a particular state.

Q. You refer in the submission that you made to the concept of value-based payments and suggest that they might be something that should be looked at as an alternative way of approaching the funding of health care. Could you explain that concept and how you see it might make differences to the way in which we deliver the public health system?
A. So value is what's delivered when there are benefits to the patients, benefits to the system, benefits to society, really, for the amount of cost that's produced, to produce that care, that's generated to produce that care. So that's - so what you want to do is produce more care that's high value and less care that's low value, and I mentioned that before on Choosing Wisely and other things that New South Wales has done that I hope you access about the work they've done on producing high value - more high value care across those 14 - I think there's at least 14 conditions where they've done work on that.

It would be an interesting question to ask now several years later to what extent has that had take-up and been implemented, and that speaks to how hard it is for the system to take on board any initiative, including your recommendations when you formulate them.

Q. So having said that, though, you've identified these forms of low value care, wanting to incentivise the delivery of high value care. How do value-based payments operate in that context? Just perhaps talk us through by way of a hypothetical example how a value-based payment might be structured.
A. So I'm not an economist. I'm not a health economist. It's a question, really, rather than an answer to your question: could we design a system where we provide more incentives, systems incentives or even clinician incentives, to treat more high value care than low value care? Now, we've got that in a way, and that's the MBS schedule. It's not New South Wales. It's Australia wide. There's been lots of attempts to try and change that because there are some procedures that generate a great deal of benefit to the provider, we're not sure if there's

an equal amount of benefit to the receiver of the care, and some people are making a very good living out of that. Now, that's a federal question. But New South Wales is a big voice in the health system and I'm sure regularly is looking at that and discussing that with the federal ministry of health.

Q. Even if we do get to the point where we can through a funding structure incentivise the delivery of high value care, is there not still a point where we have to make a decision about what is going to be delivered through the public health system, what can we do and what can we do properly, as opposed to let's try and do as much as we possibly can, if the consequence of that is delivering a lot of care in a highly strained way because aspects of it, through the thin spreading --
A. Yes.

Q. -- of the budgetary envelope, are not being resourced properly?
A. If there's excessive thin spreading, I think that's not wise. There's definitely a relationship between volume and outcomes. In other words, if you have a surgical group that does a lot of a certain kind of procedure, heart bypass surgery or something like that, they get really good at it and really efficient. You don't want that done in a remote setting, where you can't guarantee the quality and it's only done once a week or once a fortnight or something like that. You don't want to receive that care. You want to receive it in a big centre where lots of - there's lots of throughput.

Q. Not good for the patient, obviously, to have someone performing a procedure which is - they're doing infrequently and perhaps not as safely as it's being done by those doing it more regularly?
A. But citizens and taxpayers, rather than patients, they would like a teaching hospital right next door, even if they live in a remote place, but that's not going to happen.

Q. That takes us to the next step, which is there may well be a point at which a procedure can be delivered safely because it's being done sufficient times within a setting, maybe the hospital that's next door to our hypothetical taxpayer, for it to be, based on evidence, safe, but it might not be the most efficient way of

delivering that care because delivering it at a large teaching hospital which is doing a much higher volume of it actually means that there are greater efficiencies in delivering that care in that setting. Does that - how do we grapple with that in terms of deciding whether or not we should be providing care to everyone everywhere as opposed to confined to certain settings where it's more economically feasible or more efficient systemically to deliver it so as to reduce the extent of the thinning of the financial envelope?
A. Yes. So, you know, streamlining that way where you get more centres of excellence, which are super specialised quaternary, super specialised groups. The problem is politically that's not been a very happy hunting ground because politicians don't like taking things away from that hospital to give to that hospital, and the clinicians themselves sometimes are in competition with each other for equipment and patients, et cetera. So it's kind of - it's easy to recommend but hard to do, is the problem.

Q. But is part of the difficulty - and this might be more of a political question than a --
A. We're trying not to be political.

Q. But is part of the difficulty with that the political challenge that's raised raises its head in large part because, as you characterise it, we're taking away from one hospital to give to another, but there's no clear identification of the benefit that attaches to that decision; that is to say, everyone looks at the detriment, something is being taken away from one hospital, where you have to drive further for this procedure now, but there's no - in the way the system is currently being formulated and articulated, there's no transparency around, "Well, we're doing that because that means we can provide our paediatric service," for example, "and we've made an evidence-informed decision that this is actually more important than being able to provide that procedure 20 minutes away from your house as opposed to an hour away from your house"?
A. Sure. No, I just - I can't anything but agree that that's right. It's not in the interests of people to - it's better to travel and get very, very good care than get care next door that's substandard or not up to scratch because they're just not doing enough of those procedures.

Q. But that's relatively self-evident, but then it might also be better, may it not, for the person to travel to get the excellent care, which could be safely provided next door --
A. Yes.

Q. -- if the upside of that is there is some other service which they or some other member of their community might actually have a genuine need for that would otherwise not be provided --
A. Yes.

Q. -- which is what you can deliver through the saving that you've made by centralising in a cost-effective and safe way the particular procedure that our hypothetical taxpayer needs?
A. That's true. That's true. The way hospitals have developed, though, because you've got an emergency department that anyone can come to you, the big ones, then you tend to provide the widest range of services possible to cope with all of those. We haven't done a very good job perhaps of integrating across the system - even when we formed LHDs, and before that there was area health services and - I was at the inception of the first experiments with those, I go back that far. We haven't done a very good job of saying how do we link this up so that we communicate better. The new digital record thing going on is probably one way that we're going to do a better job with that.

Q. A single digital patient record theoretically enables patients to transition from one setting to another --
A. Yes.

Q. -- in a way that reduces unnecessary tests that might already have been done, maximises the extent to which the quality of their health care is enhanced by knowledge of the health care they've been delivered in a different setting?
A. Yes.

Q. But it doesn't necessarily help us so much with those decisions around what should the public health system actually look like at each of these locations, should we have this procedure being offered in this facility or not, and I guess what I'm interested to explore with you is how we might go about as a system making those decisions?

A. So that might be through sitting down and centrally planning the New South Wales - the Sydney Basin, because it's mainly the Sydney Basin where this occurs. The other way is to think - this is not going to be popular with clinicians, but measure, if there's two units or three units in three different hospitals, which ones deliver good outcomes, which ones deliver the best outcomes. It's not going to be popular because no clinician wants to think that they're not doing as well as the people over there. But somehow we have to have a rational criteria and rational decision making about that. Even then, it's going to be hard.

Q. This is coming back to science. Just to pick up on something you said, the extent to which good outcomes might be produced in one setting but not another?
A. Yes.

Q. That's not necessarily just a function of the quality of the surgeon or surgeons, for example, who are operating in that facility, is it? It may well be a range of factors, like the mix of different procedures that are being offered, which in turn informs the skill set of the entire team throughout the hospital conveyor belt for those particular patients?
A. And how well it's governed and the structure of the place, but also the culture.

Q. So the quality of the outcome in each of these settings is a factor which if you were making decisions about creating centres of excellence, for example, would potentially feature, but likewise presumably you would need to make decisions based on things like the location of that setting relative to --
A. Yes.

Q. -- population densities and those sorts of things?
A. You absolutely would.

Q. Is there a reason that you've been able to observe why this - as a system, the health service has not done well at centrally managing the system in the way - in the coordinated way that we've been talking about?
A. It hasn't done a bad job. It hasn't done a bad job because we've got functional LHDs right across the Sydney Basin for a population of 5.5 million, which is pretty good. But why they haven't been able to do that? I think

Sydney's population has been growing and changing, and always services are playing catch-up. I go back when I remember in '78 when Westmead opened. That was a major thing for the people in the west. It's probably in the east - Westmead is probably eastern Sydney now, the population has grown out so much. So, you know, populations grow, gotten older, developed, been more demanding, and we've been trying to in a way play catch-up with distributing services sufficiently well, and then every large hospital wants to do the wide range of things that its patients might require. So that sort of mitigates against building specialist centres where people go to for their care, unlike, say, somewhere like India, where there's a heart hospital that only does hearts and everybody comes there from miles, kilometres around and that's where they go to, and they get really good at that. So we haven't historically got the right background to have created those in New South Wales.

Now, can we? That's a question we have to really have a look at internationally, I suspect.

Q. To the extent that we have done that and think of a couple of examples that we've encountered are - heart and lung transplants being a good example, it seems that the circumstances which led that to being a service that was provided in the one location that it is provided didn't really have much to do with a long-term planning process but, rather, a particular clinician or group of clinicians who had particular grants who did work in a particular place, which in turn created the possibility of this surgery, which happenstance then led to it being the place where it was done.

But I guess that's another question around this planning. How should we be dealing with the extent to which those sorts of circumstances can produce innovation, and valuable innovation, but doing it in a way that enables us to be a little bit more focused on our system planning whilst it's being rolled out?

A. It's the perennial problem for every system, not just in health: what's the right mix of top down versus bottom up, and can we let a thousand flowers bloom because that treats lots of innovation, but it also creates a lot of wastage, you know. I run the Australian Institute of Health Innovation. We talk about this almost every day. How do you get innovation in a system where we also want

standardised care, so, equitably, everybody gets a good quality of care, and we want hospitals to be able to provide a wide range of services to people so that if you go to hospital and whatever happens to you, whatever your multi-morbidity is, you get access to care there in the one place. So these are perennial problems. There's no magic solution for that.

Q. Is that part of the problem, though, just the notion that you go to a hospital with a problem and you'll have that problem dealt with, unless it's one of these extremely pointy end sort of procedures, at that hospital? Is that a mode of thinking which might have once worked when the delivery of medicine was simpler --
A. Yes.

Q. -- and sub-specialisation and particular techniques and medical innovations had not yet occurred, but within the existing funding envelope might it be the case that that's just not a realistic way of approaching health care anymore?
A. Sure. It happens a little bit because people get an - you know, clinicians get an interest and they super specialise and then patients come to them, and if that's not happening at that hospital or facility they might go to another one and set up shop there and - so it does happen a little bit. But in the current strapped-for-cash system it happens less than it did in the old days, I suspect.

On that, you know, I wanted to mention about medical emergency teams. They've been spectacularly successful and are a good change model.

Q. Tell us about that model.
A. So medical emergency teams - and New South Wales did very well here. It's a case example that might be of interest to you. So in the old days what used to happen is if a patient had a cardiac arrest you'd send the crash team in to deal with that cardiac arrest, and that worked that way for decades. But, really, in a way that was insane when you think about it because why would you wait until after the person had their cardiac arrest as an inpatient before you send in the team? So medical emergency teams came in the last 20 years - also called rapid response system. So what happens now is, if a patient is on a ward and they're starting to deteriorate, that ward may not necessarily have the skills to deal with the deterioration

but all they have to do is notice the deterioration and call the medical emergency team. So now before the patient actually goes into a big crash the medical emergency team is called, and then they come out of intensive care and they deal with the person.

So New South Wales - we published some papers on this, and it was the Clinical Excellence Commission that did this - invented a program called Between the Flags, an Aussie icon type thing where if the patient was swimming between the flags it was okay but if the they went outside the flags you should call - that was deterioration and they were now at risk and you could call the medical emergency team.

And then some places have - I don't know about New South Wales, but some places have extended that so that the patient or the patient's relative can call the crash team, can call the medical emergency team. Now, that's kind of way outside of medicine's understanding of how care works, that they're the experts. So that was quite radical. But now if, say, in a kids' hospital - the person who knows whether the patient is deteriorating best is the mother or the father, so they can call the medical emergency team if they think their child is deteriorating, and it's probably saved a lot of lives.

So the question is how did that arise, how did we manage to get that up against the medical culture which is the doctor in charge owns the patient and, "You can't do anything with that patient unless I approve it, I authorise it. I'm the authorising person." So that managed to get up in many parts of the world, including in many hospitals in Australia. It's a good example of how change can be done if you're looking for to hang some of your recommendations on a good model.

Q. How was it done?
A. Sorry?

Q. How was that change effected?
A. Over time with a group of committed people, committed intensivists and people like me doing research, finding that a research interest, to slowly get that done over time, and convince others who were sort of saying, "Well, we don't need that in our hospital. We look after our patients well." But that wasn't true.

Q. In relation to research of that kind, another thing you've pointed to in your submission is the desirability of there being greater transparency of data --
A. Yes.

Q. -- so health systems can learn and, I'm assuming based on answers you've given, learned from research conducted by organisations like yours. What did you have in mind when you were suggesting greater transparency of data? I fully appreciate the more data we can collect the more there is for you to work with, but only if you can get access to it?
A. I can submit a paper to you that we wrote just recently on the idea of learning health systems, health systems that continuously improve and learn, and it's the idea that there's lots of data lying around in health care, huge amounts. How do we turn that into intelligence? Firstly, we've got to turn it into information that is useful for people who make a decision - policy makers, clinicians, leaders, patients - and then how do we turn that into intelligence, that's intelligent data.

So there's people coming up with dashboards - there's lots of that in New South Wales hospitals now compared to 10 years ago - people using data much more wisely, but there's a huge - there's a deluge of it. So how do we pick and choose the right KPIs, the right incentives for people to use data, how do we liberate data while still preserving privacy. There's a raft of issues here.

THE COMMISSIONER: This is the theme of "The patient will see you now"?
A. Sorry?

THE COMMISSIONER: This is the theme of "The patient will see you now"?
A. Yes.

THE COMMISSIONER: The Topol book. Yes
A. Well, patients are going to do it anyway. Who doesn't, if they have a twinge or get some symptoms, go to Google or ChatGPT or Copilot and have a quick look at what that means before they go to the GP? That's radically different to 10 years ago or 20 years ago. So you're either going to see Dr Google and sort of make a judgment as a patient, or you're going to get some good advice or even a second opinion. So people are using data all the

time.

MR MUSTON: You tell us about the potential value of preventative care. How do we value preventative care and see it as - particularly in the context of what might historically within the New South Wales public health system have been a more acute care focused system --
A. Yes.

Q. -- how do we - do we introduce and value preventative care as part of that system, or how should we be?
A. Yes. So if you've got a dollar to spend and you're running an LHD and you've got patients trying to get in with acute conditions, you know, that's often where the money goes, and that's completely understandable. But the long-term benefits - it was Commissioner's question earlier, the long-term benefits of preventative care, the problem is you don't see it in, dare I say it, an electoral cycle or even the medium term. You're going to get the benefits later on down the track. These are very difficult questions. I'm going to go away, Commissioner, and have a look at any studies, economic studies, of the longer term benefits of preventative care --

THE COMMISSIONER: Thank you.
A. -- and health education.

MR MUSTON: The last thing I wanted to ask you about was where you talk about the human development and the obvious importance of the workforce to the health system. But what you tell us is robust evidence-based health workforce planning, not just of the medical workforce, is essential to enable healthcare systems to respond to significant challenges. What do you regard as being robust evidence-based health care - health workforce planning? What might that look like?
A. So this is a question for Australia as well as New South Wales. We sort of haven't done a very good job of predicting ahead of time how many doctors we'll need, how many nurses we'll need, and we sort of - it's like a seesaw, we zig and zag, sometimes there's a surfeit of people and then there's a scarcity. So maybe that's a product of medical and nursing and allied health educations distributed across universities, and it's a federal government problem as much as anyone's. But we really need to do better at planning workforce, and this comes from my colleague Professor Yvonne Zurynski, who works in my

research institute. We can send you some of her papers. It's just being much more robust about planning for the workforce and trying to do better at extrapolating and forecasting and predicting what's needed.

Q. But that presumably requires a far greater level of collaboration between, say, the health system that is the recipient of that workforce and the education system, including vocational education of doctors - tertiary education of doctors, nurses and allied health professionals and the like in terms of what do we forecast as our need, how are we now going to facilitate in collaboration with educational institutes and medical colleges for delivery of that workforce --
A. Yes, it's a big collaboration.

Q. -- in a timely way?
A. And then we've got that unfortunate problem - that unfortunate intervention in the health system called COVID-19, which, you know --

Q. We've heard a lot about that.
A. I'm sure - which, you know, created a lot of subsequent burnout and fatigue and people not wanting to do - become a clinician, and that's posing us a problem that's going to last for a while. So it's hard to forecast and predict these things.

Q. That's probably brings one last question up. We have been told repeatedly that there is a demographic change or a social change in the demographic of people who are clinicians entering the system, either nurses, doctors, allied health professionals. There was a time when many of them would take it on as a vocation and work from the sun up until sun down and go out at night if they needed to be called upon for an emergency, that that was the way they approached their professional lives, whereas nowadays younger people entering these professions don't want to work and live that way any more. So we've been given a whole lot of statistics, which I suspect are largely rubbery figures, but for each one FTE of a retiring medical professional you need 1.5 or two or sometimes people have said up to three to replace them?
A. Yes.

Q. Is that a reality that just contributes to that increasing cost of delivering health care, we're no longer

in effect getting more than one FTE worth of work out of one FTE worth of salary and that's something we're just going to have to come to grips with?
A. I don't know. It's an empirical question that needs to be tested. But, just thinking of my own involvement with health care over decades, it certainly was the case that there was a lot of goodwill amongst especially doctors, who would devote themselves to a particular facility and, you know, be on call night and day and all that sort of stuff. It was also a less demanding era. You know, we can do lots more now. It's become more professionalised in a way. And we do think that the latest generation of Millennials or whatever title, Gen Z or whatever they're called these days, you know, are quite happy to do their shift but not necessarily do that extra mile.

It seems real. I'd have to do more work to think whether it was actually empirically real. But if it is real then that's true, we've got a problem of extra costs because of that. So, if your hypothesis is right, it's an extra difficulty for the system to navigate.

MR MUSTON: I have no further questions for this witness, Commissioner.

THE COMMISSIONER: Mr Chiu?

MR CHIU: I have no questions.

THE COMMISSIONER: Professor, thank you very much for your time. We're very grateful for the assistance you've given the Inquiry. Thank you.
A. Thank you, Commissioner. Thank you, counsel.

THE COMMISSIONER: All right. We'll take the morning break now and come back at 11.45.

<THE WITNESS WITHDREW

SHORT ADJOURNMENT

THE COMMISSIONER: Yes.

MR MUSTON: Commissioner, the next two witnesses from your left to your right on screen are Professor David Bedford of the Business School at UTS within the accounting discipline

and Rosie Viney, who is a professor of health economics and the Director of the Centre for Health Economics Research and Evaluation also at UTS.

THE COMMISSIONER: Thank you. Professor Bedford, can you hear me?

PROFESSOR BEDFORD: I can.

<DAVID STUART BEDFORD, affirmed: [11.51 am]

<ROSALIE CLAIRE VINEY, affirmed:

<EXAMINATION BY MR MUSTON:

MR MUSTON: Professor Bedford, I might just get you to state your full name for the record, please.

PROFESSOR BEDFORD: David Stuart Bedford.

MR MUSTON: And, Professor Viney, I might ask you to do the same.

PROFESSOR VINEY: Rosalie Claire Viney.

MR MUSTON: Thank you. Can I just start by testing some propositions with you that we've explored with other witnesses over the past couple of days. Accepting that the budgetary envelope which will be available to health is always going to be confined, that is to say it's not a limitless amount of money, there will always - that budget will always be able to be exhausted by delivering care to patients which is, at least to those patients, of high value, even in a system where all relevant inefficiencies have been weeded out; would you agree with that?

PROFESSOR VINEY: Yes, I'd definitely agree with that.

MR MUSTON: And, having delivered all of that care, there will be no doubt a wide range of care that you could continue to deliver to patients which would be of high value to those individual patients if you had more money; is that right?

PROFESSOR VINEY: Yes. David?

PROFESSOR BEDFORD: Yes, I would agree with both those

statements.

MR MUSTON: That is to say health is a bit of a bottomless bucket in the sense that there's probably no end to the amount of money that you could actually spend on the public health system and do so in a way which was at least from a health perspective of genuine benefit to the community, assuming that the system was operating even at perfect efficiency.

PROFESSOR VINEY: Yes, I'd agree with that.

PROFESSOR BEDFORD: Yes, that's correct.

MR MUSTON: Of course back in the world of reality there is a limited budget available to a government, and decisions need to be made about how to spread that budgetary envelope across the varying competing priorities which are faced by government, including education, transport, justice et cetera. And you'll need to answer out loud. Whilst you're both nodding --

PROFESSOR BEDFORD: Yes.

MR MUSTON: -- the transcript doesn't pick up the nod.

PROFESSOR VINEY: Yes, agreed.

MR MUSTON: And it's not quite so simple as saying money spent on health helps health and money spent on, say, education or community services helps those respective areas. Particularly having regard to things like the social determinants of health, there are ways in which money allocated to other sections of the budget, for example, education, community services and the like, which can in the long-term have significant benefits from a public health point of view or population health point of view.

PROFESSOR BEDFORD: That's correct.

PROFESSOR VINEY: Yes. I think there are several examples where we see that investing in other areas such as housing or improving the environment et cetera can make a big difference to people's health.

MR MUSTON: Just for present purpose could we start by

looking at the envelope of money which is made available to health. So, accepting that there are other ways of spending money within the economy which could produce health benefits, for present purposes I just want us to focus on the health budget.

PROFESSOR BEDFORD: Yes.

MR MUSTON: To the extent that there is more that could be done with the money within the health budget than we have money to actually spend on those things, decisions need to be made about which of the services or forms of care that we deliver and the way in which we deliver them so as to make the best use of the budgetary envelope that we have available; would that be right?

PROFESSOR VINEY: Yes, correct.

PROFESSOR BEDFORD: That's correct.

MR MUSTON: In terms of what we should be aiming to achieve in terms of making the best use of - to use my inelegant phrase - what in general terms do you think the objectives of that spend should be in terms of what are we trying ideally to achieve through the way in which we deploy that money?

PROFESSOR VINEY: So I think the way we should think about it is we're aiming to improve population health, improve the health and wellbeing of individuals within New South Wales, and ensure that that's done in a way that's equitable; also ensuring that people have access to care.

PROFESSOR BEDFORD: And I'd just add to that it's done in as efficient manner as possible.

MR MUSTON: When you said - I think did you say "as efficient"?

PROFESSOR BEDFORD: "As efficient", yes, not inefficient.

MR MUSTON: It was no doubt the speaker, but it came across as sufficient, which probably needs to be done in as sufficient a way as possible as well. You tell us in your submission - we might come back to exactly what those objectives might look like in a slightly more nuanced way. But you tell us in your submission - the submission that

you've made, and perhaps I should actually go back to that. Each of you I think have contributed to a submission dated 31 October 2023 which was provided to the Commission; is that correct?

PROFESSOR BEDFORD: That's correct.

PROFESSOR VINEY: That's correct.

MR MUSTON: Have you had an opportunity to review that submission before giving your evidence today or more recently than 31 October 2023?

PROFESSOR BEDFORD: Yes.

PROFESSOR VINEY: Yes.

MR MUSTON: And you're satisfied that the views that you expressed in that submission remain views that you hold or continue to be views that you hold?

PROFESSOR BEDFORD: Yes.

PROFESSOR VINEY: Yes.

MR MUSTON: In due course, Commissioner, that might be tendered as well, actually.

THE COMMISSIONER: Yes.

MR MUSTON: In that submission you tell us about or tell us that costing information is integral for healthcare funding as it allows for efficient resource allocation, aids in budget planning and forecasting, promotes cost efficiency, enables comparative analysis for benchmarking, supports the assessment of potential impact, enhances transparency and accountability, and facilitates evidence based decision-making whilst driving quality improvement efforts. Could I just ask either of you or whichever of you is best qualified to do so to just, first of all, explain what the costing information you're referring to is and exactly how you think it might better be used within the funding structures or decision-making structures around public health.

PROFESSOR BEDFORD: Sure. So each of the local health districts in New South Wales have to submit their costing

data or the patient level costing data to the NHCD - through the NHCDC, which is the national health costing and data collection process. So that's mandated in the NHRA. And this information attempts to cost the delivery of services or episodes of care to patients within a one-year period. So that costing information should cover nearly all costs. There's a few things that are excluded for various reasons from the patient level costs. But that helps informed primarily funding at a national and state level.

As you mentioned, from our submission there's many other ways in which that information is then used by state and local administrators such as benchmarking, you know, local hospitals against other hospitals in the LHD or against other LHDs; looking at ways of improving clinical practice; using costing information to improve models of care or tender business case submissions for employing new people or for the purchase of new equipment where they can justify doing so by lowering care or improving quality.

Whatever funding method that New South Wales Health and the federal government take in future, costing information is going to be critical to implementing any form of funding arrangement, and the reason why is because that patient level cost information indicates simply the cost of providing services to patients. So if that data is incorrect then you'll be misfunding different DIGs or services at the local level.

So what we've seen in research that I've done is that the quality of that cost information varies a lot; so that some LHDs and hospitals have very good information about the cost of the services that they deliver, but many others do not and they make a series of assumptions about how they arrive at a cost where most of the patient cost is assumed rather than actual cost, which essentially means it's done through accounting estimates rather than knowing, you know, what the true cost of service delivery is.

MR MUSTON: Are there any checks and balances that can be used to test the accuracy of those assumptions in the sense that, if a hospital knows what its overall spend on staff and other overheads might be, if there's then been a process of assuming based on a range of estimates and assumptions what the cost of delivering a particular type of care might be, is there a way of going back and saying,

"We know what the total care delivered is; we know what the total cost is," do the two add up?

PROFESSOR BEDFORD: Yes, so they'll add up. It's just about the allocation between the services that are provided. So when you're making decisions about where a service should provided, for instance, if you don't understand the cost at the different centres of treatment then you can't make a valid decision about where it might be most cost effective, and that cost effectiveness gets into calculations about value because you want the best outcomes at the lowest cost, you'll have distorted information and won't be able to make good decisions about value based care.

MR MUSTON: So that's dealing with making a proper assessment of the cost incurred in delivering services as they're delivered.

PROFESSOR BEDFORD: That's right.

MR MUSTON: Obviously it's critically important that any costing data that's relied on is as accurate as possible.

PROFESSOR BEDFORD: That's right.

MR MUSTON: And does that costing data take into account or is part of that costing data any sort of assessment of the efficacy of the care that's being provided through that spend? So let me give you an example. You might identify that for a particular procedure which is performed in a hospital or a particular service which is being delivered in a hospital there is a cost per patient or per bed day or per procedure. Is there any assessment made of the extent to which the outcomes - or how do the outcomes of the procedure factor into that costing, if at all?

PROFESSOR BEDFORD: They don't factor into the costing. So those assessments are made on an ad hoc basis, not - it's definitely not a systematic basis. The only - there's an exception to that in that both state and federal funding has certain adjustments that get made; so, for instance, sentinel events. So if there was a mortality then you wouldn't get funded for that particular event. But there's no systematic tracking of outcomes related to costs. That would all be ad hoc at a LHD level or sometimes at a higher level when certain studies are

commissioned.

MR MUSTON: So the costing data that's gathered, for example, other than in the ad hoc way that you tell us and/or in the event of sentinel events, it doesn't say that X dollars per patient or per bed day to provide that service whilst maybe very low and efficient is not actually producing the sort of quality of outcome that spending a little bit more on that same service might produce?

PROFESSOR BEDFORD: No, in theory that all can be calculated, but as far as I know it's not done on a systematic basis.

MR MUSTON: And I assume that the costing also doesn't take into account the extent to which, say, a workforce might be stretched. So if in the ideal world you might have four clinicians who are involved in the delivery of a particular service through a facility but, for workforce reasons, you've only managed to attract three or through decision-making around the allocation of resources that are available there's only three people who are - clinicians who are delivering that service at that time, that on its face would produce a lower cost of delivering the service but would not recognise the extent to which those delivering the service might not wish to continue delivering that service in the longer term?

PROFESSOR BEDFORD: That's correct. So once you have a look at the cost data it's relatively aggregated. So you can't easily unpick, at least at state level, what is going into that cost; so, you know, how many clinicians were actually involved in delivering a patient's care. In some cases - some LHDs would have that information, others would not. And this also goes into, you know, questions later on that you might have about would you see cost efficiencies arise if you implement new models of care, and often you don't because you still have the same staff, same structures, facilities, et cetera, and the cost is still there even if you reduce the services or provide services in a different way. So it becomes difficult then to make these - actually identify whether particular changes are leading to changes in cost or not, given the current granularity of the cost data that is available.

MR MUSTON: Now, can I turn to the costing of services from a planning point of view rather than just identifying

what the cost of delivering the services might have been in any given period. Is there a different exercise undertaken that you're aware of or is it possible to do a different exercise whereby one identifies a service that might ideally form part of a service mix and works out what the cost of delivering that service properly would be?

PROFESSOR BEDFORD: Yes. So to do that correctly you need to commission an actual cost analysis to be done of a service. So these are done. So LHDs do do this. So when you have a best practice pathway of care or model of care then you can actually go in and track all the resources that are being used to deliver that model of care, and then you can compare that to what is being done on a state or national basis.

MR MUSTON: But if you are, say, making a decision about - as part of your prioritisation and decisions around how you're going to deploy a limited health budget across the system through the rolling out of particular services would it be possible to identify the cost of each of those potential services so as you could decide whether spending that money on that service would be something that would be justified as opposed to spending perhaps the equivalent amount of money or a smaller amount of money or a larger amount of money on a different service?

PROFESSOR BEDFORD: Yes, again, in theory. So you'd be relying - so what I would do would be rely on the larger LHDs because they tend to have more investment into technology, IT infrastructure to collect more accurate cost data. The only issue then of course is if you try and say, "We'll take that cost to delivering in a remote or rural setting," it's not going to hold because they don't have the scale, their costs are going to be more because many of these specialties require locums to come in so you're paying at a greater rate et cetera, et cetera. So in theory, yes, but in practice it becomes more complicated to actually identify this.

MR MUSTON: So, to the extent that it becomes complicated and difficult to do, how might costing information be used - to use your phrase - as part of evidence based decision-making?

PROFESSOR BEDFORD: Yes, so although I'm saying many things about the lack of quality in some of the cost data,

in general and by world standards we do have good cost data. So that should be on the record, that Australia in general and New South Wales and a few other states in particular really do - we're at the pointy end of the world in terms of the quality of the data that we collect.

So where cost data probably becomes more useful is where you have services where you have a known model of care and outcomes, and then you look at variability in those costs. So when you have a relatively standardised practice then it becomes easier to identify outliers and cost variations and go and find out why are those cost variations happening.

When there are services that are delivered infrequently or they're services that have significant costs associated with them that may not be allocated effectively then it becomes more complicated. But in terms of - you mentioned in our submission, for instance, maternity care. We have very good data about the various ways in which maternity care is delivered, and you have quite high confidence in the data, in the cost data and outcome data, in order to make decisions at least to that particular service.

MR MUSTON: So maybe let me unpack that a little bit. Say, just taking as a hypothetical example, a community based paediatric service that might be offered, not a huge amount of technical equipment and inputs that go into it, it's predominantly going to be a collection of salaries and wages which you identify the team that would be required to provide that service. From a costing point of view there might be some slight complexities around it, but it wouldn't be an overly complicated task, would it, to work out the cost of delivering a service like that?

PROFESSOR BEDFORD: No. So if you wanted to deliver community maternity care prior to birth then you would be able to do a reasonably good job in costing what that service would be, and then you would be able to compare that to pregnancies that did not have - whether the female didn't have maternity care prior or didn't have access to community care et cetera. Because many of these studies have been done, so you would be able to identify a reasonable population of people and work out the costs in an effective way. Rosalie might have something to say about that.

PROFESSOR VINEY: If I might add there I think if we take that example of a community based paediatric service, yes, it would be relatively straightforward to say, "Okay, this is what the service is, this is the population that it's covering, this is the kinds of services that we might" - I think from a planning point of view if you were setting up such a new service the question you need to be able to answer is also, "What would happen if we didn't have that service? What would happen - where would the services be delivered? Would there be people not getting services? Would they be going elsewhere?" So I think it's actually getting that comparative component that is really important in thinking about the planning of services. So the costing information, one way or another, will be there; but also thinking about what will happen under this new delivery of services compared with what is happening now.

MR MUSTON: Definitely coming back to that. That's an important point once I've understood exactly how the costing works. So we've got our relatively straightforward example of the community paediatric service which is predominantly going to be a workforce cost, with some additional expenses.

We then get into something a little bit more complicated like, say, the delivery of primary care through acute or co-located site, for example, where you've got a workforce cost of a general practitioner or a rural generalist and perhaps a practice nurse, maybe an allied health professional or two, depending on the precise service that you were wanting to build, but those costs would be relatively easy to quantify?

PROFESSOR BEDFORD: Yes. So the one limitation here is that you would perhaps have to go and collect those costs. So the costs that are collected through the process at the moment are only going to be for the items that are on the general list, you know, determined by IHACPA. So if there is something like a community care or allied health that is not part of the list of services that are being funded then there's perhaps no current collection of that data.

So one thing if I was making a recommendation is that when you set up these service contracts with community health and allied health is that you require them to provide cost and activity data, because then that helps

everyone in the longer term. But at the moment we hear reports of allied health professionals no longer providing the LHD with activity or cost data, and that limits the resources that we have in order to make informed decisions going forward.

MR MUSTON: In a well-functioning system ideally those resources or such resources as are available would enable a decision-maker to make an assessment or have available to them an assessment of the actual cost of delivering a service before they actually decide to do so so as they can make an informed decision about whether that's the right service to be delivering to a community in the location which it's proposed as opposed to something else.

PROFESSOR BEDFORD: That's correct.

MR MUSTON: So in terms of just to deal with that primary care example you've got - it might not yet be readily available because it's not part of the IHACPA ABF suite of activity, but nevertheless you've got your salary and wage component which is something that someone with the right skill set could probably pull together as an estimate of the likely cost of delivering the service, I would have thought?

PROFESSOR BEDFORD: That's correct.

MR MUSTON: And then in addition to that there might be some other overhead costs associated with running a facility like that, some equipment, some consumables, but again it's not likely to be overly challenging, is it, for someone who's got the right information available to them and the right skill set to be able to work out, whilst not down to the dollar accuracy, with reasonable accuracy what it's likely to cost --

PROFESSOR BEDFORD: That's right. That's right. You don't need perfect data; you just need useful data.

MR MUSTON: Yes.

PROFESSOR VINEY: Can I just --

MR MUSTON: No, please.

PROFESSOR VINEY: I think the other side of this, though,

in designing that service there's a question about demand. So you might say we have, you know, a nurse, we have a general practitioner, we have a primary care provider, but I think a lot of the information about the true costs and what the service is likely to deliver will depend upon what happens once that service is there.

MR MUSTON: I guess there's a couple of ways - just to pick up on that, there's a couple of issues that come out of that, is there not? The first is there's the possibility that if you create a service there will be somewhere out there an unmet demand that will consume that service. And if it's consumed in full then - that is to say if the demand makes full use of the service which is there, then the cost will be at the upper end of your hopefully reasonably accurate estimate of what it would likely cost to deliver the service?

PROFESSOR BEDFORD: Yes. So, I mean, the more you use a service the cheaper the cost is because you spread those costs across more patients. So there's that aspect to costing. So you first need to know what the demand is of that service and then you also have to work out what reduction in demand for other services might be.

So what often is reported is when you have the community or alternative paths of care rather than in the hospital setting people report, "Well, there's been no cost saving." And they report that because they often omit the opportunity cost. So you free up a bed day in the hospital, but that cost of freeing up a bed day is not incorporated or taken off the cost of delivering the new service.

And then like you very early on said as soon as you open up bed days in the hospital that's going to be consumed by other activity. So the total cost never goes down. It's just that you're able to provide more activity to patients. So those two things, what Rosalie mentioned, and the opportunity costs that arise need to be taken into account.

MR MUSTON: Just to pick up on your point, Professor Viney, another issue about demand that's important is if the demand greatly outstrips the extent to which the service that you've developed is able to meet it then the extent to which it's not being met might not be

readily measurable, that is to say all of those people who are not able to get access to the service we don't know anything about them by creating the service, other than we're treating those people who are able to access it and are being treated and we're busy so that's positive, but as to whether or not there's more we're not quite sure; is that right?

PROFESSOR VINEY: I think that's absolutely correct, and that comes to the point that it may be that the people who are able to access the services may not be the ones who most need to access the service.

MR MUSTON: And is there also a risk that if there is excessive demand on the service that might actually manifest itself in the form of wait lists which become so long that the clinical benefit of the service that you're proposing to put forward is lost or compromised?

PROFESSOR VINEY: I think I would agree with that.

MR MUSTON: I'll come back just briefly to the costing side of it before we get into that more substantive - the benefit side of the cost-benefit analysis. Where we are talking about acute services, say, a procedure - obstetrics service I think is the example that you used - is your point that the data that's available and submitted by the LHDs, starting with the metro LHDs where the data you tell us is perhaps more reliable, does give you a reasonable ability to assess roughly what it costs when you take into account the proportion of staff time which is being deployed in this service, some of it in that case your obstetricians and midwives are probably largely 100 per cent being applied towards that service, but there may be other staff within the hospital who have cross-over, consumables, et cetera. Whilst not perfect --

PROFESSOR BEDFORD: Yes.

MR MUSTON: -- within the metro LHDs, high volumes like that, you get a reasonable good estimate of what it would cost per baby to deliver an obstetrics service.

PROFESSOR BEDFORD: That's correct, yes. You might still need to make a few assumptions about how much of that cost is variable, that is for each additional unit you have or take away how much of that cost actually gets saved. So

some is fixed; some is variable. But someone that's skilled in doing this analysis would be able to make those assumptions effectively, I think.

MR MUSTON: And that's - so the fixed and variable costs - I introduced perhaps a complicating factor, which is the price per baby. But at one level if you weren't trying to break it down into the price per baby but, rather, were just looking at what does it cost to actually provide a service which is capable of delivering up to a certain number of babies per week --

PROFESSOR BEDFORD: That's right.

MR MUSTON: This is what it's going to cost?

PROFESSOR BEDFORD: Yes.

MR MUSTON: And working out that costing but accepting that there might be some additional loading for things like locums and other increased costs, if you're delivering a service that's capable of delivering up to a certain number of babies in a metro hospital the cost will potentially be roughly the same as the cost of delivering that service in a rural location, save that in the rural location there might not actually be anywhere near as many deliveries per week, so the cost per baby will be a lot higher but the cost of the service itself might be roughly the same?

PROFESSOR BEDFORD: Yes, but - yes, on some level. I mean, the size of the - well, the capacity of the service will differ, right? So in the metropolitan area you would have far more - the capacity should be far more, and in a rural setting it might be far less, depending on where it's located, but yes.

MR MUSTON: I suppose for present purposes the more important point is you work out what your demand is likely to be, you're able to at least conceptualise a service that would be capable of meeting that demand even if it was under-utilised because the demand didn't sort of reach the point of that base service, and you'd work out what it - you'd be able to work out roughly what it would cost to deliver that service?

PROFESSOR BEDFORD: Yes.

MR MUSTON: Could I now come to the next part of that equation - sorry, one last thing on costing. You did say a moment ago that at the pointy end some of those more complex and innovative type procedures were more complicated to deal with. I assume there you - are you talking about some of these emerging therapies and treatments where there's very little data in relation to them, there's small numbers of people who are receiving that treatment at the moment, and they tend to be quite high cost?

PROFESSOR BEDFORD: Yes. So there's two probably. There's the innovative technologies like CAR T-cells for cancer treatments, but then also even more routine services like haemodialysis. So with haemodialysis it's a short-stay procedure, but it has very high pharmacy costs. So in the LHDs that cost this correctly they'll what's known as trace the pharmacy cost to the patient that is receiving the haemodialysis. So you'll know exactly how much pharmacy cost is being incurred per delivery of haemodialysis or even, you know, per patient. Whereas at other points of delivery they will allocate the pharmacy cost on some driver, like bed days or hours in the hospital, and it will just be an average cost. So in those hospitals the costs will be - the average cost will be much lower because they're not accounting for the much greater pharmacy cost involved.

And so there was one example that we had where an LHD was wondering why their cost was so much higher than their comparable - hospitals that were comparable, and it was because they're costing it correctly and others are not. And in that case what - generally the average washes out, you know, some over-cost, some under-cost, but in that case it seemed like that service was systematically under-cost and underfunded because the accurate cost data wasn't available for that.

MR MUSTON: So turning from the cost side of the equation to the potential benefit side of the equation, in making decisions about how to deploy the finite economic resources that are available in the public health system, presumably a well-functioning system would have regard to the cost of a service, the extent to which it's unavoidable in a practical sense, and if it's in that wide range of things that you could avoid doing but you'd like to do you need to make a decision about which one amongst them you're going

to do?

Perhaps let's me put that more elegantly. There will be things that a hospital service can't really avoid doing, like a patient who presents with a trauma or a heart attack or a burst appendix, it's broadly accepted I think that the system needs to be able to treat that urgent condition in a way that prevents them from having an adverse outcome; do we generally accept that as a proposition?

PROFESSOR VINEY: Yes. I mean, I think fundamentally a hospital or a health service is there to meet the needs of the population, and so the population that presents does need to be treated. I think where you're going perhaps with the question is what about if we want to change the way that we treat patients and we want to do something different.

MR MUSTON: Where I'm going - and I'm happy for you to develop this thought if I sort of start it off. Where I'm going is I'm interested to explore whether as a matter of practical reality within the current budgetary envelope and perhaps any budgetary envelope we will never actually be able to meet all of the needs of the community within the public health system, and how do we approach decision making around which of those needs we should actually be meeting. So, in making that decision around what to prioritise and what to utilise the budgetary - or the funds that are available, how do we go about making that decision from an economic perspective?

PROFESSOR VINEY: So I think it's not a question that is easily answered at the system level. You really have to come down to particular services or particular models of care and then ask the question about - you know, using economic evaluation techniques to say what is the cost of this, what are the outcomes of this particular service compared with what the alternative might be.

THE COMMISSIONER: An example of that might be - I've seen a paper recently about greater utilisation of virtual hospitals, where there's analysis done, well, we invest in this - assuming this can be done safely - it will save this number of bed days, and therefore saving X number of bed days means saving Y amount of money, and there might also be a saving in expenditure on the capital infrastructure expenses because we don't need - we may not need as many

hospitals because we're using more virtual hospitals. So an analysis is done telling us if we embrace more virtual hospital care then there's some kind of net cost avoidance or cost saving.

PROFESSOR VINEY: And potentially benefits as well. But I think it's really important that - again, there's two parts of that question. One of them is the should we invest more in virtual care and set up virtual hospitals. But there's also the question about to whom are we delivering the virtual care, under what circumstances and what do we know about the effectiveness of that virtual care, or indeed the safety, as you said. So - you know, there are examples going on in New South Wales, for example, of virtual wound care at the moment, and you can see a lot of benefit of that. But you really do want to know that you've evaluated that correctly against the alternative model, which is somebody coming in and having their wound treated or somebody going out to their house to look after their wound.

THE COMMISSIONER: Sure. I guess some proposed or innovative model of care might have a cost saving, but if it's providing poor value care it's not such a great investment.

PROFESSOR VINEY: Yes, I guess I'm putting a little bit of a plug for systematic economic evaluation of those new models of care.

THE COMMISSIONER: What about things that are much longer term? Mr Muston's mentioned paediatric interventions that might result in - if children with whatever health care condition, if there's an early intervention means that there's a much greater prospect of them becoming either taxpayers and economically active or, if it's a health intervention, means they won't have as many health care problems as they grow up. Are there sort of rates of return, cost-benefit analysis possible to be done that look forward, you know, 20 or 30 years as to what might be the secondary benefits flowing from those kind of health interventions?

PROFESSOR VINEY: There definitely are, and there are lots of examples of that, either - whether it is investment in screening, those things, and indeed, you know, these happens all the time. I think the thing to be cautious of

is, yes, we can project that benefit into the future but it won't necessarily always be realised. So you might get better outcomes, yes.

MR MUSTON: The same could be said presumably for other forms of care as well. For example, let's take the example of the knee replacement. You can project into the future what you anticipate will be the clinical benefit of replacing someone's arthritic knee, but you're not guaranteed to get those returns in every patient. You would hope to, but you might not; would that be right?

PROFESSOR VINEY: Yes, that's always going to be true. But I guess if you've done good clinical evaluation and good costing then you have a fair idea of what those benefits will be relative to the costs.

MR MUSTON: And is your point that the - well, are you able to do the same sort of analysis and make the same assessment of costs in the case of, say, a hypothetical paediatric - community-based paediatric care, or is it the point that it's more challenging because of the long timeframe?

PROFESSOR VINEY: It's perhaps more challenging because it's not just one pathway of care, it's not just one intervention. A paediatric community service might be multiple different interventions, and, again, from an economic point of view you always want to know what would have happened without that service. So how is the service changing the models of care? Now, that doesn't mean that's not doable. It just means that it needs that systematic approach to saying, "If we set up this paediatric service, how will the model of care change, who will be seen, who is seeing them, what would have happened otherwise and how do we expect that?" And it might be that there's therefore multiple evaluations that need to be undertaken to make those projections.

MR MUSTON: And each of those steps needs to be done obviously in an evidence-based way?

PROFESSOR VINEY: Yes, yes.

MR MUSTON: In relation to some of those longer term propositions, are you aware - I mean, have people done that sort of analysis of the extent to which early

interventions - I think the Commissioner might have touched on this a moment ago, but the extent to which early interventions and investments in, say, preventative health care can have long-term benefits which manifest themselves outside, say, the health budget?

PROFESSOR VINEY: There are multiple evaluations of those. I hope you'll accept me taking it on notice to actually provide reference --

THE COMMISSIONER: Yes. Thank you, we would appreciate that. Thank you.

MR MUSTON: So I gather, just going back to you, Professor Bedford, where you refer in the submission to the need for greater standardisation of costing practices across the local health districts, what you have in mind there is what you told us about a bit earlier, which was the fact that some districts are using different assumptions to in a rough and ready way quantify the cost of delivering services whereas others are being more precise about it, and a level of standardisation across the board would enhance the quality of costing information we have?

PROFESSOR BEDFORD: That's right. So, again, I want to say that New South Wales has its own cost accounting guidelines, it's not the case for every jurisdiction, and those are regularly updated. So in terms of standardised practice we're in theory very good, but then actually when it's done there's either not enough resources at the LHD level or there's not the technology available to automate many of those cost allocations, like, for instance, tracking pharmacy products to the patient.

MR MUSTON: What are the sort of resources, both human and technology, that might be required in order to do that effectively?

PROFESSOR BEDFORD: So the technology ones are - material tracking services would be one for pharmacy goods, but then also there's all these - maybe there's 30-odd feeder systems, so these come from transport, pharmacy, radiology, et cetera. So they're all different systems and they need to connect to one another, and I think one person described it as a bowl of spaghetti as to how all these systems integrate with each other, meaning that they don't really

do it very well. So, going forward, investment into technology that is integrated across not just in terms of acute or hospital care but also across allied and community health as well. So there's that sort of technology investment.

But human resources is really important. So many LHDs might only have one person doing all the costing for that LHD, and that's just going to be insufficient in order to actually go beyond just the very - you know, just in terms of just trying to get the submission done for the NHCDC or to IHACPA.

And then secondly on the human resources side is that clinicians do not - generally are not that engaged with costing information. So one thing is that they're time poor. The systems are not very accessible for them, so the way that information is delivered is extremely difficult to access for someone that doesn't have integrating costing, let's say. And then also for managers. They need to know about how to properly make use of this information. So there's always two sides. If we think about devolving decisions to LHDs in some cases as to how to provide care, our best care, to the population, if they don't understand about how to use the cost information then they're not going to be informed to make the best decisions at that local level.

MR MUSTON: I might raise this question with you, Professor Viney, on the topic of the devolving of decision making. Starting proposition is decisions - we are told decisions made closer to the patients tend to be better decisions from a patient outcome perspective. Is that general proposition one that rings true with you?

PROFESSOR VINEY: I think that's generally true. I think the thing to consider there is that when a decision is made at a - right down at the patient level it's a decision about that patient made by that clinician and may not take into account what the overall resource allocation questions are. So I think we've got that tension between what's best for this patient at this time versus what's best for all patients.

MR MUSTON: So, moving up a step in that resource allocation piece, you've then got decisions which are being made at the local health district level, which one would

hope are informed by an assessment of the health needs of the population of that local health district and the extent to which decisions made about the way in which resources available are allocated will meet those needs?

PROFESSOR BEDFORD: That's correct.

MR MUSTON: Let's take it up to the next step again. Is there also scope for or need for systemic decision making to operate above those LHDs so as to examine what services are being made available - well, what is the need in each of these LHDs in terms of a particular health need, what are the services that might be required in order to meet that need, and where should those services be provided, if not in every LHD, which ones and at which --

PROFESSOR BEDFORD: That's correct.

PROFESSOR VINEY: Yes.

MR MUSTON: Do you have a view, Professor Viney, as to the way in which one might approach that process of decision making?

PROFESSOR VINEY: I think that comes down to an assessment of health need. So I think what you're referring to is the idea that you don't necessarily need every level of service in every local health district. It may not be efficient to do that. So there's a - you know, obviously there's going to be a trade-off between asking people to travel to receive a particular service versus the practicality of having it available. I mean, obviously that's where virtual care may come in because there may be different ways of delivering it.

The other part of I think what you're referring to is that if you've got evidence that there is a good new model of care that is likely to be more efficient, more effective then it may be that you need a systemic approach to implementing that model of care rather than leaving it to just being taken up at the local health district level. So it may be that you need to give the incentives to each local health district to implement that new model of care.

MR MUSTON: Can we take it back down to that middle step, the decision making at the LHD level. If the reality is it's not going to be practicable to provide in an effective

way services which meet all of the health needs of the community within the existing budgetary envelope, how does one go about making decisions - economically informed decisions about which services should be offered, starting of course with I guess an issue you just raised, which is to what extent are those services able to be met from resources external to the LHD? But let's assume for present purposes that you can't, that is to say it's not a service which can readily be accessed outside the LHD, how should we in an economically informed way be making decisions about what to offer and what not to?

PROFESSOR VINEY: So I think some of that comes down to what services - having the information not just about the cost of services but what services are needed, so understanding the health of the population, and then from a planning point of view thinking about what are the overall program budgets that are needed for those services to be delivered and what can we do at the margins to shift between services.

MR MUSTON: So we start with an assessment of the local population, which is probably something better done at an LHD level than at a central level; would that be right?

PROFESSOR VINEY: On the whole, although obviously it will be informed by information at the New South Wales Health level, yes.

MR MUSTON: Might tell the LHD that within their catchment there is a particular preponderance of, say, diabetes when compared with other LHDs, or even if not, that they've got a particular preponderance of diabetes within their LHD that they need to provide services to address?

PROFESSOR VINEY: Or even things like the population is more culturally and linguistically diverse, and so you need to cater for the additional challenges of delivering services to a culturally and linguistically diverse population.

MR MUSTON: That, on one view, comes back into the costing piece, doesn't it? That is to say, a particular service, say delivering endochronological care to people with diabetes, might cost a particular amount if you're dealing with a health-literate community that are predominantly speaking the same language as the endocrinologist, whereas

it might be more expensive to deliver if you're dealing with a different community that doesn't have that health literacy and has language barriers?

PROFESSOR BEDFORD: That's correct.

MR MUSTON: But that's not - whilst that's part of your costing and presumably would need to be factored into assessing what it would cost to deliver the care of that endocrinology service or diabetes service as compared with the cost of delivering, say, a community paediatric service, if these were and no doubt many others that were on the table in your decision about how do we prioritise what we should be delivering to this community and what we shouldn't, I'm just wondering what sort of economic tool at a system level when we're making our system planning we might be able to employ in order to help us to make those decisions about effectively what should we be - what should the public health system be delivering to this community in this location and what - whilst it would be great if we could, what really needs to fall on the other side of the line unless and until we get more funding?

PROFESSOR VINEY: So my answer to that question I think is really that some of this depends upon having the right evidence available and the research. So if we take the endocrinology example, it's not just a matter of the - for the culturally and linguistically diverse population that they need to speak the same language as the endocrinologist. It might be that because of the cultural backgrounds that it's harder for them to know that they need that service, and so we need that kind of evidence. So I think it comes down to making sure that we have research at the local level that informs the design of services. I'm not sure if that's what you meant, but ...

MR MUSTON: Well, I suppose what I'm trying to explore is let it be assumed that you have the information you need to identify a need within the population, you've identified a service which is capable of meeting that need, and you've identified in an evidence-based way the cost of delivering that service, and then you're having to make a decision as a health administrator about whether or not you do deliver that service or whether instead you take the resources which might be - you know, the financial resources which that service would consume and use them to deliver a different service, because I'm starting from the premise -

and, again, I invite you to disagree with it, but I'm starting from the premise that we're not going to be able to offer as part of the public health system all of the services that are required to meet all of the health needs within the community. As regrettable as that might be, it's a reality. Do you agree with that premise?

PROFESSOR VINEY: I do agree with that premise --

MR MUSTON: Again, I'll invite you to respond to another premise, which is the risk of not approaching the planning of service delivery in a systemic way which actually takes into account which of those needs we feel we can deliver and should deliver, and which, within the funds available, we can't, is - we just try and do our best to deliver on all of those needs in the way that the health system organically does, which produces a situation where the funds are spread so thin that in fact none of them are being dealt with adequately or as well as they could be, and they're placing the workforce who's involved in the delivery of those services under increasing strain. Is that a potential consequence of not having a slightly more strategic approach to deciding which services within a constrained budgetary environment you will deliver and deliver well and which ones, regrettably, you won't?

PROFESSOR VINEY: I think it's absolutely essential that there is a systematic approach to planning and delivery of services, and, as you said, there will be some services that always have to be delivered because you have to deal with the person who comes to the emergency department. What I think we're talking about here, though, is using the costing information that David's been talking about plus the activity information to say what are the services that we're delivering and what are the outcomes that we're achieving from them, and then asking the question for each of those, if you like, programs of activity, if we took resources away from them and put them elsewhere, what would we achieve and what would we lose.

MR MUSTON: That's exactly the question.

PROFESSOR VINEY: (Indistinct) an economics way of thinking to that planning, and I am absolutely convinced that within local health districts that is happening.

MR MUSTON: What leads you to that view that that

considered analysis of the cost of particular services and the benefits of those services are being taken into account in deciding which services to offer and which ones not to?

PROFESSOR VINEY: I guess I've seen through multiple examples across many years that that kind of thinking is applied within local health districts, within local health services, not necessarily systematically all the time but that it is part of what informs decision making, particularly around the design of new services.

THE COMMISSIONER: We have to be careful, though, don't we, to distinguish between the mere offering of a service and what - for want of a better expression I'll say, offering a service at an optimal or appropriate level? For example, we've talked about paediatric services. They're offered and they're available. But what the clinicians have told me is that they've never seen wait times so long and that children that need these services are being seen beyond the time that they clinically should have been; in other words, clinically inappropriate delay. That's offering a service but not in the manner that might be best.

PROFESSOR VINEY: I definitely would agree with that, and I think some of that comes down to the question of you can do what - you can do the best you can with the available resources, but if the available resources are not sufficient you may not be able to address those waiting time issues or it may not - you can't always rearrange things to make things more efficient and make sure that you meet all those needs.

MR MUSTON: You may not be able to rearrange them immediately or overnight, but it may well be that you could rearrange them over a period of time by disinvesting in other services and diverting that money into, say, this hypothetical community-based paediatric service to actually deliver that care in a way which is sufficiently resourced to meet the needs of the children when they need to be met rather than when they're a few years into their schooling and they've already fallen behind, for example. You could do that, couldn't you? It depends on the budgetary envelope, obviously, but --

PROFESSOR VINEY: Yes, it depends upon the budgetary envelope. So it depends on what services, and I think it's

important to realise that - so, for example, if we thought about that and we could see that there would be savings that could be made and better outcomes because we can look at children now who use more services because they didn't get that early intervention, the problem is you can't not give them that service, if you see what I mean? So, even though we might want to invest for the future for the children who will be in primary school in five years time, we also need to recognise that you also have to deliver the service that is needed for the children who didn't get that early intervention, if that makes sense?

MR MUSTON: No, that does. But that goes to the size and scale of this hypothetical paediatric service. I guess the question I'm trying to engage with is maybe in order to properly fund and resource the paediatric service which deals not only with the kids who haven't yet got it but those who might benefit from it now, otherwise you're like a dog chasing its tail, you might need to say - make a difficult decision about whether you, say, provide different types of elective surgery to people in the latter half of their lives - knee replacements, hip replacements, for example. You might say, well, if there is a limited budgetary envelope and we need to make a decision about whether providing that paediatric care is what we should be doing or providing hip replacements to a cohort of patients within our community who require that, accepting there's going to be one, you might need to make those decisions, and I'm just trying to explore with you whether there are ways in which you think we should at a systematic level be approaching those decisions through an economic lens.

PROFESSOR VINEY: So what I would say from an economic lens is that we do have ways - we don't necessarily always have the information everywhere, but we could assess that on the basis of quality-adjusted life years. I think it's really important to make sure that we are also still being distributionally fair. But we could assess all of these different potential programs or potential services on the basis of incremental cost per quality-adjusted life year and invest in those that are likely or predicted to provide the most qualities. And so that would mean that we would be able to think about what is the gain to the population of people who are having hip replacements versus the population of children who are getting early interventions for hearing problems. I'm not saying it's easy.

MR MUSTON: I don't think I have any further questions for these witnesses, Commissioner.

THE COMMISSIONER: Thank you. Mr Chiu, do you have any questions?

MR CHIU: I have no questions, thank you, Commissioner

THE COMMISSIONER: To both of you, thank you very much for your time. We're very grateful for the assistance you've given to the Inquiry. So thank you.

PROFESSOR BEDFORD: You're welcome.

THE COMMISSIONER: And we'll adjourn until 2 o'clock. Adjourn until then. Thank you.

PROFESSOR VINEY: Thank you.

PROFESSOR BEDFORD: Thank you.

<THE WITNESSES WITHDREW

LUNCHEON ADJOURNMENT

UPON RESUMPTION

THE COMMISSIONER: Yes.

MR MUSTON: Thank you, Commissioner. The next witness is Professor Stephen Duckett AM.

THE COMMISSIONER: Professor Duckett, can you hear me?

PROFESSOR DUCKETT: Yes, I can indeed, thank you, Commissioner.

<STEPHEN JOHN DUCKETT, sworn: [2.01 pm]

<EXAMINATION BY MR MUSTON:

MR MUSTON: Thank you, Professor Duckett, could you state your full name for the record, please?
A. Stephen John Duckett.

Q. And you are, amongst other things, currently the chair of the Health Performance Council in South Australia?

A. Yes.

Q. Perhaps it would be more efficient if I let you rattle through the other roles that you have.
A. Thank you. I chair the board of the Eastern Melbourne Primary Health Network. I'm a member of the board of Healthdirect Australia, which provides community health services across Australia and advice services. I'm Deputy Chancellor of RMIT University, and I'm on a number of Commonwealth advisory committees.

Q. You had some involvement in the establishment of the ABF or the ABF as a way of capturing the cost of delivering acute health care in New South Wales?
A. Indeed. In Victoria I was the person who designed and implemented activity based funding in 1993, the first such implementation in Australia and in the world, really, other than the United States. And I was also a member of the National Health and Hospital Reform Commission, which recommended the introduction of activity based funding nationally. And I was a consultant to the Independent Hospital Pricing Authority on the design of the national activity based funding framework.

Q. Could you tell us what you perceive to be the benefits that ABF funding has to offer in terms of a model for the funding of at least acute care within the public health system?
A. Yes. It's been implemented in a number of countries now and the general objective - there are a number of general objectives associated with its introduction. First of all is to drive efficiency improvements; that is, the whole point of activity based funding is you pay a hospital for what it does. In Australia we call it the national efficient price; that is, hospitals that cost more to provide an appendicectomy, for example, don't get paid more for providing that appendicectomy. It also is equitable in the sense that all hospitals get paid the same and it's also fair in the sense that everybody knows what everybody else is getting and why they're getting it.

Q. In terms of driving efficiency we've heard the distinction drawn between technical and allocative efficiency in the evidence that's been received and submissions made. Could you perhaps just explore with us the type of efficiency that you had in mind when you were referring to the ABF model driving efficiency?

A. Yes. So when I was using that term I was specifically thinking of technical efficiency. Technical efficiency is the way you describe cost per unit of output - that is, cost per patient treated - and you try and drive efficiency in that sense. If you don't have technical efficiency you can't have the other sort of efficiency, namely allocative efficiency, which is where you get the same amount of outcome for the cost. Of course allocative efficiency is very difficult to achieve because it's also - it's very difficult to achieve - to measure outcomes.

Generally in the implementation of activity based funding you move towards allocative efficiency by capping your spending; that is, you might say to a hospital, "We're only going to fund you up to this number of admissions," and it's up to the hospital to rank admissions to the hospital so that the most needy get admitted.

Q. To some extent is there a relationship between the two in the sense that a system which is technically efficient is able to make better use of the budget that's been allocated to it and, by doing things that need to be done efficiently, it leaves you headroom to do other things that might able to be done which are of benefit to the patient cohort?
A. Yes, I agree with that characterisation.

Q. We have heard some evidence in our travels about the extent to which - at least it's suggested by those who operate some different types of services, for example rural and regional services and highly specialist services like paediatric networks and the like - that the ABF model at least as currently formulated is not, to their minds, capturing the actual cost of delivering the care that they are delivering in the settings that they are having to deliver it in. Do you have a view in relation to that? Let's start with rural and regional settings?
A. If I start with rural.

Q. Yes.
A. If we start with small rural, very small hospitals, the cost is essentially driven by keeping the doors open; that is, you have to have a minimum number of staff whether you treat one patient or a million. So in the national funding arrangements in the National Health Reform Agreement there is a recognition that those very small hospitals have to be so called block funded; that is,

funded on a keeping the doors open basis with a minimum amount of activity based funding associated with it. And the same --

Q. Pausing you there, because at a relatively small hospital you'll have an array of fixed costs like electricity, a necessary staffing level to operate a hospital of that size, whatever activity it might generate, and such other fixed costs as might attach to the operation of a facility. No amount of activity that goes through it is ever going to be enough to reach those fixed costs and so there's an acceptance, is there, that a block of funding needs to be provided - to use your terms - to keep the doors open and the lights on, but then there is still some amount of activity based funding to incentivise technical efficiency to the extent care is being delivered?
A. Yes, yes. So, you know, you have to have - in a very small hospital you have to have two staff on at night for occupational health and safety reasons and to provide good care to the patients. So, you know, if you don't have enough activity based funding to employ two staff you're in deep trouble. There's a small amount of activity payments to recognise that, if you admit an extra patient, you have to change the sheets for example and so on. So there is a small activity based funding component associated with those very small hospitals as well.

Q. So that's at the very small hospital end of the spectrum. At the very large hospital end of the spectrum where you've got very high turnover, a lot of activity being generated, how does the activity based funding system work in the context of that setting?
A. So in the very large hospitals that's the ideal setting for activity based funding because activity based funding is based on averages, and the formula would say, "Look, the average cost of treating a person for an appendicectomy or a hip replacement or whatever is X." But some patients are going to cost more and some patients are going to cost less.

And so you need a certain volume to cope with the so-called swings and roundabouts that you're going to get paid too much for some patients and too much for other patients, but on average you're paid the right amount of money, and you have the incentives associated with that average. So it's the ideal situation in those very large hospitals.

Q. Is it potentially also an ideal situation in a large hospital because I think we've been told in some evidence given today that within a large hospital setting where you've got a large number of procedures being performed those procedures can often be performed more efficiently than in a slightly smaller setting?
A. Yes, there is a fair amount of literature which says that "practice makes perfect"; that is, the more you do a particular procedure, the better your quality. And, similarly, if you do a lot of cataract operations, for example, lens procedure operations, you can actually structure your services to do it efficiently so that all the staff, not just the surgeons but the nurses and everybody else around the patient, knows what they're doing and does it efficiently.

Q. So in between those two extremes - the very large hospital and the very small hospital - we've got a range of hospitals which vary in size, some of them in metropolitan areas, some in regional areas and some in quite remote areas. Perhaps if we start - I think I interrupted you a bit earlier. If we start with the rural hospitals. It's suggested to us that the cost of delivering care through rural hospitals tends to be higher for a range of reasons, including greater reliance on premium labour, for example, increased costs of having things delivered to them in rural settings, and a range of other factors which have been identified as increasing, the general proposition, the cost of delivering health care in that setting.
A. Yes.

Q. How does ABF account for that, if at all?
A. So the principle underlying ABF is that - and the principle underlying a formula funding of hospitals is that hospitals should be held to account to provide service efficiently for things for which they are responsible. And the idea behind that - it's an idea about accountability and so on.

But the issue of workforce is an interesting one. New South Wales has a system of awards and, typically, if the enterprise bargaining award changes, the state government actually effectively changes the price. It's not precisely what it does, but it's effectively what it does. And that assumes that everybody is facing the award price for what they do.

Now, in some cases the hospital is mismanaging its staff and they have huge staff turnover and people don't want to work there because of management failings, and in which case it doesn't seem fair to me that the hospital should get paid extra just because it's badly managed. In other cases the state government has failed to provide sufficient workforce in a particular location, has not done good workforce planning - the state or the federal government - and in those circumstances you might say, "Well, you know, if there is a hospital where they're paying huge amounts for locum staff, then maybe the activity based funding should be adjusted for that just as it is adjusted if there is an award increase."

Q. When you referred a moment ago to the management issues, that could capture a range of different failings. At one level a management problem might be active management decisions which have created a negative workplace environment, but at another level a workplace which is under increasing or continued financial strain will potentially become a workplace which is not necessarily a happy place which can tend to contribute to these turnover issues.

A. Yes, I'd agree with that. Staff dissatisfaction could be associated with poor management locally. But, on the other hand, if everybody is working too hard, that is there is not enough money to provide the services of a standard that they would like - that the staff would like to see it provided, that then is not really the responsibility of management. Health staff, be they professional or not professional, want to come to work to do what is right for the patients and, if they feel that they have to cut corners, that creates stress situations and dissatisfaction; yes.

Q. Can I explore this with you. Is there a sense to which perhaps the perceived need to be everything to everyone within a health system such that if someone turns up at their local hospital, they have a particular problem, they expect for it to be treated, it drives us to deliver or attempt to deliver within a budgetary envelope the services that are required to meet all of those various needs perhaps in circumstances where there is not sufficient money to deliver all of them adequately or at all, which results in all of the services being delivered in that hospital being done so under a significant degree

of pressure both financially and workforce driven?
A. So we know that not every hospital in Australia can provide heart transplants. So we know that some services are not going to be able to be provided safely in every hospital across New South Wales. And, in my view, we should not attempt to do so; that is, we should attempt to work out what is the right mix of services in this location and say that, "What our job is in this location is that if something goes wrong in an emergency we have the capacity in this location to stabilise the patient and get them to the right service as safely and efficiently and as quickly as possible." And similarly for planned procedures; that is, we know that not every hospital in New South Wales can do every sort of planned procedure.

So a critical part of management at both the local or area level, district level, and at the state level is working out what should be the role of every hospital in the state. And I would agree with the view that when there is a disjunction between the capacity of the hospital and the funding of the hospital and what is it expected to do that then in itself creates stress.

And it is unclear to me whether the responsibility for that alignment is entirely the State Government's responsibility, the Department of Health, or entirely the district's responsibility, or some mix of the two. And I think obviously where I'm going it's some mix of the two. The district should have views on what each of the hospitals within the district can do safely and for which there is adequate funding. And it should be ensuring that the ministry in Sydney knows about those issues and challenges. And I think it's inappropriate for a district or a small hospital to be asked to do things for which it has neither the funding nor the capacity.

Q. And in terms of that global oversight by the ministry decisions, say, to withdraw or disinvest in a service which can't be provided effectively - even if safely but can't be provided efficiently and effectively within the budgetary envelope, it's important that the LHD discusses that presumably with the ministry to ensure that people living within the catchment of that LHD do have the service available to them somewhere which is sufficiently proximate to be acceptable from a social and political level and, if not, can make an application for further funding in order to enable them to deliver that service locally?

A. Yes. So it is incumbent on the district to actually engage with its local community to talk about what the constraints are, and also to engage with the ministry to talk about what the constraints are. And the reality is the amount of money available that is allocated to the health system is capped. And so we need to engage with the community to say, "In this environment we can't do everything for everybody. And we have to accept that the best thing to do is that orthopaedic services are centralised within the district at this hospital, and this local hospital is just not going to be able to do significant joint replacements, for example."

Q. A discussion that we don't seem to have, and if you think it's happening or if you have experience of it happening either here or elsewhere please tell us about it --
A. We're often too scared to do it because they don't trust the local communities. But there's been a lot of work done on so-called community citizen juries and so on which, when you come clean with the public and say, "These are the choices we've got," they seem to understand that.

Q. It would seem logical that it's easier to comprehend why something is not being provided if you understand what is being provided instead; that is to say, "Here's the resources we have. Here's the needs of the community. We've prioritised them in a way which means we think these services are the ones we should provide and provide really well. We can't provide those ones because to add them to the mix would result in compromising the extent to which we're delivering on the other ones, and in fact probably all of them. That's why we've made this decision." That's an understandable proposition, even if unacceptable to the individual who doesn't have access to that particular services at the location they want it.

But are you aware of any jurisdiction which is doing better than we are in terms of having that more transparent discussion about, "Here's the limited resources we've got and here's why we're making decisions about how to deploy them in a way which is good for some people but bad for others"?
A. The problem in discovering these is that the best ones take place very quietly; that is, they don't hit the newspaper, so you don't see the successful ones. But what's happening in Victoria in some smaller towns is that

mergers have occurred recently and the public is being engaged to say, "Look, you know, we're going to provide these additional services here because we now can," or, "We're not going to provide these services here because we can't provide it safely." So, as I said, they're not getting much public attention because the community - they're not hitting the newspapers.

Q. For example, a discussion with a community around the possibility of replacing an expensive and perhaps what might objectively be viewed as a clinically unnecessary emergency department in a small rural hospital with a co-located primary care service, if delivered to the community in a way which enables them to understand what their perceived needs are from the LHD's perspective the way in which those needs are going to be met and the advantages of doing what's proposed might be received better than a, "We're going to close your emergency department," and the front page of the local rag that that would no doubt generate?
A. Yes, exactly. And there's the recognition that attracting and retaining medical staff in some of these small hospitals and nurse practitioners is very hard. And so you've got to actually use their skills wisely and say, "Look, we know that one of the issues of concern to you is that if something goes wrong then you can get care quickly and safely. But that might mean you only get stabilised at this location; you don't get definitive treatment."

Q. Just coming back to ABF funding, there are the small hospitals which are block funded; we understand. There are then a cohort of hospitals which either across the entirety of their operations or with respect to particular services that they feel compelled to deliver they have the perception that the ABF funding model is not adequately capturing the cost of delivering those services. What's your response to that?

I'll give you an example perhaps to engage with. Cooma Hospital tells us that they have to provide a 24/7 obstetric service to deliver something in the order of 107-ish babies a year which, if you multiply the relevant state efficient - NWAU and state efficient price by 107 it doesn't really come close to the hard costs of operating that 24-hour service for the moment when a mother walks in having need for obstetric services.
A. So it would be highly unusual if every service line -

say maternity services, orthopaedic services, neurology services or whatever - each of them runs at a surplus in any hospital; even the biggest hospital that would be highly unusual. So there is inevitably going to be a need for cross-subsidisation between those service lines. And in my view that should be an overt - it should be an accepted thing, that's part of what boards of directors do or management does, and it should be overt; that is, "We believe it's important to provide ophthalmic services and we're going to provide that at a loss because we provide trauma services" or whatever and there is an interaction, and so one service is going to cross-subsidise another. So that's what in my view ought to happen.

But the problem is if you're in a tiny hospital, in a smallish hospital like Cooma, you may not be able to cross-subsidise; that is, you may not have enough money surplus in those other services that your obstetric service can be cross-subsidised from the surplus you make on geriatric services or on other services. Now, then that becomes a much more difficult situation because you can't have hospitals putting their hand up and saying, "We've got this one line that we're making a loss on, so we want to be funded fully for that one and we're not going to tell you about all these other ones."

But I think you shouldn't expect that the only thing you have to do in managing a health system is once a year make a pricing decision and not do any active management of anything else in the meantime, the next 364 days. So what you should be saying is looking at a situation like Cooma, looking at the whole hospital and say, "Does it" - or the whole district maybe, but looking at the whole hospital and say, "Does it have the capacity to cross-subsidise?" And if it does not then you've got to say, "Do we want to provide obstetric services here or not?" And that's political state or district decisions. But, once you've decided to provide it, it has to be funded properly.

Q. Which is not necessarily the decision as between the Commonwealth and the state, I gather, but is a decision as between the state, its local health district, and perhaps the local health district and the facility?
A. Yes, the Commonwealth-state relationship is pretty clear. The National Health Reform Agreement says that the state is the system manager, and there's no-one in the Commonwealth who says, "You've got to provide obstetric

services in Cooma."

Q. Just so I can understand the way that arrangement works, obviously it's a national average price which is arrived at which presumably means, just taking into account your - there are some services and some locations that produce surpluses and some that produce losses, but if it is in fact a true average it all evens out to that figure. Does that essentially mean that the funding delivered from the Commonwealth to the state with respect to all of those services, including, say, the paediatric service - the orthopaedic service offered at Cooma is in fact adding up to the actual cost or broad cost of delivering those services, even in a high cost centre like Cooma?
A. So New South Wales is a big state and so on average across New South Wales you would expect it to be able - the average cost of providing maternity services across New South Wales to be pretty close to the national cost of providing maternity services, for example, across the whole country because it's big enough that all the swings and roundabouts can even out.

Q. In working out that average, though, let's say that because the hard cost of keeping a maternity service open 24/7 at Cooma are what they are whether you have 107 babies or 1,070 babies, is that average price which is arrived at as part of the process, albeit slightly delayed by a couple of years, does that take into account the fact that at Cooma the cost of a delivery is total cost of running a 24/7 service divided by 107? I think that's very rough and ready, I appreciate, but you get the gist.
A. The actual answer is the number of babies delivered at Cooma is a rounding error in the number of babies delivered within New South Wales. So on average, you know, when you add up all the other maternity services in Sydney they provide 80 per cent, 90 per cent, I don't know, whatever per cent of the babies across the state, 75 per cent of the babies across the state by the time you add Wollongong and Newcastle, but the big hospitals drive the costs and the small hospitals, as I said, yes, on average it's going to be more expensive to provide maternity services at Cooma than it is at Westmead or Prince Alfred or wherever, but on average across the state it ought to balance out.

Q. Assuming that a decision were made that it was needed to deliver obstetric services at Cooma for reasons

associated with population, geography and the like, climate, but that the ABF or the activity generated through that was not going to be sufficient to meet the cost of running that 24/7 service, presumably it wouldn't do violence to the ABF's system or its capacity to drive efficiency to block fund that service or to provide some supplementary funding to Cooma Hospital or Southern Local Health District to enable that service to be delivered in a cost-effective way?
A. Yes, the - or rather phrase it no. The block funding principles at the moment only apply to a whole site; that is, a whole hospital such as Cooma. They tend not to apply - they don't apply to a specific service within a hospital. I think there's a very strong case that if you make a decision to provide, for whatever reason, maternity services in Cooma then someone has to take responsibility for ensuring they're viable; that is, you can't just say to the district, "You're required to provide maternity services in Cooma and you have to find the money somewhere else," because they may be too small to find the money somewhere else.

Q. Or put another way, "You have to provide maternity services in Cooma and here's 107 babies' worth of activity that we're going to purchase from you for the purpose of delivering that service"?
A. "We will fund 107 babies - maternity service to provide for that level of service." But as I said about the very, very small hospitals you've got to have midwives available 24/7 if you're going to have a maternity service, and you've got to have on-call anaesthetists or GP anaesthetists to provide caesareans, and on-call GP obstetricians or obstetricians. So if you're going to provide the service you've got to make a commitment to provide it safely and to fund it accordingly.

Q. When you say there's got to be a commitment to do it, just for clarity, that's a commitment by the state or the ministry?
A. Well, if I were in the ministry I would say, "The district has to do it." But then you've got to make sure that the district has the capacity to do it. You can't just pass all the responsibilities down to the district and assume that they've got sufficient surplus, because Cooma might not be the only problem, it might have the exact same problem in Queanbeyan or wherever.

Q. And it would presumably depend very much on the particular service we're talking about. There will be some which might be politically necessary. There are others that might be clinically necessary. And where something is clinically necessary it's very hard to say, "Well, it's up to you, district, to decide whether or not you want to provide this, but we're not going to give you adequate funding to do it."
A. Yes. And in my view the ministry almost inevitably has to be involved, partly because of the political issues, partly because they're the ones that have to find the money if the district can't find it, and partly also the district may not have the skills. I mean, working out whether you need a maternity service is not just a simple issue. And so you've got to actually have support and understand - so you've got to marry the local knowledge and understanding as well as the technical support that you'd require from ministry to make those sorts of decisions. And the ministry should have information that enables it to compare and contrast Cooma with some other hospital of similar size and similar demand.

Q. The ministry has that technical skill and ability to compare and contrast, but the ministry also presumably has a helicopter view of the wider system and an ability to say, "You might think you need to offer that particular service in Cooma. But we know what's being offered in an adjacent LHD, and we think actually when you two work together there's a far more effective way of delivering a service through the adjacent LHD rather than through yours."
A. Yes, they can make an informed decision about the risk of babies being born on the road to Canberra, for example, versus providing the service and make a service choice. But, as I said, if they make the service choice to provide they have to make sure it's viable.

Q. What about at the other end of the spectrum the potentially larger facility that delivers small turnover but high complexity care? We have heard paediatric services or we're told paediatric services are potentially not well captured by ABF funding because of the added complexity associated with dealing with paediatric patients, the sort of care and treatments they're given coupled with the need to liaise not only with patients but families; similarly high complexity procedures like heart transplants and things like that?

A. I'm not sure what the New South Wales funding formula is, but in the national funding formula there is a loading for paediatric services, specialist paediatric services, in the formula. You've got to be - yes. And that came about partly because every state has exactly the same issue. It's not that in one state for whatever historic reasons the children's services, paediatric services, are more expensive. It turns out that in every state they're more expensive. So the formulae leads to - gives a loading for that.

Q. And arriving at that loading, is that - just trying to understand how that works in the context of the system. Is that loading used by the Commonwealth and presumably thereafter the state just to set some parameters around the distribution of the money that's paid or is it --
A. No, the distribution of the money is entirely a state responsibility once it arrives in the state coffers. The national efficient price is based on essentially averages across the country. If it turns out that admitting a First Nations patient costs more, or admitting a patient who lives remotely from the hospital costs more, or admitting a patient to a paediatric unit costs more than the other patient, than an adult patient or a non-First Nations patient, then there is a loading. And there is a loading in the national efficient price. So the price for cancer treatment, paediatric cancer treatment, is higher than the price for an adult cancer treatment because on average that is what's happening across the whole country.

Q. I'm just trying to understand that, though. If the ordinary approach is you work out what the average cost of delivering, say, this hypothetical cancer treatment to the population is that will give you the average cost, which at the upper end of the scale will be the paediatric patients, at the lower end of the scale will be the adult patients, and somewhere in the middle lies the average. At one level why does the Commonwealth need to apply the weightings where, in essence, it's for the state to decide how it wants to distribute that average across the high cost and the low cost centres?
A. That is true. But the whole point is that if different patients are systematically more expensive than other patients and there's enough of them then that should be recognised. And it's the same as appendicectomies, for example. There are two appendicectomy diagnosis related groups because some patients with severe complications are

more expensive than others in a systematic way with is not the result of inefficiency. So the same is true of First Nations patients. The same is true of paediatric patients, specialist paediatric patients.

Q. I understand. So you have your average price which is identified. A weighting is then added to work out roughly what the average price would be, if it were a First Nations patient or a paediatric patient, for example. And then year on year you're not going to be potentially suffering a detriment if you happen to have a year where you treat more First Nations or paediatric patients than expected or a benefit if you treat less, because the idea is through this average it provides a funding stream which reflects the actual care which was delivered to the patient cohort which presented?
A. The whole point is it's a fair payment relative to the needs.

Q. Just building on that a little bit, though, and perhaps touching on something we were addressing with our little Cooma example, there's nothing which compels the state to distribute the money received through the activity based funding formula from the Commonwealth in a way which reflects perfectly the activity which it's gathered and the locations from which that activity is being gathered, is there? It can distribute the money in a way which potentially better reflects the cost of delivering the services in different locations? It can provide more money to an expensive cost centre and less money to a more efficient cost centre?
A. There are two issues here. First of all, in the National Health Reform Agreement the state is described as the system manager; that is, it is the system manager for public hospitals. It is accountable for public hospitals. It decides where maternity services are going to be. It decides whether a small hospital is going to exist or not exist. And that is a state responsibility.

So it can decide whether it is not going to apply a single brain cell between what the national efficient price says and what goes out the door or it can decide, "We will apply a single additional brain cell and we're going to change it in these ways because we've got a value added role here, and what might be sensible nationally isn't sensible in far western New South Wales," for example.

Q. Can I move to another topic. You've provided to us a document that is headed, "Report on Commonwealth-State Financial Arrangements in Healthcare"?
A. Yes.

MR MUSTON: I don't think it has a date on it, Commissioner, but that document is exhibit M20.

THE COMMISSIONER: Yes, I have it.

MR MUSTON: Have you had an opportunity to review that document recently?
A. Yes, I have. Yes, I've got it in front of me, as a matter of fact.

Q. Presumably, unless you tell us otherwise, are we safe to proceed on the basis that it still reflects views that you hold?
A. Yes, it does.

Q. I note that it does draw on some data principally from the year 21/22. But is it the case --
A. 2021, yes.

Q. 2021. I take it that the more recent data has not - would not cause you to draw different conclusions that you've addressed in that document?
A. Yes, the most recent data is one year later, 21/22, and there's no significant - no material difference in the data from 21/22 and so my conclusions are the same.

Q. I might ask you to explain exactly how it works but, as I understand the conclusions you draw, effectively - and whilst not dollar for dollar - the proposition that by increasing the amount of activity based funding that you can gather from the Commonwealth under the National Health Reform Agreement does not necessarily result in an equivalent increase in the total funding available to the state which can be allocated to health, but rather adjustments are made through the Grants Commission the effect of which is to reduce other sources of funding such that the state's funding remains roughly the same; have I broadly captured that?
A. So you've nicely summarised in one or two minutes what I took 13 pages to summarise - to describe. But, yes, essentially there are two funding streams we need to think about: the National Health Reform Agreement, which has

these highly specific formulae and so on, and you can actually see the funding flow and there are agencies which tell you the funding flow down to the nearest dollar. But, although important I think for symbolic reasons, the National Health Reform Agreement, its main role in terms of total funding is it determines the total flow of money from the Commonwealth to the states collectively.

More importantly, New South Wales funding is determined by what the Grants Commission assesses as New South Wales' needs; that is, the state government is essentially obligated to provide a similar level of services to other states or vice-versa. South Australia is obligated to provide a similar level of services as New South Wales. And different states have different capacity to pay for that, and different states have different costs associated with providing that similar level of services. And that's the job of the Grants Commission, and has been for almost 100 years.

And its job is to say, "What are the costs of providing a similar level of services in the other states to New South Wales, for example, and what are the revenue that New South Wales gets that - or Queensland gets that New South Wales can't get?" And it allocates the GST money on that basis and takes into account in doing so the amount of money the National Health Reform Agreement provides New South Wales. And so the GST that New South Wales gets is big or smaller if New South Wales gets bigger or smaller amounts of National Health Reform Agreement funding. So if you increase the number of patients in New South Wales by 1,000 that will not essentially change the amount of money New South Wales gets in the long-term because of the GST equalisation effects.

Q. Can I just explore another way of potentially putting that. If New South Wales could persuade IHACPA to agree that a range of community based services which didn't fit neatly into the ABF structure because they weren't acute care of the type that ABF was probably invented to deal with, nevertheless were to be counted as activity for the purposes of the formula, that would not necessarily - I gather from what you've just told us - result in New South Wales on the whole getting more money from the Commonwealth; it would just potentially result in more money which is quarantined for health?
A. Yes, the one caveat I'd make to that is, because New

South Wales is a big state, if New South Wales was able to persuade the Commonwealth to do that you might be able to notice it in the national figures, that is if you increase activity significantly in a state which is a third of the stuff that gets put into the pool - you know, a third of the population, a third of the activity - it might flow through to New South Wales. It wouldn't flow through directly, but it will wash through the Grants Commission. But you might be able to measure it.

Q. In what way might you be able to measure it? So New South Wales has persuaded IHACPA to include a new community based form of care - sorry, persuaded IHACPA that a new community based form of care should be counted as activity for the purposes of the formula. New South Wales is big. It's doing that a lot. That increases New South Wales' activity. And the cost of doing that activity in the community is being captured and passed on to IHACPA. Where do we go from there?

A. So, okay, let's assume that this new community services activity counts as 1,000 NWAU, for example, and New South Wales does not hit the cap that's in the National Health Reform Agreement of 16.5 per cent growth. But let's assume that there's 1,000 extra NWAU produced in New South Wales. If you simply looked at the National Health Reform Agreement you would say that New South Wales would get 45 per cent times the NWAU times 1,000.

However, that's not how it works. You have to look at how the Grants Commission would manage all that. And the Grants Commission says New South Wales has to provide - sorry, the total pot that flows out of Canberra to the states collectively would increase slightly because of that 1,000 extra NWAU. And so the total pot that flows to all the states is going to be slightly bigger because of those 1,000 NWAU. How that money gets distributed is entirely up to the Grants Commission. And New South Wales will not get 1,000 NWAUs worth of extra because it will be spread across all the states. So New South Wales might get a third times a half, 45 per cent, you know, it might get extra, but it's not going to be 1,000.

Q. So is the point because of the complexity of the broader arrangements, let's say it was $10 worth of NWAU just to keep the numbers very easy that was being added. The Grants Commission might look at that and in the context of all of the considerations that apply to New South Wales

it might actually say, "Well, you've got $10 worth of additional NWAU coming in through the reform agreement. That's a form of own source revenue that we take into account as part of our calculation, which means we can reduce the GST moneys by an amount." It might not be $10, though, it might be $8; or, alternatively, it might be $10; whereas in, say, the Northern Territory the same $10 worth of NWAU might actually only result in a GST reduction of $2, it just depends on the way the Grants Commission deals with it?
A. Yes, exactly, and the fact that the pot is slightly bigger than it used to be; yes.

Q. But the broad effect of it is it's definitely not an additional $10 worth of NWAU that can be added to the New South Wales budget --
A. No.

Q. -- because there will be some reduction through the GST side of the equation?
A. Yes.

Q. However, insofar as the way New South Wales deals with that budget, it is an additional $10 worth of NWAU which is effectively quarantined for health. So it would be difficult for New South Wales to take that $10 worth of NWAU generated through this new community service and use it to build a road or fund a school?
A. I don't know how New South Wales Treasury allocates money to New South Wales Health, but in the ordinary course of events if the National Health Reform Agreement funding goes up the public would expect the health funding to go up.

MR MUSTON: I don't have any other questions for this witness, Commissioner, unless you had anything you wanted to address.

THE COMMISSIONER: I do. Can I ask you something, Professor, that feel free to tell me it's either a nonsensical question or I'm missing something entirely, but --
A. As long as you promise you won't send me to gaol if I say --

THE COMMISSIONER: It's something that's been troubling me. Part of the context is I was listening to two

economists talk on a podcast last night, which is what I do for fun now, and amongst the things they said - they were, first of all, extremely critical about the Bank of England and its modelling and failing to see the GFC, and then raising interest rates too late and not reducing them early enough et cetera, et cetera. And then they were critical of the incoming Labour government in the UK for being timid in relation to infrastructure spending. And the just of what they've said was there's too much consideration given about how much money government spends and not enough on what it actually spends the money on, and too often they don't do a rate of return analysis.

And I was thinking, well, you know, if it was a property developer and they were going to buy land, they'd never buy land in order to develop it without doing a lot of calculations, including ultimately leading through an internal rate of return and risk factors et cetera in terms of considering what would the profit likely be from buying the land.

The reason I'm raising that is we've got - most of the money that New South Wales spends goes on acute services. So we have to provide those. So a child goes into emergency with a broken arm, it's going to be seen in a timely fashion by skilled clinicians and we're always going to fund those services. It could be any trauma or any acute illness that the child has to go into hospital for.

But we're then told for other services we're in these constrained financial circumstances and there's a limit to what we can do. I accept that New South Wales government has to fund - as I do - has to fund education, roads, police, et cetera. It's got limited revenue raising capacity as compared to the Commonwealth et cetera. So there is a limited budget. And I apologise for the length of this question.

But we're told as an example that certain paediatric services that involve early interventions in children, the clinicians are saying got really long wait lists and the kids are waiting longer than is clinically appropriate for intervention that might cause or might contribute to a lifetime of change. It might make the difference between the child becoming an economically active taxpayer and not a burden on the health system as distinct from a child that

ends up in the criminal justice system as an adult.

Is there a means in which if it was thought to be appropriate or ought to at least consider funding that kind of service so that every child is seen in a clinically appropriate time, there could be - and I guess it would be complex, but economic modelling done such that you could at least have an analysis of for this level of investment in a certain period of time, whether it's 20 years or 30 years, the modelling would at least show there will be this level of secondary benefits, whether it's productivity, taxpayers et cetera; in other words, an investment of $5 will have a return of $15, or maybe it will only be $3 and so we've got to think about it carefully? Does that happen in health?
A. So I don't know who the economists on the podcasts were but I think there's probably not an economist who wouldn't agree with them; that is, that you've got to think about the benefits of any public spending as well as the amount of any public spending.

That said, I don't think cost-benefit analysis or cost-effective analysis should be the sole criterion for allocating --

THE COMMISSIONER: No. There are social benefits of providing health services as well that are beyond economics; yes.
A. Yes. And there are also status hierarchies in the health system, and some services are generally underfunded because the people who get them are lower status. So mental health services are very often underfunded because the public doesn't value them as much as an emergency department.

THE COMMISSIONER: So is that throwing a form of politics into the equation?
A. Yes, yes. Yes, exactly. So in an ideal world the New South Wales government would say, "We can do a business case here" - well, not in an ideal world. But one of the things the New South Wales government could say is, look, let's do a business case here, and let us say that if we invested in removing this waiting list then there would be a return in five years or 10 years time, and it is possible we - using pretty standard economic techniques to convert an internal rate of return, as I think you mentioned.

In fact, New Zealand tried to do that in the health

and welfare sector, just saying, look, if we did early intervention with some of these kids, they wouldn't go into, you know, care and homes and all those sorts of things, they'd be actually able to get productive jobs 10 years down the track, and so on. And so it is being done, and I think it is appropriate to do, that is you know, if you have a long cataract waiting list, the people on the cataract waiting list might end up breaking their leg because they tripped, and so it's those sorts of things you've got to think through that when you're making allocation decisions you've got to think through what the consequence of those allocation decisions, and it might be there's a good business case to spend money in this place because of the return, and the return might be outside the health sector.

THE COMMISSIONER: Yes.
A. As well as a return inside the health sector.

THE COMMISSIONER: Yes. Before I ask Mr Chiu whether he's got any questions, we're extremely grateful for the time you've given us and the assistance you've given the Inquiry. Could I ask you, though, in relation to the topic we've discussed, if anything - any study comes to mind - you've mentioned the New Zealand one - I mean, of course, I've seen studies like, you know, if we use more virtual hospital services it will save X number of bed days and that will save a certain amount of money, et cetera, et cetera. But in terms of what we were discussing, if there's any studies that come to mind, if you could shoot an email to the Inquiry I'd be very grateful.
A. Yes, I am in Abu Dhabi at the moment.

THE COMMISSIONER: I understand.
A. I'll do that when I get back.

THE COMMISSIONER: Within the bounds of reasonableness that request is made. Mr Chiu, do you have any questions?

MR CHIU: Just one issue.

THE COMMISSIONER: Yes, go ahead.

MR CHIU: Thank you, Commissioner.

<EXAMINATION BY MR CHIU: [2.58 pm]

MR CHIU: Professor, one of the points --

THE COMMISSIONER: Sorry, this is Mr Chiu, who's representing - he's the senior counsel now representing New South Wales Health.

MR CHIU: Thank you, Commissioner. Professor Duckett, one of the points you made earlier, and this is at 6476 of the transcript, was that it is hard to achieve allocative efficiency because outcomes are hard to measure, and I think one of the things that you discussed with the Commissioner just now is some of the different ways in which you can try to measure outcomes. Could you just talk through why are outcomes difficult to measure in health?
A. So thank you. I think for a number of reasons. First of all, we have - different groups within the health sector have different perspectives on what is important to measure, and so clinicians, for example, might say what is important to measure is the clinical outcome that the patient achieves; that is, I have a hip replacement and that operation goes really well. From a patient's perspective, they might say, "The reason I fronted up to hospital was because I had pain in my hip and what I wanted resolved was the pain. I didn't ask for a hip replacement," and the clinician decided that a hip replacement was the way of reducing the pain. So you have a clinical perspective or a patient perspective, and they might be different.

Secondly, let's assume we're going to entirely go from a patient's perspective. Then you have to have a standardised way of measuring what are called the patient's preferred outcomes, and it's called in the jargon patient-reported outcome measures, so called PROMs. Now, the problem with patient-reported outcome measures is we don't do it very often and if you're going to measure outcomes you've got to measure what the level of pain is before the operation and what the level of pain is after the operation, and so you can compare the improvement that was achieved, and we tend not to do that.

So, because we don't have really very much measurement of outcomes at all, trying to move to allocative efficiency to compare the outcomes of an orthopaedic operation and the outcomes of a dental treatment is really, really very hard, because you've got to be able to measure in a way which is commensurate, that is in a way which adjusts the dental for

the orthopaedic, for example.

Q. Is there also a way of measuring outcomes beyond an individual patient, i.e. you look at it from a population or a society and you measure outcome as overall are you achieving a healthy population? That may have tension as against individual patient outcomes, wouldn't it?
A. Yes, yes, yes. So the problem is the more you move away from the aggregation of individual outcomes to broader outcomes such as life expectancy, for example, the more there are other factors other than the health system that impact on life expectancy. So, if you're trying to attribute an improvement in life expectancy or an improvement in self-rated quality of life to the health sector, there are all these other intervening variables that affect it, for example living conditions or employment or whatever.

So in international comparisons we very, very often use life expectancy, and in fact I've used that myself. But whenever I do it I have to put in that caveat that it may be the best we've got but there are all these other things that impact it.

Q. Are there any systems that have either adopted or even considered funding by reference not to activity but to outcomes or a version of outcomes?
A. There's an enormous amount of talk about that, and I don't - I'm not aware of any systematic implementation across a whole health system; that is, it is possible to think about doing it for a part of the health system, say orthopaedic services, but to do it across the whole health system I have not seen anybody do it. As I said, that's not to say there's not a lot of talk about it. But just to give you some examples of the complexity of this, if I stick with orthopaedics, if I have two orthopaedic services, one which has a great outcome, better than the national average, for example, and one which has a worse outcome, do you give the hospital with the best outcomes more money or less money? And then the one with the best outcomes might be the most expensive already versus the one with the worst outcome might be the cheapest. And in fact in some of my presentations I actually have a graph of exactly that kind, because in the United Kingdom they measure outcomes for joint replacements and you can plot them on whether the hospital is more or less expensive relative to the national average and whether it's got

better or worse outcomes relative to the national average, and the hospitals are all over the place. But no-one has done anything with that information because it's too complex, really.

Q. Right.
A. There's no reason why we couldn't do the same in New South Wales, except we don't have the outcome measures for that yet.

Q. Suppose you develop the outcome measures and the infrastructure to measure those things, and you could foreseeably see a - develop a system where - at least for something like chronic disease, managing chronic disease in the population against quality-adjusted life years of that population, it's possible, isn't it, to develop a system where you fund certain types of activity that are directed to that outside of the acute space?
A. So I think if you're asking whether it's possible to write a business case which says, "If we invest in this, then we would get exactly the same increase or more - a better increase in quality-adjusted life years than if we invested in additional orthopaedic services," for example --

Q. Yes.
A. -- yes, of course you could do that. But don't forget New South Wales tried this approach with its area-based funding for decades and didn't ever do it.

Q. Can you just explain that last comment a little bit more? You say New South Wales tried that approach?
A. Yes. So I live in Victoria but I grew up in New South Wales. So it's very interesting to compare the evolution of the health systems in both states. Victoria has never adopted an area based model of funding, or its service delivery for that matter, and New South Wales did and for a very long time it had a resource allocation formula to allocate funding to the areas on the assumption that, with an area based funding formula, the area would have an incentive to do exactly what we've just been talking about, to do exactly that business case to compare investing in X versus investing in Y. None of them ever did it. And so this lasted for 20, 30 years, from I think the mid-70s potentially through to 2010 or 15, whenever it was. And it is very, very complex. That's why it didn't happen. It's nice in theory, very strongly supported in theory, but

doing it in practice is pretty hard.

MR CHIU: Commissioner, I have no further questions.

THE COMMISSIONER: Can I ask just one more and, I apologise, it's an impossibly broad question, but you're here so I'm going to ask it anyway. I know your extensive knowledge and how much you've written about the introduction of Medibank/Medicare. We have in our travels around regional New South Wales and to certain very remote towns fairly consistently been told a combination of either, "Our GPs have disappeared," or, "The ones that exist have got closed books and it takes X number of weeks to get a standard GP appointment."

We've been told about certain solutions to that, whether it's the single employer/section 19(2) exemptions model or at least one instance a local council stepping in and employing a GP for primary care. And I know some of Professor Cormack's recommendations in his scope of practice review will be relevant to this. But I know you're on the - well, you certainly were on the Strengthening Medicare Taskforce. Other than the things I've mentioned, is there any solutions to ensuring this state can have - people can access and adequately access primary care, GP-led primary care?

A. Thank you. So I think the implementation of the recommendations of the Strengthening Medicare Taskforce and the subsequent review of GP incentives, which I was also on, will help. But the fundamental issue is there's been a collapse of workforce planning in this country, health workforce planning in this country. No-one does anything about it and no-one takes any responsibility for it.

So it does seem to me that New South Wales Health - and part of the problem is that there are lots of irons in the fire; that the Commonwealth government funds universities, the universities make autonomous decisions, the state government funds clinical placements in hospitals and other certain locations and so on and so forth. So there are lots of people having fingers in the pie, and that can either lead to a complex way of doing things or nothing happening at all, and it's the latter that's happened.

So, in my view, I think the New South Wales Government ought to have responsibility for actually doing something

about this in conjunction with the universities and the Commonwealth. And it ought to say New South Wales ought to be net self-sufficient in every health discipline; that is, we should no longer have to rely on international medical graduates or international physios or whatever, and we should train enough in New South Wales to meet New South Wales' needs. Of course some people are going to go overseas and some people are going to come in but, by and large, we ought to make sure that the intakes are enough to produce the workforce we need.

And it is especially true west of the divide that you might say that New South Wales west of the divide ought to be net self-sufficient. And what we know is that if you set up a medical school, say, at Charles Sturt University, and Charles Sturt University says, "We are going to prioritise students who grew up west of the divide, who come to university west of the divide, who do all of their clinical placements west of the divide," they will stay west of the divide. And that is true and there is evidence about that. But we haven't tended to do that. So the New South Wales Government has to lobby the Commonwealth, has to say to the universities, "This has to be your selection process" and so on.

And you've got to start with the workforce production. There's no point saying, "We're going to expand the University of New South Wales in Kensington," in the vein hope that this is somehow going to help Orange or Bathurst. Well, it won't and it hasn't. But you've got to start with the workforce, getting the workforce right. Of course in the meantime - because that's a long-term strategy. In the meantime you've got to deal with all these other issues like multidisciplinary teams and sharing the loads and all those sorts of things. But, unless you start with a workforce strategy, you'll never fix the workforce strategy.

THE COMMISSIONER: Yes. Did anything come out of that that you want to ask a question about?

Professor, thank you very much for your time.

A. Pleasure.

THE COMMISSIONER: Especially talking to us from so far away. We are very grateful for the assistance you've given. Thank you.

A. Thanks. A pleasure.

<THE WITNESS WITHDREW

THE COMMISSIONER: All right. So we adjourn until 10 o'clock tomorrow. All right. We'll adjourn until then.

AT 3.12PM THE SPECIAL COMMISSION OF INQUIRY WAS ADJOURNED TO THURSDAY, 21 NOVEMBER 2024 AT 10AM

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