

**Special Commission of Inquiry
into Healthcare Funding**

**Before: The Commissioner,
Mr Richard Beasley SC**

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

Monday, 26 February 2024 at 10.00am

(Day 010)

Mr Ed Muston SC	(Senior Counsel Assisting)
Mr Ross Glover	(Counsel Assisting)
Mr Ian Fraser	(Counsel Assisting)
Mr Dan Fuller	(Counsel Assisting)
Dr Tamsin Waterhouse	(Counsel Assisting)

Also present:

Mr Lachlan Gyles SC with Ms Joanna Davidson for NSW Health

1 MR MUSTON: Good morning, Commissioner. We are moving now
2 to the innovation phase of this hearing block. There will
3 obviously be some overlap between what we're discussing
4 this morning and some of the procurement issues that were
5 raised last week, but that's where we're at.
6

7 I do think we have a formal tender of some
8 confidential documents and an order that needs to be made
9 in respect of confidentiality but I won't deal with that
10 immediately.
11

12 THE COMMISSIONER: Okay.
13

14 MR MUSTON: Ms Waterhouse is going to deal with this
15 witness.
16

17 THE COMMISSIONER: Thank you.
18

19 DR WATERHOUSE: Commissioner, the witness is already in
20 the witness box. It is Adjunct Professor Jean-Fredéric
21 Levesque. I will spell his name in full for the court
22 reporter, J-É-A-N-hyphen-F-R-É-D-E-R-I-C L-E-V-E-S-Q-U-E.
23

24 <JÉAN-FREDÉRIC LEVESQUE, affirmed: [10.01am]
25

26 <EXAMINATION BY DR WATERHOUSE:
27

28 DR WATERHOUSE: Q. Dr Levesque, can you please state
29 your full name and also your occupation?

30 A. My name is Jean-Fredéric Levesque, I'm deputy
31 secretary for clinical innovation and research in
32 NSW Health and I'm the chief executive of the Agency for
33 Clinical Innovation, also within NSW Health.
34

35 Q. How long have you been in this role?

36 A. I've been in the role of deputy secretary for
37 12 months and I've been the chief executive of the Agency
38 for Clinical Innovation for a little bit less than six
39 years.
40

41 Q. And what roles have you held before that?

42 A. Within NSW Health I've also been chief executive of
43 the Bureau of Health Information and previously I had
44 various professional roles in Canada, before migrating to
45 Australia.
46

47 Q. And can you outline for us your qualifications?

1 A. I'm a medical doctor by training. I've got
2 a specialisation in preventive medicine and public health
3 and I'm a fellow of the Royal College of Physicians and
4 Surgeons of Canada and I also have a PhD in public health
5 from University of Montreal.
6

7 Q. Thank you. You have prepared a statement to assist
8 the Commission, and I believe that statement is dated
9 30 January 2024. You have a copy of the statement with
10 you?

11 A. Yes, I do.
12

13 DR WATERHOUSE: We might just bring that up on the screen,
14 if we could, it is exhibit B.003 [MOH.0001.0435.0001].
15

16 Q. Have you had a chance to review the statement before
17 giving evidence today?

18 A. Yes.
19

20 Q. And is the content true and correct to the best of
21 your knowledge and belief?

22 A. Yes, it is.
23

24 Q. We might scroll down to paragraph 4. In that
25 paragraph you refer to the creation of the clinical
26 innovation and research division approximately one year
27 ago, February 2023. What was the rationale for developing
28 this or establishing this division and what do you see as
29 the advantages?

30 A. There were various goals in establishing the division,
31 bringing together the Office for Health and Medical
32 Research and the Agency for Clinical Innovation and the
33 first one was really to lift research and innovation as
34 a key priority for NSW Health, really send the signal that
35 it is an important component of the system and something
36 that we need to continue to progress.
37

38 There was also a desire to better coordinate the work
39 across the entire continuum from research, discoveries and
40 implementation in the real healthcare system. So the
41 objectives were really to ensure that we would have more
42 visibility from a research perspective and also really
43 align our work for stronger impact on the system.
44

45 Q. Can you see any disadvantages to creating it as
46 a division in the ministry?

47 A. I don't see any disadvantages. I think that it's

1 really creating an opportunity for better aligning our
2 investments in research with the efforts that we're making
3 to translate them into clinical practice.
4

5 The only thing that we need to manage as part of this
6 arrangement is the fact that the Agency for Clinical
7 Innovation is a pillar of NSW Health and therefore, you
8 know, we've had to establish different ways to manage
9 a pillar and branches of the ministry, working together,
10 but again, it's a great opportunity to actually be able to
11 make a pillar work so closely with branches of the
12 ministry, it was just a matter of establishing the right
13 governance processes.
14

15 Q. One of the terms of reference --

16
17 THE COMMISSIONER: Q. Sorry, so the division of clinical
18 innovation and research is part of the Ministry of Health?

19 A. It is.
20

21 Q. So the ACI and the Office for Health and Medical
22 Research, it says, "were integrated to form a new
23 division". I don't quite - the ACI still stands alone as
24 a pillar - yes?

25 A. Yes, it does.
26

27 Q. And there's the Office for Health and Medical
28 Research - that stands alone as an office?

29 A. It's one of the branches, yes.
30

31 Q. And what is the form of integration to form this
32 division of clinical innovation and research?

33 A. Well, the first thing, Commissioner, is that both of
34 those units are led by the same person, myself.
35

36 Q. That's you?

37 A. So I'm deputy secretary, you know, supervising all of
38 the research and innovation work across the system for
39 NSW Health and I'm the chief executive of the Agency for
40 Clinical Innovation. So in this way, there was a first
41 level of integration. And then from a functional
42 perspective, the management structures within ACI as well
43 as OHMR and the small structures that enable me to lead the
44 division in a more coordinated way all meet together in
45 planning our activities. There is --
46

47 Q. There might be a really good reason for this, and this

1 is your chance to tell us why, it just sounds like it
2 should be the one organisation. The division of clinical
3 innovation sounds a lot like the Agency for Clinical
4 Innovation. Obviously I'm missing something as to why it's
5 been done this way as distinct from just all of these three
6 entities being the one organisation.

7 A. The Agency for Clinical Innovation as a pillar
8 organisation, like other pillars, has a role to provide
9 advice to the ministry, provide advice to the system in an
10 impartial way, as pillar organisation, and that arm's
11 length role was seen as an advantage in keeping the agency
12 as a separate entity from a legal perspective, but really
13 aligning it through its leadership with the work of OHMR,
14 the work of the critical intelligence unit, within
15 a division so that we better coordinate the work.

16
17 So we were trying to preserve the advantages and the
18 levers that are part of a pillar organisation but by
19 bringing it under a more integrated leadership so that it
20 would really span the entire continuum from grant delivery
21 to working with clinicians through that independent entity
22 for real system change. But really, from a functional
23 perspective, we now have meetings that enable us to
24 coordinate the work across the two organisations.

25
26 DR WATERHOUSE: Q. The Commissioner asked if the OHMR,
27 or Office for Health and Medical Research, was
28 a stand-alone body and I think you responded that it was
29 a branch. Is it, in fact, a branch of the ministry?

30 A. It's a branch of the division for clinical innovation
31 and research, so, yes, it is a branch of the Ministry of
32 Health, from a legal perspective.

33
34 Q. So the only part that sort of stands alone,
35 effectively, is the ACI?

36 A. That is correct.

37
38 Q. Thank you. Part of the terms of reference for this
39 Inquiry is to inquire into the balance between central
40 oversight and locally devolved decision-making. Could
41 bringing the ACI and the OHMR together in this way, into
42 the division in the ministry, be seen as an increase in
43 centralisation?

44 A. I think to answer that question, I need to reflect on
45 what kind of organisation the ACI is. I think it is
46 important, because you'll see that the ACI is an
47 organisation that is already heavily decentralised through

1 its clinical networks.

2

3 So the agency has, you know, employees that we
4 directly employ, they include network managers, they
5 include people that have expertise in epidemiology just or
6 organisational studies, data analysis, but the agency, one
7 of its core roles is to lead 42 clinical networks that are
8 made of clinicians working in local districts, working in
9 our different hospitals across the system.

10

11 And the number of core fluctuates, but there are
12 thousands of clinicians involved in various groups led by
13 those clinical networks, and that really is a way for us to
14 reach very deeply into the system, making sure that we hear
15 from real clinicians, you know, currently working in the
16 system about issues that may need to be addressed, or about
17 opportunities in terms of new ways to deliver care, and
18 then bringing it within an organisation that then can
19 mobilise resources to redesign models or to support
20 implementation at the state level.

21

22 So the ACI is already a very, you know, decentralised
23 structure with that reaching out of clinicians through our
24 work.

25

26 One of the goals of establishing the division was
27 actually to make sure that we would keep that clinical
28 voice and bring it to the ministry executive so that the
29 ACI being part of or led in an integrated way as part of
30 that division for clinical innovation and research, then we
31 could create that, you know, streamlined channel so that
32 the voice of clinicians could be conveyed to the ministry
33 executive in an even more effective way going forward

34

35 So I think the reality is that it's not a top-down
36 approach; it's not just a bottom-up approach either. It's
37 about balancing those two together so that we have really
38 activities in the system but in a way that it can then get
39 into policies and in more integrated and statewide
40 approaches. That's one of the advantages of having
41 established a division as it stands, because we can keep
42 that really essential role of mobilising thousands of
43 clinicians for the purpose of innovation, and then
44 integrated to inform policy that is led at the central
45 level as well.

46

47 Q. Would it be fair to say that the decentralisation that

1 you're referring to there relates to consultation rather
2 than the actual decision-making being on the ground, and
3 that the decision-making is done more centrally by ACI?

4 A. There has not been any changes following the creation
5 of the division with regards to how ACI makes its
6 decisions. We have clinical networks executive committees
7 and these are made of doctor, nurses, allied health
8 professionals and consumers. They identify the work that
9 they need to do and then have it endorsed by the ACI
10 executive committee. And we also have a clinical executive
11 advisory group that informs the decisions of ACI, and we're
12 talking about clinicians from intensive care, surgery,
13 primary care, many different areas.

14
15 The ACI still has, as it had in the past,
16 a performance agreement with the Ministry of Health,
17 identifying what are the key priorities, what is the work
18 that is emerging from the different networks that we need
19 to bring to scale, and that has not changed following the
20 establishment of the division. So we've really tried
21 again, as part of that transformation, to keep the strong
22 advantages of the current structure, making sure that the
23 voice of clinicians is well coordinated, well supported by
24 the ACI, but by having a deputy secretary that leads that
25 agency, you know, interacts with the clinical networks on
26 a regular basis through our own ACI mechanic, then I can
27 bring that clinical voice to the ministry executive, and
28 that was one of the objectives as part of that reform of
29 our structures.

30
31 Q. I'm going to come back to the ACI in more detail a
32 little bit later. I would like to ask you some questions
33 now about the Office for Health and Medical Research. So
34 if we could just scroll down to paragraph 14, please.
35 Before we go to that, can you just describe for us the
36 purpose and functions of the Office for Health and Medical
37 Research?

38 A. Yes. So the Office for Health and Medical Research
39 has got, as overarching role, to catalyse research into
40 NSW Health through different ways. Its role is really to
41 be a central agency that helps local districts, hospitals,
42 to use and produce research for the purpose of improving
43 clinical care.

44
45 And the office does that through different means.
46 First, we engage with academic institutions ensuring the
47 coordination between NSW Health and universities or

1 research centres. We also administer various grant
2 programs, so we allocate funding to medical research
3 institutes, we allocate funding that is targeted at
4 specific areas of research, so grants in cardiovascular
5 diseases, for example, or in spinal cord injury, and we
6 also work on supporting the governance of research in the
7 healthcare system, and that means establishing more
8 standardised ways to manage ethics, confidentiality
9 assurance, that relates to the management of research.

10
11 And finally we work in partnerships with either
12 academic institutions, local health districts research
13 teams or industry, at working on the infrastructure that is
14 required to make specific areas of research more conducive
15 to impacts on the healthcare system. These are the main
16 functions of OHMR and how it, you know, again tries to make
17 research part of the delivery of health care in New South
18 Wales.

19
20 Q. So if we just look at paragraph 14 now, it says that
21 there is a budget of 104.7 million for that, and that's
22 this year's budget. Would that be a typical budget for
23 OHMR or have there been any significant changes in recent
24 years?

25 A. No, there's not been significant changes, but year on
26 year it will be slightly different, depending on the timing
27 of specific grant programs. So with certain grant programs
28 finishing, some years we could have a reduction, and of
29 course there are always new grants coming in. So there is
30 a bit of fluctuation in the overall budget but over the
31 last few years it's been fairly stable.

32
33 Q. So looking just for this year, then, it says at 14b
34 that 44.5 million, which by my calculation is about
35 42.5 per cent of the total budget, has been allocated to
36 the day-to-day costs of running independent medical
37 research institutes. How is the effectiveness of that
38 spend evaluated?

39 A. There are various ways that we evaluate the impact of
40 our investments within the Office for Health and Medical
41 Research. First, we have a small team that is dedicated to
42 monitoring and evaluation of programs, and we do have to
43 report, depending on the source of funding, on the
44 achievements related to our grant funding.

45
46 We do also monitor different indicators of
47 performance, either with regards to the timeliness of

1 ethics reviews or governance approvals, and we do receive
2 reports from the different groups that receive funding from
3 the office as part of that work.
4

5 Another area is that we have worked with various
6 academic institutions in progressing stronger frameworks to
7 assess impacts. Traditionally, impacts of health research
8 was mostly calculated in terms of number of publications or
9 the grants that those institutions would receive from
10 national funding, for example, but increasingly we're also
11 asking them to reflect on the impact that it has on local
12 policies or specific delivery programs in health care so
13 that we can have a more rounded approach.
14

15 As part of the medical research support program that
16 you're talking about, we do have specific metrics that we
17 revise with them that relates to their academic
18 achievements, and that is also integrated in the review
19 of the level of funding that they receive on an ongoing
20 basis, and there have been shifts according to, you know,
21 the performance of those organisations in the more than
22 10 years that the program has been in place.
23

24 Q. Now, given that some of these medical research
25 institutes would be operating in the same space, doing
26 research in similar sorts of conditions, how do you avoid
27 duplication of the way that the money is being distributed,
28 particularly if they're competing for research grants that
29 are the same source, et cetera?

30 A. So in the case of the medical research institute and
31 the medical research support program, this is
32 infrastructure funding. So it's not funding that we give
33 for specific research activities, it's really to support
34 them as organisations so that they can be functioning in an
35 efficient way, an effective way, and it's for their
36 researchers to actually determine what are the programs
37 that they will apply to receive operating expenditure as
38 part of grant programs.
39

40 We do have conversations with the entire sector, we
41 meet with the various associations, including the
42 Association of Medical Research Institutes that we have in
43 New South Wales, on a regular basis, and therefore, at
44 times we do provide advice if we feel that there are
45 certain areas where, you know, there's opportunities for
46 new research to be conducted. But again, the funding that
47 we give is not tied to that; it's really infrastructure

1 funding, helping them to exist as centres.

2
3 Q. If we go to paragraph 14c, that's about medical
4 technology and commercialisation initiatives. Can you tell
5 us a bit more about that?

6 A. Yes. So the Medical Devices Fund is a fund that was
7 established around 10 years ago. It's a fund that aims at
8 helping start-ups and other companies or clinicians that
9 have great ideas in terms of how medical technologies can
10 actually help to deliver care in a different way, to
11 accelerate their projects.

12
13 So what we do in that program is we give grants on
14 a competitive basis, so we have independent committees
15 assessing the proposals, and the most promising medical
16 devices are selected for funding and that enables them to
17 do the work that they need to at times bring those medical
18 devices to a commercialisation stage, which means that they
19 can then start to sell these medical devices on the market.

20
21 We select only a few of the, you know, all of the
22 proposals that we receive, and we provide them with support
23 in different ways to make sure that we increase their
24 capabilities for commercialisation. Many of those devices
25 are created by clinicians working in our system and,
26 therefore, we need to help them to better understand how do
27 you manage intellectual property, how do you engage with
28 people that can potentially provide funding, how do you
29 advertise and promote your medical device for it to be
30 a successful endeavour?

31
32 That's what the commercialisation training program
33 does and the Brandon BioCatalyst collaboration does as
34 well. Those two structures are enabling us to provide
35 a wrap around the programs so that we ensure that we're not
36 just investing money to help those medical devices to be
37 successful, we're also providing them the support so that
38 they can really truly accelerate their development and
39 ensure their success.

40
41 Q. You mentioned Brandon BioCatalyst. Can you tell us
42 what that is exactly and what is its role?

43 A. Brandon BioCatalyst is an Australian venture capital
44 fund and in our case, they participate in the
45 commercialisation training program to give advice to the
46 medical device fund trainees about the best way to engage
47 with funders, so that they can bring their innovations to

1 the next stage of funding. The Medical Devices Fund is
2 really just an acceleration fund. At some point, some of
3 those companies are at a stage where they need to produce
4 at a larger scale and that's the advice that they - you
5 know, that's the advice that Brandon BioCatalyst provides
6 within our context.

7
8 Q. And when you say the most promising of the very many
9 proposals that you receive are the ones that are supported,
10 is that the most promising in the sense of being
11 commercially successful or addressing patient problems or
12 having the most impact on patient outcomes? What's the
13 measure?

14 A. It's both of those things, and the committees that
15 evaluate the candidates every year have specific criteria
16 that they use to assess them, and it includes the stage of
17 development of those medical devices, so have they already
18 demonstrated that, you know, it can work? It includes the
19 potential impact on patients and on the healthcare system,
20 because sometimes those medical devices will help to
21 deliver more care for patients or deliver technologies that
22 are enhancing the current treatments that we have for
23 patients; but it's also with regards to their economic
24 potential. This is really about ensuring that our clinical
25 entrepreneurs can be supported.

26
27 So all of those different aspects are part of the
28 decisions. This is not something that I control. We've
29 got peer review groups that do that in an independent way
30 and then recommend to the program which candidates should
31 be supported.

32
33 Q. Can you give us some examples of particular devices or
34 initiatives that have been commercialised in this way after
35 being developed by people working in the system?

36 A. There are many examples, given the fact that we've
37 supported more than 40, if I remember, different devices
38 through the years - or, sorry, 80 different medical
39 devices. Some of them relate to very clinical areas, such
40 as finding ways to provide dialysis in a different way.

41
42 There are some that relate to digital applications,
43 for example, or at least providing a digital application
44 support on a specific device. In terms of specific
45 examples, if you'd just allow me - I think I have mentioned
46 some, but at the moment they're escaping me in terms of
47 those that have reached commercialisation stage. I can

1 find that for you a bit later.

2

3 Q. That's okay. Does the OHMR monitor to see whether
4 they do have the anticipated benefits for patients or
5 commercial success?

6 A. There are various - again, there are multiple
7 modalities we can do to monitor that, depending on the
8 specific device or specific grant programs that OHMR
9 supports. There are - in some of those programs, we have
10 evaluation programs, independent evaluations, that need to
11 be provided, and we do them at regular intervals to make
12 sure that we provide an input back into the system and we
13 provide the right adjustment to increase effectiveness.
14 So, for example --

15

16 THE COMMISSIONER: Q. So something that doesn't work
17 very well for patients is unlikely to have much prospects
18 for commercial success; right?

19 A. That is correct. If something doesn't generate the
20 outcomes for patients, it's very unlikely that people will
21 want to purchase those medical devices, and in a similar
22 fashion for other grants that we have, if a research study
23 doesn't demonstrate an impact, then it's not something we
24 would promote for implementation at scale afterwards.

25

26 So there are things that relate to every single
27 project's evaluation, as well as an evaluation of the
28 entire programs that we put in place, and I was about to
29 say that the translation research grant programs, for
30 example, was evaluated after its second year and that
31 allowed us to make adjustment to the program to ensure that
32 the projects we are supporting, you know, we assess them
33 with the right criteria to ensure that they're going to be
34 successful.

35

36 DR WATERHOUSE: Q. In paragraph 14d there, there is
37 a reference to the Translational Research Grants Scheme,
38 and that is for projects that have the potential to benefit
39 patients quickly. Can you give us some examples of
40 successes in terms of those TRGS grants?

41 A. Yes. So there's been many programs. We're at our
42 eighth round of translational research grant programs now.
43 One example is the monitoring of electrocardiograms, so
44 that's to assess the heart, you know, electrical rate.
45 That was developed in Hunter New England. It was part of
46 the translational research grant programs and demonstrated
47 really that we could have a more streamlined access to

1 quick diagnostics for cardiac care for patients living in
2 rural settings, and the program is currently being
3 implemented across the entire Hunter New England region and
4 we're monitoring it on an ongoing basis to see the
5 potential for other areas as well. So it's a good example
6 of a program that went to the translational research
7 grants, that demonstrated, you know, a really good impact
8 on the system.

9
10 Q. Are there programs that have been - or projects that
11 been funded by these grants that have been rolled out
12 across the state?

13 A. Yes. For example, the naloxone program is one that
14 went through the translational research grant to evaluate
15 the impact of accessing that drug at home on the health of
16 patients, and following very positive pilots funded through
17 the translational research grant program, it has been
18 rolled out across the entire state and is now used across
19 many drug and alcohol centres as a way to treat patients in
20 a standard way.

21
22 Q. Now, the TRGS funds, as I understand it - that
23 \$5 million is entirely money from the state; is that
24 correct?

25 A. That's correct.

26
27 Q. And when you were speaking previously about the types
28 of grants that the medical research institutes could apply
29 for, were they only state grants or are there other sources
30 of those?

31 A. No, I was talking about other sources of funding such
32 as the National Health and Medical Research Council, but
33 also the MRFF, which is another Commonwealth-led program,
34 and of course, there are also funding that they receive
35 through philanthropy or specific funding sources that may
36 be provided by clinical patient programs, you know.
37 There's a few sources of funding, although the main sources
38 of funding for those medical research institutes are the
39 NHMRC and the MRFF in volume.

40
41 Q. So of that 104.7 million budget for OHMR, is that
42 entirely state funding?

43 A. That's entirely state funding.

44
45 Q. And just finishing on the TRGS, have there been
46 learnings from projects that were funded but were deemed
47 not to be successful?

1 A. Well, yes. There's been various learning as part.
2 TRGS program in general. What we can say from our
3 evaluation is that 40 per cent of programs that went
4 through - projects that went through the program have
5 demonstrated successes and have been implemented at the
6 state level. 30 per cent usually demonstrate a potential
7 effectiveness but still need a bit of work to really
8 understand or to help us assess if we need to roll those
9 programs across the entire state. And there is 30 per cent
10 of projects that didn't demonstrate enough effectiveness.

11
12 And that's the goal of the program, you know, we
13 wouldn't expect 100 per cent of projects to demonstrate
14 that they would be effective. The goal of the program is
15 to actually trial interesting ideas coming out of the
16 system and really assess if they work before we invest
17 further in implementing them statewide.

18
19 There are some learnings that came out of the
20 evaluation as well with regards to the fact for those
21 projects to have a very strong endorsement locally from
22 their chief executives that are promoting them in their
23 districts. They need to have a very clear measurement
24 approach. They need to be mobilising clinicians locally so
25 that they get implemented, and all of those are the types
26 of learning that we have made through the years and now we
27 help projects before they arrive to reflect on those
28 different aspects and they're part of the things that we
29 assess with the peer review committees to decide which ones
30 will receive funding going forward. So the evaluation we
31 did of the program did enable us to reflect on some
32 learnings and then integrate them into the later rounds of
33 the program.

34
35 Q. We might just move down to paragraph 14e, at the top
36 of the page there. So you refer there to 15 million, this
37 year, at least, being spent on cardiovascular research
38 capacity. Can you give us a bit more detail of what that
39 covers?

40 A. Yes. So that fund is a fund that we have for
41 10 years, we're about midway through it. The goal was to
42 lift our competitiveness nationally and internationally in
43 research grants in cardiovascular research. What it covers
44 are various types of grants, first, early and mid-career
45 grants, really helping young researchers to better
46 establish their career, have a stronger lab platform to
47 then be competitive and receive funding from national

1 organisations.

2

3 It includes funds that we use to attract emerging
4 researchers internationally that we feel would provide
5 something back to New South Wales, which would be a good
6 new asset in cardiovascular research. And then it also
7 provides funding for specific projects.

8

9 I want to, for example, mention the fact that we will
10 have a targeted call for proposals about cardiovascular
11 health for Aboriginal people this year, and that's a way
12 for us to at times target the funding in an area where we
13 think we need to lift, we need to increase capability in a
14 more targeted way.

15

16 Q. And then if we look at paragraph g, omics research and
17 omics technologies, it sounds like a space-age word but can
18 you please explain to the Commissioner and the group what
19 this actually means and what it involves?

20

21 A. Of course. "Omics" is a term, a very generic term
22 that is there to describe many different things, and
23 probably the most known area is genomics, which is the
24 science of genes and the science of intervening to modify
25 genetic illnesses to improve the health of patients.

26

27 So our omics work doesn't just cover genomics, it
28 does, but it covers proteomics, which is about the science
29 of proteins in the body so unfortunately it is a bit, you
30 know, cutting edge and complex, but ultimately, if I am to
31 summarise our work in that space, it is that we're really
32 working with our partners to make sure that all of the
33 promises of personalised medicine, which is really medicine
34 that is about the specific genetics of people, the specific
35 genomics of cancers that they may get, et cetera, so that
36 the real personalisation of our treatments can be supported
37 and be embedded into our system. And therefore, it's about
38 that translation of cutting-edge, you know, benchtop
39 research happening in universities and research centres,
40 and helping them along the way so that we transform it into
41 clinical applications at the bedside for patients. That's
42 really our omics work.

43

44 THE COMMISSIONER: Q. Are they who you're referring to
45 when you say "our partners"?

46

47 A. The partners in that omics space would be
universities.

1 Q. And the research institutes?

2 A. Research institutes, but at times it could be
3 industry, if specific industries are developing
4 technologies that we feel are at the stage where we can
5 start to support their implementation in clinical settings.
6

7 DR WATERHOUSE: Q. Can we scroll, please, to
8 paragraph 15. Now, it refers there to OHMR's annual
9 priorities and work plan deliverables being negotiated and
10 recommended by the branch's executive team. Does this
11 involve any consultation with the local health districts
12 about the needs of their populations and their challenges
13 and what they're doing to address them on the ground?

14 A. Yes. And there are various ways that we achieve this.
15 First, there are regular structures that enable us to have
16 close connections with the local districts' chief
17 executives, such as the senior executive forum, where the
18 Office for Health and Medical Research and the ACI are
19 presenting their planned work, receive feedback about their
20 adjustment with regards to local needs or feedback about
21 things that we may need to adjust to better fit the
22 clinical setting. And that's, of course, really also
23 enabling each of the local districts to get a better
24 understanding and an early view about the type of work that
25 the Office for Health and Medical Research and ACI are
26 progressing.
27

28 We also have two communities of practice that enable
29 us to better connect locally as well, both in terms of
30 research as well as innovation. So we've got a community
31 of practice which is a group of people having to achieve
32 similar kind of work, and it's called the community of
33 practice of directors of research, and they are the
34 directors of research that are active at the local district
35 level, working with their research teams at identifying
36 specific opportunities, specific needs. And they now meet
37 on a monthly basis to reflect about their specific needs
38 but also the things we need to do at the state level to
39 support their work, which, of course, is a very important
40 role of the Office for Health and Medical Research.
41

42 And we also have a community of practice of directors
43 of innovation. They don't always have that name, but we
44 know who is leading, you know, innovation and translation
45 work in the district, and they also meet on a monthly basis
46 to reflect on our implementation programs, you know, the
47 things that we're bringing at scale at the moment.

1
2 There's also, of course, at times consultation with
3 the districts and specific hospitals or research centres
4 that we do as part of specific programs. So, for example,
5 when we do an evaluation or when we want to reorient
6 specific programs, we would very often organise
7 a consultation where people will be able to reflect on the
8 previous program and identify potential gaps that we need
9 to address, and at times, it does include public
10 consultations as well.

11
12 Q. But all of this is being brought into the annual
13 priorities for the OHMR?

14 A. Not for each of the programs, because some programs
15 have plans in place for multiple years. So we don't always
16 review things in the middle of those programs. But I would
17 say that every year there's at least one program that
18 enables us to go back and connect with the districts,
19 connect with clinicians and researchers to inform our work.

20
21 Q. And in terms of these sort of - the priorities and
22 work plan deliverables, you're confident that the system
23 works in such a way that there are not sort of gaps or
24 duplication at a district level in terms of what they're
25 doing and what the OHMR is focused on?

26 A. We're really doing our best to ensure that we've got
27 the communication platforms in place so that there's a good
28 balance between local districts, progressing the work they
29 need to progress in an efficient way without undue
30 bureaucracies or steps, yet at the same time, us having the
31 right visibility so that we can tailor our work so that we
32 support their work, avoid duplications, you know, but at
33 times, of course, when a specific clinical area is an area
34 where there's a lot of innovation emerging, sometimes we do
35 see that, you know, districts may do work that is not quite
36 connected. The establishment of those coordination
37 platforms is really the way for us to pick that up as
38 quickly as possible and then work with them so that we
39 align the work.

40
41 But it's about balancing, you know, centralised
42 coordination versus local emergence, because we don't want
43 to lose the initiative that comes out of clinical settings
44 in terms of what they do in research and innovation. So
45 we're striving to find the right balance.

46
47 Q. I would like to scroll down to paragraph 29, please.

1 Now, you refer in the second-last line there to the
2 "NSW Health and Medical Research Strategic Review 2012".
3 If we can just bring that up on the screen, it is B.023.51,
4 and that is [MOH.0001.0358.0001]. So that's the document
5 that you were referring to there?

6 A. Yes.

7
8 Q. If we can just move down to page 13 of that document,
9 please. So this is where a number of recommendations are
10 made. Now, this review that you said remains a strategic
11 document for research in New South Wales, is 12 years old.
12 Are you confident that those recommendations that were
13 identified 12 years ago have now been implemented and
14 embedded in the New South Wales health system?

15 A. I would say that most of the recommendations have seen
16 significant improvement, many of them having been achieved.
17 Some of them will need to be reviewed because they may not
18 fit anymore with the new environment that we're in.

19
20 This strategy, as you've said, dates from 2012. It
21 was due to be renewed because it was a 10-year strategy,
22 and then the pandemic really took us to a different
23 direction, we had to reorient a lot of our work to support
24 the COVID research program during the pandemic, and now we
25 have progressed an endorsement brief within the ministry
26 and we're currently in consultation to review that
27 strategy, with the aim over the next few months to have
28 a replacement of that strategy.

29
30 Q. I'm particularly interested in the ones that rely on
31 the districts actually making changes, and, of course,
32 they've also been fairly overwhelmed with COVID. So if you
33 look at 1.4 on the page there, the obligation to provide
34 training for practitioner researchers and facilitate access
35 to research support - is that something that has been
36 embedded effectively at a local district level?

37 A. I would say that in most districts there has been
38 significant improvement in them mobilising clinicians,
39 providing support through a director of research, through,
40 at times also, specific expertise that helps to, you know,
41 develop research careers for our clinical researchers.
42 And, of course, there are various programs at the central
43 level from OHMR that are also aimed at that.

44
45 The early mid career grant programs is an example of
46 that, really helping clinicians that are budding as
47 researchers to be supported, to have more time dedicated

1 for research, being able to attract grant funding and then
2 establish their career as research clinicians.

3
4 This has also been part of the work that we've done
5 around research governance, making sure that we streamline
6 the process, reduce administrative barriers so that
7 clinical researchers can actually be more effective at
8 concentrating themselves around the research and less
9 around the administrative tasks that relate to research as
10 well.

11
12 Q. And further down that same page, 2.3 refers to "Reduce
13 barriers to clinical trials by faster start-up times and
14 greater opportunities to recruit trial participants and
15 engage clinical staff". How is that working in the
16 districts?

17 A. Yeah, we've got two - we've got two programs that we
18 have developed to help districts with regards to these
19 capabilities, and the first one is the research ethics and
20 governance system, which really enables us to better track
21 the administrative tasks, reflect on indicators of
22 performance with regards to ethics reviews, local site
23 approvals, making sure that we govern research in an
24 appropriate way but also in a timely way and reduce the
25 time that it takes from money being available for research
26 until it starts to hit the ground and recruit patients and
27 clinicians.

28
29 So that's the first program, and we've got very
30 advantageous indicators compared to other states in that
31 space - you know, more quick assessment to ensure that
32 clinical trials, for example, can start quickly in
33 New South Wales, and this is recognised internationally.

34
35 The other one is the clinical trial management system,
36 which is a system that helps local districts to manage
37 clinical trials when pharmaceutical companies or other
38 devices companies, for example, want to conduct trials, to
39 make sure that we've got, again, a streamlined approach and
40 that we can have a quick introduction of those trials so
41 that our patients can start to benefit from them quickly.

42
43 This has really helped, I think, to structure through
44 those technological platforms but also through the policies
45 that we've established for both of those in making sure
46 that the entire system sees what are the goals and has
47 a more strategic alignment to really increase our

1 competitiveness in clinical trials and really, again,
2 making sure that those trials end up benefiting our
3 patients, and we all know that system that integrates
4 clinical trials in a more systematic way is a system that
5 is safer and a system that really promotes better outcomes,
6 and there's a lot of literature in that space.

7
8 So that's why we've invested heavily into those two
9 systems to really support local districts to be more active
10 in research.

11
12 Q. Could we bring your statement back up on the screen,
13 please, and if we could go just to paragraph 31 at the
14 bottom of the page there. So it says:

15
16 *The CIR Division actively engages with*
17 *other pillars and branches within NSW*
18 *Health, researchers, academic institutions,*
19 *commercial entities, clinicians and*
20 *consumers ...*

21
22 Now, there's no mention there of engaging with those health
23 service managers in the districts or the specialty health
24 networks that are actually responsible for managing health
25 services. Isn't this something of a disconnect?

26 A. I think it's an omission, because it is in our
27 strategy documents, clearly, that managers are one of the
28 stakeholders that we work with. All of our models of care
29 have components that relate to the work of, you know, nurse
30 managers or medical directors, and therefore, they're
31 a group that we engage with through our dissemination
32 approaches and also they're part of the group that we
33 consult with when we engage with them.

34
35 Managers are also part of our Health System Advisory
36 Council, so it's clinicians of different clinical
37 backgrounds but also managers that give us the high-level
38 advice that we need to guide our programs towards impact.

39
40 So I would say that managers here is really an
41 omission. It is really clearly demonstrated in other
42 documents, they're absolutely one of the target
43 stakeholders for us because they're the ones that locally
44 will very often translate our models of care into
45 operational decisions and operational models.

46
47 THE COMMISSIONER: Q. Just to be clear about "omission",

1 you mean paragraph 31 of your statement should have
2 mentioned the LHDs and --

3 A. Yes, I think it would have been correct to mention
4 them as part of the stakeholders mentioned there.

5
6 DR WATERHOUSE: Q. And they're engaged at an early stage
7 in the planning of new sort of research and so on, not just
8 downstream, once things are expected to be implemented?

9 A. Yes, and that happens because many managers are
10 involved in our clinical networks as well. Our clinical
11 networks, as I've said, have got, you know, executive
12 committees that have clinicians, consumers, people that are
13 having administrative roles in the districts, and
14 therefore, they're part of the identification of
15 opportunities or gaps, and therefore, at the specific
16 clinical level, are involved in many of our - in most of
17 our work through the clinical networks, but then the group
18 of managers in the local districts are also consulted once
19 we have drafted new models of care or new policies. So
20 it's both through these mechanics that we're trying to link
21 with local managers as well.

22
23 Q. And you mentioned nurse managers. What other types of
24 managers might be involved in some of that decision-making?

25 A. Well, it depends on the clinical program and it
26 depends on the type of model of care that we would be
27 developing. For example, if we've got a model of care -
28 for our models of care around virtual care, for example, we
29 do engage with clinical information officers, we engage
30 with people that are managing IT systems locally, because
31 our models of care need to be supported locally by the
32 right infrastructure.

33
34 If we're talking about models in surgery, for example,
35 we very often have people in managerial roles with regards
36 to how the surgical wards, the operating theatres, are
37 managed, so that we better understand the operational
38 issues that may have to influence the clinical guidance
39 that we're providing. So depending on the type of clinical
40 area and the type of model of care that we promote, we
41 would have different types of clinicians, different types
42 of managers involved in the design and in the review of
43 those programs.

44
45 Q. In paragraph 32, if we just scroll down to that, you
46 mention there that research is pivotal in the work of the
47 division. Can you give an example of how the division's

1 involvement in research has led to system improvements?
2 A. Okay, so the first thing I'll say is that, you know,
3 the Agency for Clinical Innovation is a partner in many of
4 the translational research grants for the part that relates
5 to supporting implementation, supporting the local
6 engagement and the redesign, and the ACI is participating
7 in many research programs that go through the TRGS program
8 but also are going through, you know, NHMRC and MRFF
9 funding as well.

10
11 So our clinical groups are involved proactively and
12 increasingly proactively with different research groups to
13 support their work and make sure that that work, that
14 research work, is produced with input from us so that it
15 translates the needs of the system and the opportunities
16 for improvement.

17
18 We've done research in many different programs where
19 we feel that it has made a significant difference. That
20 includes, for example, the support that we gave for work
21 where we wanted to change the way emergency departments are
22 managing back pain. We collaborated with universities to
23 assess how to avoid prescription of opioids in emergency
24 departments, by mobilising different types of resourcing,
25 different types of professionals around it.

26
27 That study, for example, demonstrated a really strong
28 reduction in the use of opioids and in the use of imaging,
29 for example, which we knew was very often not benefiting
30 patients, not really making a difference for patients.

31
32 So that's an example where we worked with the clinical
33 team to really ensure that their research question, you
34 know, was driving the research, but informed by very strong
35 clinical and health systems research expertise to make sure
36 that it translated into impact afterwards.

37
38 Q. And just taking that example, given that back pain is
39 something that presents in general practice a lot and
40 people might be referred in to the hospital, have you been
41 able to disseminate those learnings into the primary health
42 networks and others to try and actually change the approach
43 in general practice to managing back pain?

44 A. There are different routes we're taking to try to
45 influence GPs and the primary care sector in general, which
46 is not, you know, a sector under the leadership of
47 NSW Health directly. It involves a structure that we have

1 in place at ACI that we call the general practice advisory
2 group, and that's a group of primary care providers that
3 give us advice about where should we be talking about that
4 model of care, should we organise webinars with GPs, should
5 would go to specific conferences where we talk about those
6 models? And in the case of back pain, they have given us
7 that advice and those studies were heavily, you know,
8 presented across the system.
9

10 But we also have a joint committee with the primary
11 health networks where we discuss these kinds of results and
12 projects. Every time we feel that there's a structure
13 within NSW Health that interfaces with primary care and
14 where the result of, you know, the research or an
15 innovative program may require an adjustment on both
16 sides - you know, emergency department and primary care
17 practices, for example.
18

19 So in terms of back pain, I know that the research
20 team has been heavily involved in disseminating the work.
21 I wouldn't be able to provide any numbers with regards to
22 the change in primary care. That's probably a study that
23 should be done to assess, you know, the impact. But with
24 regards to emergency departments, it's been very, very
25 clear, the positive outcomes.
26

27 DR WATERHOUSE: Commissioner, I'm going to be moving on to
28 the Agency for Clinical Innovation now. Did you want me to
29 do that or did you want me to take a break at this point?
30

31 THE COMMISSIONER: No, I won't take a break yet.
32

33 DR WATERHOUSE: Q. If we now turn, as I said, to the
34 ACI, and we might move to paragraph 23a of the statement,
35 so going backwards, it says there:
36

37 *Engagement and collaboration with consumer,*
38 *clinicians, agencies, industry and*
39 *academics, to identify, design and test*
40 *innovations in clinical practice.*
41

42 Who are the agencies that you're referring to?

43 A. Oh, it would be other pillars or organisations in
44 different areas that would be an important partner. And
45 those agencies could be national-level agencies. You know,
46 in virtual care we do engage with them. If we're talking
47 about models of care, we do engage with the national

1 commission, for example, you know, so there's a varied
2 group of agencies that we need to interact with to both
3 ensure that we do work that's complementary to the work
4 that they do but also ensure that we can benefit from their
5 support when the time comes to implement across the system.
6 So it does include a varied group of groups or
7 organisations across both Commonwealth and state.
8

9 Q. The paragraph above, 22, refers to the determination
10 of functions from 21 August last year. I might just get
11 that up on the screen. So that is B.023.048,
12 [MOH.0001.0345.0001], and if we could just make that a
13 little bigger. Thank you.

14
15 So it says in the third paragraph:

16
17 *The Agency will achieve this role by ...*

18
19 and it is very similar wording to what I just read out from
20 the statement --

21
22 *connecting consumer, clinicians, system*
23 *leaders, industry and academics to*
24 *identify, design, test and implement*
25 *innovations ...*
26

27 So the word "system leaders" is what is included in the
28 determination?

29 A. Mmm.

30
31 Q. But that has been changed to "agencies" in your
32 statement, and I'm just interested in the reason for that
33 change from "system leaders" to "agencies"?

34 A. There is no specific reason. I think it's an
35 oversight. It probably would have been better to use the
36 same terminology, because we're really thinking about all
37 of the agencies or individuals that have a role to play in
38 how the system is designed and transformed eventually.
39

40 So I would say "system leaders" is probably a broader
41 term, more aligned with the variety of stakeholders that
42 we're engaging with for our work and, therefore, the
43 determination of function is the most appropriate and
44 correct wording.
45

46 THE COMMISSIONER: Q. So the "agencies" referred to in
47 23a are the health system leaders that are referred to in

1 the determination; is that what you mean?

2 A. They are included in the system leaders, just like
3 they're included also in the public health organisations
4 when we go in more detail into the functions of the
5 organisation afterwards.

6

7 DR WATERHOUSE: Q. So do "system leaders" include the
8 local health districts? Because again, it seems that there
9 is a bit of a disconnect at that early stage of identifying
10 innovations, that the LHDs are not necessarily part of that
11 broad range of people with whom you consult. The
12 clinicians, yes, but not at that decision-making management
13 level?

14 A. There is absolutely no doubt that the local districts
15 are a key stakeholder and a partner in all of our work. We
16 do engage on a monthly basis with the chief executives of
17 the districts, through the senior executive forum. We
18 often present our work in key groups that have a role to
19 play either in safety or clinical governance, as a way to
20 engage with the district as well, and as I said, we've got,
21 as embedded into our clinical networks, many of those local
22 system leaders. So it's really a diverse approach that we
23 have to ensure that we hear, listen and respond to the
24 needs of the local health districts as part of our work.
25 It is not just clinicians that are consulted through that
26 process.

27

28 THE COMMISSIONER: Q. I suppose, when it has functions
29 in the determination - I mean, "agencies" doesn't seem what
30 an LHD is, but they might be system leaders, I think, but
31 when you look at the functions, it has:

32

33 *The Agency will perform the following*
34 *functions:*
35 *a) work with LHDs ...*

36

37 That's what you are really referring to?

38

39

40 DR WATERHOUSE: Q. So even though consulting at the
41 senior executive forum level will be about telling them the
42 work you're doing, you're comfortable that there are
43 mechanisms to find out what they are doing to identify
44 those innovations that are happening out in the districts
45 at an early stage?

46

47

A. Yes, and there are some structures that we've put in
place to do that. The first thing I will say is that

1 there's not a lot of programs that we start as a pilot
2 where a local district is not the main partner, and that
3 really means that, for that specific pilot, which is really
4 a small project that we progress before we implement
5 something statewide, we'll have a governance group
6 involving either the chief executive or the director of
7 clinical governance, or it could be the head of surgery,
8 for example, at the district level, and therefore we
9 co-design it, really, at the district level. And then we
10 use those more statewide platforms when the time comes to
11 say, "Well, how do we translate that successful pilot into
12 something that we will design for the state?"
13

14 If I may just use the example of Telestroke, because
15 I think it is a good example that demonstrates the way we
16 work. So Telestroke is a program that started probably
17 a bit more than eight years ago, and it started because we
18 were realising that patients were not receiving
19 thrombolysis, which is really the clot-busting technologies
20 and treatment, at a rate that we would require and expect
21 in many clinical settings.
22

23 Then we started to work with Hunter New England and
24 Mid North Coast, two local health districts, to pilot how
25 could we support a remote or regional area with the
26 specialised expertise of a regional centre to provide
27 clinical guidance remotely through virtual care means, and
28 what would be required from a technological perspective to
29 be able to do that.
30

31 What we did is that we trialled it, co-designed the
32 process with the local clinicians and the managers. There
33 was a local health district sponsor in both Hunter New
34 England and Mid North Coast, and then that enabled us
35 afterwards to design what it would look like if we were to
36 do that across all of the local districts in the state, and
37 that was the second phase of the project where we decided
38 that, yes, the benefits were clear.
39

40 So we worked with groups of clinicians and managers
41 from the different districts to design the model of care
42 that we would implement everywhere. And then we had, with
43 each of the districts, a go/no-go kind of approach where we
44 would start to look at their capability, work with them to
45 enhance their technological platform, make sure that their
46 clinical processes were in place, and then start to
47 implement in collaboration. That enabled us to implement

1 the program everywhere but also to make small adjustments
2 when we felt had a the local resourcing or the specific,
3 you know, geographical challenges meant that we had to roll
4 the program in a slightly different way.

5
6 THE COMMISSIONER: Q. Because you have mentioned
7 Telestroke, why don't you tell us practically how it works.
8 So a patient turns up in a rural ED with symptoms
9 consistent with a stroke. You take it from there.

10 A. Yes. So what we've done is that we've funded cameras
11 and mobile units in regional centres that are not
12 specialised for stroke, and what we do when a patient shows
13 up at a rural emergency department is that the emergency
14 doctor identifies that, you know, this could be a stroke,
15 connects with the service.

16
17 The service is, you know, led by a hub at Prince of
18 Wales Hospital in Sydney, and the clinician would then be
19 able to connect through virtual care, you know,
20 telemonitoring and screens, to be able to first help the
21 emergency doctor to provide the right assessment, provide
22 the right imaging that's required to diagnose a stroke, and
23 when it's confirmed to be a stroke - and that's not always
24 the case, so sometimes the patients may have symptoms that
25 look like a stroke but are not a stroke, and our
26 centralised service enables us to provide that advice to
27 the emergency doctor - when it is, you know, confirmed that
28 this is a stroke, then the neurologist specialist from the
29 hub will provide advice about the right treatment.

30
31 Q. A neurologist at the Prince of Wales will --

32 A. Yes, so the doctor at Prince of Wales or another of
33 the big centres part of the service will provide that
34 advice, and then either a thrombolysis will be started on
35 site, because that's a treatment that can be done in those
36 rural settings, or the patient will be transferred to one
37 of the endovascular clot retrieval centres located in
38 bigger centres, if we have to physically go and retrieve
39 the clot from the vessel, because that's another, you know,
40 new treatment that we have for stroke now.

41
42 Therefore, the Telestroke enables us to both increase
43 local capability to provide care locally for rural
44 patients, as well as making sure that our networked
45 approach, you know, between bigger centres and smaller
46 centres, would work in a seamless way and really ensure
47 timely retrieval for patients that need a higher level of

1 care. That's what Telestroke, in a nutshell, does.

2

3 Q. Thank you and Telestroke is an example of what you are
4 talking about, a collaboration between the ACI and, in
5 these instances, regional LHDs to develop a remote virtual
6 model of care to get better outcomes for people that suffer
7 strokes that aren't having strokes in the metropolitan
8 area?

9 A. Absolutely. And it's also a good example of how we've
10 collaborated across the entire system with eHealth, with
11 the ministry branches. Because when you're at the stage
12 where you take a pilot project to state level, there's
13 a lot of things we need to align. We need to align the
14 technological infrastructure, we need to align the
15 policies, you know, the kind of guidance we give to local
16 districts about how they manage transfers, for example. We
17 need to align clinical advice that we give --

18

19 Q. Is Telestroke the whole of the state now?

20 A. It is across the entire the state in all of the local
21 health districts. It doesn't cover every single hospital
22 in the state, you may understand this is not feasible, but
23 it does now reach out to all of the local districts, making
24 sure that there's a regional centre where ambulances can
25 take those patients and they will receive care, which is
26 supported by the highest level of technology.

27

28 Q. So you don't roll it out in every single small rural
29 hospital, but it's within reach for people if --

30 A. Exactly, exactly.

31

32 Q. -- they've had a stroke, to get to somewhere near
33 enough?

34 A. And it does cut the time, the travel time required, to
35 access the highest level of expertise for stroke in the
36 state.

37

38 THE COMMISSIONER: Sure. Thank you.

39

40 DR WATERHOUSE: Q. Just wondering if you can explain how
41 the Telestroke service interacts with NSW Ambulance to
42 determine the appropriate hospital to take a patient to
43 based on the symptoms and signs that they're exhibiting?

44 A. So before a patient arrives to a Telestroke remote
45 centre, it's the usual grid management that will guide
46 ambulance, so they will assess the patient, they will
47 identify where they can take the patient the quickest, with

1 an available clinician to provide advice.

2
3 Once a patient is in the Telestroke program, after
4 having been managed by the emergency department, then we
5 would connect with ambulance to make sure that we organise
6 the right transportation, if the patients need to be
7 retrieved and brought to an endovascular clot retrieval
8 centre in the city.

9
10 So there is a combination of using the ongoing, you
11 know, clinical assessment from ambulance staff and then
12 a coordination of transportation mostly for the retrieval.

13
14 DR WATERHOUSE: Commissioner, that might be a good place
15 to stop.

16
17 THE COMMISSIONER: If that's convenient to you, I'll make
18 it convenient to me. Okay. We will have a break, then,
19 until 11.30.

20
21 **SHORT ADJOURNMENT**

22
23 THE COMMISSIONER: Yes, Dr Waterhouse?

24
25 DR WATERHOUSE: Q. We might go to paragraph 24 there of
26 the statement. You note there that the ACI has 200 FTE of
27 employees currently. What types of roles do they fulfil?
28 A. So the first type of role that we have are clinical
29 network managers. As I've said, we've got 42 clinical
30 networks and the clinical network managers are the ones
31 coordinating the work of each of the networks, making sure
32 that projects are progressing.

33
34 We also have people that are supporting our
35 transformation teams and our people with expertise in
36 project management, in redesign and design of healthcare
37 services. We've got also teams that have expertise in
38 science and evidence, and they're the ones that really make
39 sure that we do the appropriate review of the international
40 literature, making sure that what we propose is
41 demonstrated to be effective with strong evidence. And
42 then we've got a small administration and communication
43 team that supports the organisation. But these are the
44 main kinds of roles - oh, in addition to evaluators and
45 economic modellers that we also have in the organisation.

46
47 Q. Do most of the staff have a clinical background?

1 A. It's more than 50 per cent of the staff that have
2 a clinical background at the ACI, and it's varied clinical
3 backgrounds, you know, we have doctors, nurses, allied
4 health professionals, we've got people that are from mental
5 health and psychology as well, from a clinical perspective.
6

7 Q. Do they have additional training in fields such as
8 clinical management, health economics, that sort of thing?

9 A. Yes, many of them have either gone through our own
10 internal redesign programs, developing their skills, you
11 know, in not just engaging clinicians but also with the
12 appropriate method, and many of them have, you know, higher
13 education as well in complementary aspects, either Masters
14 of Public Health or in administration.
15

16 Q. In paragraphs 25 and 26 you talk about the clinical
17 directorates, if we start with those, first, in 25. Is
18 this an arrangement that's come into play since the
19 division was established or is this the longstanding way
20 that ACI has been organised?

21 A. Yeah, the way the ACI is currently structured, it
22 dates five years ago when we did some realignment of the
23 way we were working. So PRISM and CATALYST, the two
24 clinical directorates, have been in place for around five
25 years, and they have streams that have also been in place
26 for, many of them, five years, some of them have been
27 slightly adjusted recently.
28

29 Q. Moving down to 26, you talk there about the evidence
30 directorate, STEP - system transformation, enablement and
31 patient partnerships - and then I think on the next
32 page there's a reference to IDEA and SCOPE. How do you
33 ensure that those support directorates, if I can refer to
34 them as that, don't overlap with some of the other things
35 going on. For example, the integrated digital enablement
36 accelerator, how does that not overlap with the work being
37 done by eHealth?

38 A. It is complementary. So if I may talk about the
39 integrated digital enablement accelerator, this is a small
40 team that we have established for the purpose of
41 redesigning health care so that those health systems can
42 actually use the digital technologies in a way that impacts
43 clinical delivery of care.
44

45 So that team is not about developing or maintaining -
46 or doing the maintenance around IT systems. That team
47 works in collaboration with eHealth to ensure that we work

1 with clinical settings and local teams to do the redesign
2 of health care that's required for new technology systems
3 to be impactful on clinicians.
4

5 So this is our way to help eHealth to translate those
6 new systems, digital systems, by redesigning health care.
7

8 THE COMMISSIONER: Q. What's an example of the digital
9 systems that you're talking about?

10 A. Yeah, so I'll give the example of the health outcomes
11 and patient experience digital platform. So that platform
12 was developed in partnership with eHealth and it's
13 a digital platform that enables patients to access remotely
14 key questionnaires that clinicians want them to answer, so
15 that when they get to the actual visit in front of their
16 nurse or their doctor, that information will already have
17 been provided to their clinical team. So they can fill out
18 a form.
19

20 Q. It's a form of survey?

21 A. It's a form of remote surveying and what it does is
22 that it enables clinicians to then access those results and
23 plan, you know, what is it that they're going to have to
24 discuss with the patient when the patient comes to the
25 clinic. In that specific program, our role was to work
26 with the local districts at gradually rolling out the
27 system across the state, in new clinical areas gradually.
28 So we had, you know, a system of implementation because you
29 can't implement something like that all across the state
30 all at the same time. So we worked with local teams giving
31 them the right training, answering questions that they may
32 have, but also at times helping them to understand how they
33 need to reorganise their outpatient clinic or their
34 inpatient management for clinicians to be able to use that
35 platform in a way that's effective.
36

37 Of course, if they were giving feedback that related
38 to the actual design of the platform, then we would
39 translate that back to eHealth so that they would, you
40 know, open the hood and make the adjustments that are
41 required to make those softwares work.
42

43 We do believe that it's a really fundamental role of
44 the Agency for Clinical Innovation, because those digital
45 platforms do not translate automatically into clinical
46 care. We need to take the time, you know, to reassess how
47 care is currently provided, make the adjustments that will

1 actually make those digital systems really impactful for
2 patients, you know. So I think that's a good example where
3 the collaboration has been ongoing for many years.

4
5 THE COMMISSIONER: Thank you.

6
7 DR WATERHOUSE: Q. Do the staff working in IDEA have
8 particular sort of training that they've needed to do to be
9 able to take on that role?

10 A. It's not training that we give to them but many of
11 them come with backgrounds in clinical settings and also
12 having worked in telehealth in the past or having been, you
13 know, working in clinical information teams at the local
14 level. So many of them do have experience in how digital
15 is translated into clinical care.

16
17 But we're not talking about people that have training
18 in coding software, obviously, that's something that
19 eHealth does. Our work is much more around the
20 transformation support, and that's why we call it an
21 enablement accelerator. It's about enabling those clinical
22 settings to use those platforms in the right way.

23
24 Q. In paragraph 27 you refer to the ACI establishing an
25 internal consultancy function just a few months ago. Can
26 you tell us a bit more about what that involves?

27 A. So that involves really having identified what are the
28 areas where we feel we've got internal expertise that could
29 benefit local districts or central agencies in the system
30 and offering that expertise as an alternative when
31 districts are contemplating either using an external
32 consultant to support that work or doing the work
33 internally. And what we're doing really is to make clear
34 that we can support on evidence reviews, we can support on
35 redesign, we can support on implementation approaches, we
36 can do data and analytics internally to do that.

37
38 What it involves really is assessing when a district
39 or a ministry branch needs support, external support, we
40 work with the chief procurement officer or the specific
41 division within the ministry, assess the request, and if we
42 feel that we've got both capability and capacity to answer,
43 then we work in partnership with the local districts or the
44 branch to deliver the work instead of going external.

45
46 So that's one of the contributions that we wanted to
47 make to make sure that we, you know, develop internal

1 capabilities that will complement or fill some gaps that
2 are currently present in the system.

3
4 Q. Is that within the 200 FTE that ACI has currently?

5 A. It is. Most of the time we can fit some of those
6 requests as part of our work. When we can't and we need to
7 enhance or lift the capacity in some teams, then we discuss
8 with the local districts or the branch so that we get the
9 appropriate funding to be able to increase our capacity.
10 So it's a good mixed approach that we're trying to do. But
11 we're not - we've not established a specific team for that;
12 it's much more that it's a specific process.

13
14 Q. And so will an LHD only pay for the additional FTE if
15 you have to bring someone else in - is that right - or do
16 they pay for the service generally?

17 A. They would pay if we need additional capacity to be
18 brought in. If we can do it internally, we offer it as
19 part of our usual service.

20
21 Q. I would like to go now to paragraph 44, where you talk
22 about models of care.

23 A. Yes.

24
25 Q. You have defined a model of care as - well, it says:

26
27 *...[it] refers to the way health services*
28 *are organised and delivered it outlines*
29 *best practice care and services for*
30 *a person, population group or patient*
31 *cohort ...*

32
33 Models of care aren't necessarily best practice, though,
34 are they? I mean, any model of care, in terms of service
35 delivery, may or may not be evidence based, best practice?

36 A. Well, there is different types of evidence that we use
37 at ACI to develop our models of care. There is, of course,
38 academic or research based evidence that we systematically
39 review, but we also want to make sure that the evidence
40 that comes from the experience of groups of clinicians or
41 consumers is also considered as evidence. That's why we've
42 established the evidence team, so that we will adopt as
43 rigorous methods to generate synthesis of the academic
44 research literature as when we're consulting with
45 clinicians and consumers. We want to go beyond opinions.
46 It's really about making sure that the consultation process
47 is generating as strong evidence as with the research

1 literature. Because the reality is that research is not
2 available for everything that you need to design a good
3 model of care, and sometimes you need to rely on the
4 expertise of hundreds of clinicians and consumers to
5 generate the additional evidence that is required. And we
6 do adopt rigorous methods that enable us, at times, to say,
7 even though there's not a study on this, the collective
8 knowledge and wisdom of clinicians is strong enough that we
9 need to put it in a model of care.

10
11 So in that sense, it's always about evidence based
12 models or evidence based practice, but not just backed by
13 the academic literature.

14
15 Q. But just to be clear, what you're talking about there
16 are the new models of care that you're developing as being
17 best practice. There are thousands of models of care that
18 have existed for a long time that ACI has not been involved
19 with, those are not necessarily best practice; is that
20 correct?

21 A. You are correct that ACI doesn't cover all of the
22 models of care currently implemented in NSW Health. We do
23 cover a really broad range and provide that advice back to
24 local health districts, but very often, they have their own
25 models of care and at times their models of care pre-date
26 the ones that we're updating.

27
28 Q. In the next paragraph, the last line, you say that
29 only a small subset of models of care are mandated by
30 a specific policy directive. Can you give us some
31 examples?

32 A. So what we mean by that is that, you know, a policy
33 directive is a formal document endorsed by the ministry
34 where they say local districts or clinical settings must do
35 X and Y, must do certain types of things. So, you know,
36 there are policies in many different areas and there is
37 a policy, for example, around stroke care, and the model of
38 care for Telestroke, for example, aligns with that one.

39
40 But clinical practice is much broader than that, and
41 there are areas where we don't need to mandate a specific
42 way to care for patients because clinicians have, of
43 course, professional autonomy to make the best decisions
44 for patients. But that doesn't mean we don't help them
45 with a model of care that would help them to standardise,
46 make sure that we reduce clinical variation - and by that
47 I mean that care would vary but not because of what people

1 need but more based on preferences or other factors - so we
2 want to reduce clinical variation by giving clinicians
3 a guide, you know, a model of care, so that increasingly,
4 patients can be ensured to receive care in a way that's as
5 standardised as needs to be, even though we don't need to
6 mandate a specific aspect of that care to be provided.
7 Clinical care is much broader than the amount of mandated
8 policies in the system.

9
10 Q. Of course. I might have missed it, but do you have
11 a specific example of one that has been mandated, just so
12 we can get a feel for that?

13 A. I mean, there's a lot of different examples. I mean,
14 we've got, you know, policies that mandate certain things
15 that we do around maternity, for example, you know, who do
16 you provide antenatal care, appropriate screening? That's
17 a good example where we've got both policies, because we
18 want every mother to have the right antenatal and postnatal
19 care, and then we've got models of care that provide more
20 details to clinicians about how to do it in practice.

21
22 Q. Thank you. Let's move down to paragraph 50. You've
23 given an example there of a new model of care, being the
24 clinical genomics model of care that came in in 2021. It
25 sort of explains there what it's about and how it came
26 about. Has this been evaluated to confirm that it did
27 achieve what it actually was intended to achieve?

28 A. Not to my knowledge. I don't think this one has been
29 evaluated yet, because it's a fairly recent model of care,
30 and also, we are gradually integrating this model of care
31 into new services, as new therapies are coming along. So
32 in this case, it's really a model of care that we've
33 developed ahead of time, because we knew that there would
34 be new therapies coming, and we wanted to give guidance
35 about how to set up those clinical settings, how to
36 reorganise care so that we can provide, you know, the right
37 access to the diagnostics and the right advice to
38 clinicians back. So to my knowledge, the evaluation has
39 not been done for that model of care.

40
41 Q. What would normally be the sort of time frame for an
42 evaluation for something implemented in 2021?

43 A. I would say that, you know, we want to review models
44 of care every five years to make sure that we keep them
45 current. Sometimes what we do is a midway review where we
46 assess the content of the model of care and compare it with
47 the changes in evidence, and in the case of genetics and

1 genomics, that's something that we're doing on an ongoing
2 basis.

3
4 At times, what would happen is that, after three years
5 of implementation, we would start an evaluation, asking
6 clinicians to reflect on the use of the model, identifying
7 any gaps, and that's something that, for example, our
8 genetic network, you know genomic network would meet to
9 provide that advice back and make sure that at five years,
10 when we reviewed the model, it's informed by that
11 evaluation.

12
13 Some models of care are associated with more - you
14 know, higher investments, and we do follow guidance from
15 treasury around projects where a significant investment was
16 made, and in that case, it would have to be done midway
17 through the program, as well as when, after three or four
18 years, the program is now implemented. That's when we
19 would do the evaluation and that's for projects that sit
20 within a certain range of investments. So we've got both
21 approaches, depending on the nature of the model of care
22 and in which type of program that it sits.

23
24 Q. So appreciating that it hasn't been formally evaluated
25 as yet, and you wouldn't necessarily know about whether
26 there have been improved patient outcomes, is there
27 a mechanism by which ACI will have been receiving feedback
28 about, say, increases in equity of access and whether there
29 has been a decrease in variation, some of those earlier
30 measurables?

31 A. Yeah. So there are two - there would be two ways for
32 us to hear about early impacts as well as gaps that we
33 would identify, needing to be corrected. First, it's the
34 network that we have in place where leaders from the
35 profession, you know, participate in our activities,
36 reflect on the use of the model, reflect on the current
37 service delivery in the system and help us to identify any
38 gaps or benefits from the system.

39
40 But we also, in this case, have a steering committee,
41 a statewide steering committee, where local districts are
42 represented, where the network is represented and also our
43 new technology assessment unit, and that's where we also
44 reflect on progress in terms of implementation and impact.
45 So we've got a statewide structure as well as the network
46 that enables us to lift and capture any emerging issues.

47

1 DR WATERHOUSE: We might move to paragraph 51.

2

3 THE COMMISSIONER: Q. Just before we do, on the topic of
4 models of care, I'm sorry to go back to where it was, but
5 in paragraph 26, when Dr Waterhouse was asking you
6 questions about those innovation programs, evidence seems
7 to be a directorate. STEP, IDEA and SCOPE are programs,
8 are they?

9 A. Evidence is a systematic input into the work of the
10 clinical directorates and in the work of STEP, just to make
11 sure that we always capture the latest evidence. We very
12 often put in place what we call "living evidence tables",
13 and that means that we - our teams, you know, either on
14 a weekly or a monthly basis, scan the literature and put in
15 those living evidence tables the most up-to-date
16 information, and we do that when we are working on a model
17 of care that is in an area where things are evolving very
18 quickly.

19

20 For other models of care where it's not such
21 a vibrant, you know, ecosystem where things are changing
22 fast, we would do an evidence review ahead of reviewing the
23 model of care, and for some of them that could be after
24 five years of implementation. So it's variable but we are
25 now systematically employing the evidence team as a way to
26 support that review.

27

28 Q. Thank you. What I wanted to ask you about is in c
29 you're talking about integrated the digital enablement
30 accelerator, and you've mentioned virtual care teams. Can
31 you just explain what the virtual care teams are and what
32 they do in New South Wales?

33 A. Yes. So every district has got teams that support
34 virtual modalities to deliver care. They're not always
35 located in the same place. Sometimes they are with the IT
36 systems, at other times they're in more clinical programs.
37 But they do have people that are in charge of supporting
38 the transformation towards virtual care, telemedicine,
39 et cetera. And our IDEA team works with those teams on an
40 ongoing basis to both help to support the implementation of
41 programs that we're currently rolling out --

42

43 Q. Telestroke is an example of virtual care?

44 A. Telestroke is an example. myVirtualCare, as an
45 outpatient, you know, telehealth platform is another
46 example. We're working with them on clinical registries
47 that we translate into digital modalities. You know, we

1 really have a relay locally, in the districts, with the
2 virtual care teams, you know, to help us implement what
3 we're implementing statewide, and in reverse, for them to
4 be helped by us when they need either a policy to be
5 changed or a tool to be, you know, assessed, so that they
6 can also continue to conduct their transformation locally
7 from a virtual care perspective.

8
9 Q. Totally out of curiosity - and this is probably
10 something that will get followed up later - I was recently
11 listening to a medical podcast, which is what I do in my
12 spare time now, and it was a doctor, a physician from the
13 Boston Children's Hospital, who was talking about how
14 they'd put in a hospital-specific 5G network because the
15 wi-fi wasn't good enough, which we may have to do in some
16 of our hospitals regarding alarms. But leaving that aside,
17 the virtual care model of care that she was describing was
18 one where children, who are cancer patients, are actually
19 getting their chemo infusions at home, and it's linked to
20 the hospital, and the physician at the hospital can see
21 that the chemo infusion is being done.

22
23 Presumably the parents and maybe even the child are
24 given instructions, because the physician was talking about
25 how computer screen literate the kids are anyway. And then
26 the physician gets the message that the chemo infusion has
27 occurred and all of the data at the home, of whatever kit
28 they've got there, then goes straight into the hospital's
29 electronic patient record for that patient, and so the
30 physicians can see all the health data for the child,
31 what's happened after the infusion and can call the parents
32 without the parents having to come into the hospital and
33 say, "This is what's happened. This is how it's going",
34 et cetera, et cetera, which seems like a pretty great model
35 of care for keeping kids that are unwell but can be treated
36 at home if you've got the right model of care. Is that
37 something that is being explored in New South Wales as an
38 example, in any areas?

39 A. This kind of model of care, yes. I will not give an
40 example in cancer but instead give an example - you know,
41 there are examples that we're progressing in terms of
42 chronic disease management, you know, people that have
43 chronic heart failure, people that have also chronic
44 respiratory diseases.

45
46 Q. Explain how it works for them, then if you've got -
47 which diseases did you say?

1 A. Chronic respiratory and chronic heart disease. And
2 we're piloting using remote monitoring techniques so that
3 clinical teams would receive, you know, biological
4 parameters that are currently monitored. It could be blood
5 glucose.

6
7 Q. So how does that work and where is it being piloted?

8 A. It could be blood glucose, it could be, you know,
9 heart rate, respiratory rate. It's a pilot that is
10 starting and I don't have on top of my mind the specific
11 districts where we're doing it, but we're not at the stage
12 of statewide implementation. We're really testing the
13 technology and testing how would it work for these kinds of
14 patients.

15
16 I'll give another example of wound care --

17
18 Q. How would that model of care - say someone with the
19 respiratory illness you're talking about, what would
20 happen?

21 A. Well, what would happen is that if we see many signs
22 of deterioration of their function, for example --

23
24 Q. So it might give oxygen levels or something like that?

25 A. It could be that. Then a team from the hospital would
26 have to call and check on things. If the rates would be at
27 dangerous level, it could trigger an ambulance to go. You
28 know, there's a lot of --

29
30 Q. Is this a small device that the patient is wearing
31 to help?

32 A. It is various types. What we're trialling at the
33 moment is really to assess what is the technological
34 platform that we need for that specific type of care.

35
36 I'll give the example that is currently rolled out
37 from Royal Prince Alfred, which is the wound management or
38 the remote wound management system. That enables our
39 clinicians from the RPA wound management to connect with
40 patients rurally, have them use their phones to, you know,
41 take pictures in a secure way, transfer them to RPA, where
42 a nurse or a doctor would review it, have help from the
43 software to help calculate how is the wound progressing and
44 then either ask, "We need to see you again because it is
45 not going in the right way", or "Continue your treatment
46 because it's all good", or prescribe a new kind of
47 approach. So that's a good example of a project that is

1 starting from a specific hospital and we've collaborated
2 with them in certain components, and now that it's
3 demonstrating that it's a successful program, we're
4 exploring how could we reproduce it in another way.

5
6 So there are specific areas where, you know, remote
7 medicine is currently being developed in New South Wales.
8 I'll just add another example, which is slightly different
9 but it's still an important example. Increasingly, we can
10 help patients that are waiting for surgery, and elective
11 surgery, to be more active, prepare themselves for the
12 surgery.

13
14 Q. So this is someone that might be scheduled for a hip
15 replacement or a knee replacement in 10 months time?

16 A. Exactly. Exactly, and those are exactly the areas
17 where we've got some apps that are currently being used,
18 piloted and evaluated to help patients to be more active,
19 manage their pain.

20
21 Q. So, what, they're sending messages saying, "Perhaps
22 you should get off the couch now"?

23 A. That are various prompts that are given to patients
24 through those systems and we're currently exploring, again,
25 how to embed them as part of the model of care, and we've
26 done some trials and pilots over the last few years to try
27 to enhance care that's currently delivered through those
28 digital tools and help patients to almost like have more
29 connections with the healthcare system compared to what we
30 can do through an outpatient clinic process so that they
31 get to surgery either more ready or at times even avoid the
32 surgery, if their state is improving significantly.

33
34 Q. Sorry, out of context again, and no doubt explored
35 later, but in the same podcast - so in my mind, and only
36 because you are, I think, the head of the artificial
37 intelligence task force --

38 A. Task force, yes.

39
40 Q. -- the physician from Boston Children's was also
41 talking about ambient AI - in other words, the nurses in
42 the room with the patient saying, "I'm doing this and I'm
43 doing that" and it's all recorded and it goes straight into
44 the digital record, which seems pretty revolutionary.

45 A. We know that there are technologies available to do
46 that, but we're not currently rolling out any pilots in
47 that space.

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Q. It sounds expensive to --

A. But that's something that obviously the AI task force will have to assess, discuss and make sure that we have, you know, a good rigorous process to make sure that if we adopt any technologies like this, supported by AI, you know, that it benefits our system and that's the focus that we will have, yes.

THE COMMISSIONER: Thank you. Sorry to distract you.

DR WATERHOUSE: That's okay.

Q. If we could go back to paragraph 51, please.

A. My apologies, which one?

Q. Paragraph 51?

A. Thank you.

Q. So that and the paragraph that follows are both talking about the emergency care access and treatment protocols, or ECAT protocols. Can you tell us a little bit about what these protocols cover in terms of clinical activities?

A. Yeah. So these protocols are standard protocols covering 73 different clinical areas and these are usual presentations at an emergency department, so it can be managing a wound, it can be assessing a patient that seems to have respiratory deterioration. So there is a broad range of clinical areas that are covered, 73 different areas.

But it's all about making sure that we start the treatment as quickly as possible and in a safe way, giving nurses all of the guidance required to be the first responder to start the treatment, again, in a very standardised way. And we know from previous research studies that we have done that this can actually accelerate access to health care, without generating any complications. It's a very safe way to do it, and that's why we've done it through those, you know, standardised protocols so that it's a really simple, step-by-step way to initiate care for those patients.

Q. I understand that those are not yet evaluated, it's early days. But do you have any early indications about the perspectives of consumers and staff in relation to

1 those protocols?

2 A. There has been quite a lot of studies actually done in
3 New South Wales with regards to this kind of process - not
4 the 73 standardised protocols that we are now implementing
5 statewide, but there has been prior studies that have
6 demonstrated good benefits, good acceptability, both from
7 consumers and clinicians, and we have an evaluation plan in
8 place for that ECAT, so that now that it's at the state
9 level, we can continue to monitor their impact. But
10 there's already evidence published in the literature about
11 the benefits of those kinds of protocols.

12

13 Q. And are they well accepted generally, in the
14 literature, by doctors who may feel that this has actually
15 been their responsibility, that nurses are moving into that
16 area?

17 A. New models of care always can face resistance from
18 people that have traditionally been responsible for certain
19 aspects of health care. What we know is that all
20 healthcare systems around the world are moving towards
21 really making sure that every type of professionals are
22 working at what we call the top of their scope of practice,
23 because that's really where we need their expertise.

24

25 So our knowledge about this specific kind of programs
26 is that they're well accepted, because clinicians and, you
27 know, medical emergency department clinicians, when they
28 come to see the patient after a protocol was used to
29 initiate treatment, it gives them the reassurance that the
30 right things have been done, the early diagnostics that
31 needed to happen before they would arrive and start to
32 provide the additional treatment was also done at the right
33 time. So overall, acceptability has been good, but like
34 any changes to models of care, we need to engage with
35 clinicians to make them also aware of the scope of this,
36 reassure them about, you know, the way it's going to be
37 implemented in a safe way for their patients, and therefore
38 we need to invest time and effort to do that, and that's
39 what the ECAT program will do as well.

40

41 Q. If we move down to alternative models of care
42 initiative at paragraph 54.

43 A. Yeah.

44

45 Q. So this is a way of stopping low-value services, and
46 the example given is in an intensive care unit, reducing
47 the number of unnecessary pathology tests. Has that

1 reduction in unnecessary testing been embedded in that ICU?
2 A. So this program was done in collaboration with NSW
3 Pathology. We started this in a few clinical settings to
4 actually develop the tool that would capture the volumes of
5 tests being prescribed and provide a way to feed back to
6 clinicians those different levels.

7
8 We now have a functioning platform that is still
9 ongoing and what we're doing now is to start to engage with
10 more clinical settings so that they start to reflect on
11 that platform. It's not yet implemented across the entire
12 state, but our intensive care New South Wales team is in
13 charge of continuing to disseminate that platform.

14
15 Q. And bearing in mind that some staff rotate, junior
16 medical staff in particular, and obviously nurses, maybe
17 agency nurses and so on, in the ICU or ICUs where it was
18 piloted, have they been able to maintain it, despite the
19 changes in staff?

20 A. That's a good question, and I don't have that
21 information on top of mind. That's something that I would
22 have to ask Intensive Care NSW to see if they've recently
23 evaluated the - you know, how sustainable has this program
24 been in the first ones where they established it. I was
25 only able to reflect on the further implementation that
26 we're doing. That's something that we can certainly check.

27
28 Q. And the further implementation would be going to
29 emergency departments?

30 A. Yeah. So that's the next project that we've already
31 started to pilot, to assess what is the level of testing in
32 emergency departments. We're working with our Emergency
33 Care Institute to develop that one. But this one has not
34 come to a full fruition yet.

35
36 Q. If we go to paragraph 55, please - and this is about
37 value based surgery - so you can see just over halfway
38 down, it says:

39
40 *The value-based surgery work aims to ensure*
41 *that surgery is performed in alignment with*
42 *the evidence base about clinical*
43 *indications and identifying (and*
44 *discouraging) procedures that are being*
45 *undertaken where there is no clinical*
46 *benefit to the patient.*
47

1 Hasn't the ACI got more of a responsibility than merely
2 discouraging people from doing procedures when there is, as
3 you say, no clinical benefit to the patient?

4 A. Our responsibility is to be very, very clear in our
5 models of care and our clinical practice guides when
6 a procedure shouldn't be performed anymore or if
7 a procedure is still, you know, not just recommended but
8 should be part of standards of care and therefore be
9 offered to patients systematically.

10
11 What that specific sentence and program reflects on is
12 the fact that, for some procedures, it's not the procedure
13 on its own that should never be done; the reality is that
14 it should be done for specific patients with specific
15 clinical indication. That's where we say we need to
16 encourage and work with clinicians so that we reduce the
17 number of patients that may receive a back surgery or
18 a knee surgery whilst they didn't have all of the clinical
19 criteria that would make them a likely patient that would
20 benefit from that surgery.

21
22 The reality is that in many clinical areas, it's a bit
23 of a grey zone. The literature says - you know, when they
24 assess certain types of surgery, they may say 50 per cent
25 of patients received surgery and did not benefit from it.
26 At times it is because of their age, at times it's because
27 they had other conditions that were preventing the surgery
28 from being effective for that patient. That's why, in our
29 models of care for those procedures, we're not saying
30 "Don't do it", because the reality is that those procedures
31 are still useful for some patients. What we're saying is,
32 "You need to have a multidisciplinary team discussion in
33 place so that your colleagues will help you to decide if
34 that patient will benefit from surgery."

35
36 So that's where we're trying to work through that, you
37 know, encouraging and convincing the system, because we
38 know that ultimately, at the end of the day, for those
39 procedures, it's the clinical team and the patients that
40 will have to make the decision. It's not the role of ACI
41 to govern that, you know? But ACI, of course, when
42 a procedure is no longer perceived as being the gold
43 standard, we have the responsibility to make it clear in
44 our models of care and our clinical practice guide.

45
46 So I just wanted to clarify that the hardest work
47 really is in those areas where it's more of a fit between

1 the patient and the procedure, where we need to work with
2 clinical practices more in a collaborative way and it
3 cannot be prescriptive, you know, to reduce that low-value
4 care.

5
6 Q. So even if there is a particular cohort, say, of
7 patients for whom there is demonstrably no benefit, you
8 would still say that the ACI's role is not to do more than
9 discourage clinicians doing those procedures in that
10 cohort?

11 A. The ACI doesn't have, as part of its statutory
12 function, the role to mandate clinical settings to do or
13 not do.

14
15 THE COMMISSIONER: Q. You can't injunct services --

16 A. Our role is to provide clear advice that then they
17 would have to reflect on. But it's not part of our powers
18 or levers to be able to dictate what clinicians would do.
19 We are there to provide advice, clear advice, and then work
20 with them to ensure again we persuade them to change their
21 practice when it needs to change.

22
23 Q. If you had those powers, it might be as dangerous as
24 potentially beneficial. Because some of those judgments
25 that you're talking about really need to be made at
26 a clinician level rather than at your level?

27 A. This is absolutely correct. Medicine is practised as
28 a profession. The relationship between nurses, doctors and
29 the patient is really paramount, and it's not for a central
30 agency to dictate, you know, what care a specific patient
31 should receive.

32
33 Again, I'll just emphasise that our responsibility is
34 to be very, very clear about the status of the evidence and
35 what's currently recommended as care, and then clinicians
36 will make the final judgment about the service they will
37 provide to individual patients.

38
39 THE COMMISSIONER: Sure.

40
41 DR WATERHOUSE: Q. We might pull up the value based
42 surgery document on the screen, which is exhibited to your
43 statement, it is at B.023.064 [MOH.0001.0282.0001].

44
45 Now, that was published in November 2023. What is the
46 status of this document? Is it a policy, a guideline,
47 a discussion paper? How would you characterise it?

1 A. So this is a clinical practice guide. It means that,
2 you know, it's not a policy, it's not something mandated;
3 it's a document that summarises the status of the evidence
4 at the moment in those specific surgical areas and provides
5 advice to clinicians with regards to how to assess patients
6 that may have indications that would require those
7 surgeries and give them guidance about how do they assess
8 if the patients would benefit or not from it.

9
10 So it's much more about providing guidance, and
11 "guidance" by definition is not something that you force
12 upon people; you guide them in the right direction. So
13 that document is really there to make it very, very clear
14 about, you know, what are the indications, what is the
15 right process to review them and what is the right process
16 to engage with patients in a way that will create a good
17 shared decision-making for those specific value based
18 surgical procedures.

19
20 Q. If we just go to page 9 of that document, so it
21 discusses there in the first paragraph - it says about
22 halfway down that it is suggested that at each local health
23 district they establish a surgical committee, and further
24 down, that that will assist the director to make clinical
25 adjudications about recommendations for admission, so when
26 a patient is being put forward to be admitted for
27 a procedure. And those decisions would be made when they
28 fall into the category of discretionary procedures listed
29 in the elective surgery access policy. So for the
30 procedures identified in this document, have they been
31 added in to the policy now, so that that is a guide for the
32 districts?

33 A. If I remember well, yes, those conditions have been
34 added and identified as procedures that are potentially of
35 low value. None of those procedures are low value for
36 every single patient. It's really about making sure that
37 they're now assessed through that process and that's the
38 guidance that we're currently providing in terms of how to
39 manage it locally so that clinicians are supported to
40 reduce the volume of those surgeries and really make sure
41 that they're targeted to the right patient.

42
43 Q. So they're discretionary insofar as they will be
44 appropriate for some patients, but they need to look at the
45 clinical indications that are based on the evidence; is
46 that a fair way to describe it?

47 A. It is.

1
2 Q. So given that the role has been given to the districts
3 to set up these committees to sort of support that
4 adjudication process, is there a role for ACI to support,
5 say, the smaller districts that may not have the resources
6 to put that governance structure in place effectively?
7 A. Our surgical care network is currently working with
8 the various districts to, you know, make them aware of the
9 clinical practice guide, assess how can they locally
10 progress that work. And you are correct that the bigger
11 districts have got bigger departments, probably more
12 structures in place and more support to be able to roll
13 this out, and traditionally, the ACI always provides more
14 support to rural districts or smaller hospital settings
15 where they don't have that change management resourcing
16 available, so that they can, you know, reflect on their
17 processes and establish the right local approaches.

18
19 The ACI would not replace their clinical governance
20 processes, that's really something that is part of the
21 local health districts' mandates, but we would provide
22 advice, toolkits and other tools that would help them to
23 implement it and make it - you know, make it a reality at
24 the local level.

25
26 Because our surgical clinical network is
27 a representative network, you know, we've got all of the
28 directors of surgery, many directors of anaesthesia, from
29 the different districts, we can really connect across the
30 entire state.

31
32 Q. One of the procedures - we don't need to go to this
33 page - but one of the procedures that's talked about is
34 myringotomy without insertion of grommets. That's
35 a procedure done by ENT surgeons; is that correct?

36 A. Yes, that's correct.

37
38 THE COMMISSIONER: I'm not sure I know what that is. What
39 is it?

40
41 DR WATERHOUSE: It's when they insert a little hole in the
42 eardrum and put an aeration tube in.

43
44 THE COMMISSIONER: An aeration tube?

45
46 DR WATERHOUSE: And aeration tube, yes, when you have
47 chronic obstruction in the ear.

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Q. So there may be some districts, smaller districts, that would only have one ENT surgeon, perhaps, out in the rural areas, for example. How would they have a - sorry, I can see you nodding in that regard. So that is correct, that it would be an ENT surgeon; yes?

A. Yes.

Q. That does these procedures?

A. Yes. In some distribution there may be only one ENT surgeon or a clinical practice where various surgeons would rotate to cover the needs of surgery in those districts.

Q. So how would a district put in place a governance process when they don't have peers that they can call on to actually adjudicate in relation to recommendations for admission for that procedure?

A. Yeah. So that's something that we would work with the districts to try to find a solution for. Very often, it would be that we need to have a multidisciplinary review program, not just comprised of specific surgeons but, instead, also mobilising paediatricians, if we're talking about grommets, it could be something useful, just so that it's not just based on a single surgeon's decision, socialised with a group through a rigorous process, so that various types of clinicians can provide an input.

So we wouldn't expect all of those to be done within each of the surgical specialties, anyway, and if there's any support to give to some of those regional areas, that's something we would explore from the ACI perspective, but it would be only to facilitate the process, again, not to make the decision on their behalf.

THE COMMISSIONER: Q. How long has spinal fusion for back pain alone not been recommended?

A. My apologies; I didn't get your question.

Q. How long has spinal fusion for back pain alone not been recommended?

A. It's not really time based. It's really one of those conditions where, compared to the volume of surgeries performed, the literature suggests that many of them do not benefit patients.

Q. We're straying, but just that when I started a lawyer which is a long time ago, every single plaintiff with a bad

1 back had spinal fusion surgery.

2 A. Sorry, I didn't quite get your question. So do you
3 mean to ask how long have we known that --

4
5 Q. Yes.

6 A. I wouldn't be able to say exactly since when the
7 international literature became quite consensual on that,
8 but it has been a few years.

9
10 THE COMMISSIONER: Thanks.

11
12 DR WATERHOUSE: Q. Could we just move to paragraph 58 of
13 the statement, please. So this is about reducing clinical
14 variation, sometimes called unwarranted clinical practice
15 variation. So it's said that this is an area of strategic
16 importance for the ACI. Can you just explain in a bit more
17 detail what this is?

18 A. Yes. So what we call unwarranted clinical variation
19 is variation in care that patients are receiving that we
20 cannot put - or that cannot be explained by variation in
21 patients' needs or preferences for care, okay? So
22 patients can, you know, have specific needs, but, of course
23 some patients may not want a surgery, for example, or some
24 patients may not want certain types of cancer treatment.
25 And there are procedures where we can see that the care
26 that's provided to patients does vary, and it doesn't
27 correlate with variation in needs or evidence that it's the
28 expectations of patients that are different.

29
30 That variation can be in terms of the actual
31 procedures that are offered to patients or the way those
32 procedures are performed, you know, laparoscopically or
33 through open surgery or done in hospital versus through
34 support at home. There are various ways to look at
35 variation to reflect on that.

36
37 What's unwarranted really is where, you know, for
38 example, we may think that in a certain region they've got
39 more of a certain type of procedure and it's not because
40 they've got more patients with an indication for that
41 procedure, okay? So that's unwarranted clinical variation.

42
43 Q. And when you identify an example of unwarranted
44 clinical variation, do you find resistance to changing
45 practice?

46 A. There's very often resistance to change, either
47 because clinicians are not aware that the evidence in the

1 literature has changed and, therefore, their practice needs
2 to change, or because, you know, the change management
3 required to support them to provide care in a different way
4 is significant. You know, clinicians may not want to
5 change the way they deliver care if they're not supported
6 in the right way through outpatient support and all of
7 those things. But it could also be resistance because
8 patients need to also be informed about the fact that the
9 standards of care are changing.

10
11 It is well known in the literature that, you know,
12 following a demonstration of evidence that a certain
13 practice is not a good practice anymore or that a new
14 practice needs to be adopted, there's ample evidence that
15 suggests that it takes time, it takes a few years before
16 clinicians will adopt it, and there are pockets of
17 clinicians that do not change their practices on the longer
18 term. That's why agencies like the ACI and the Clinical
19 Excellence Commission, for example, exist - because we're
20 there to support that process, engage with clinicians, make
21 sure that they're aware that the standards of care have
22 changed, mobilise their clinicians so that they're informed
23 about it, and also at the right times find the right
24 champions that will say publicly, "It's time for us to
25 change the way we deliver care for patients", you know, and
26 we use different levers to try to address the clinical
27 variation. But, you know, spontaneously, we know that it
28 takes effort to support adoption of those new practices
29 across complex healthcare systems like NSW Health.

30
31 Q. Is it sometimes the case that there could be a vested
32 interest in maintaining the status quo even when the
33 practitioner is presented with the evidence that it's no
34 longer good practice?

35 A. There has been studies that have demonstrated that
36 sometimes, financial or, you know, regulatory interest come
37 in the way, and that means that we need to work at
38 identifying those potential barriers and make sure that we
39 adjust funding models and regulatory approaches so that we,
40 you know, make it easier for clinicians to adopt those when
41 it is known that it could have a financial impact or an
42 impact on medicolegal issues, which, of course, are very
43 legitimate things to consider when we want to promote
44 adoption at the system level.

45
46 Q. And that's a role for the ACI, to be involved in some
47 of those changes?

1 A. The role of ACI is really to identify when such levers
2 will either become a barrier or would facilitate adoption,
3 and work with our partners within the ministry or with
4 other pillars or with the local districts so that we make
5 the right adjustments and really making sure that we
6 facilitate adoption by clinicians. But it's not for the
7 ACI to make all of those changes, given the fact that we're
8 an advisory body much more than a body that, you know,
9 governs and manages the system.

10
11 Q. Understood. So what actions is the ACI taking in
12 relation to unwarranted clinical variation currently?

13 A. So, of course, we've got 42 different clinical
14 networks, many of them do have a reflection on clinical
15 variation at the moment, and we produce, again, clinical
16 practice guides that really clarify to clinicians what is
17 the current standard of practice. We develop tools so that
18 local clinicians can start to work with their peers to
19 identify where there's clinical variation and start to
20 address it, and we're currently also designing a more
21 systematic program of measurement and action to cut across
22 the different specialties to more effectively continue to
23 address clinical variation.

24
25 The reality is that the ACI has worked on clinical
26 variation since its inception. Now, we're at the stage
27 where we can formalise and systematise a lot of that work
28 and prioritise in areas where there will be a stronger
29 benefit, and we're currently restructuring our clinical
30 variation work through a clinical variation action plan
31 that we have endorsed again before the pandemic, and
32 therefore we had to be cognisant of the fact that clinical
33 settings were disrupted at that time. But now that we're
34 getting to a different phase, with many clinical settings,
35 you know, back to where they were, it's time for us to
36 re-instigate that work, and that's part of our priorities
37 for the next few financial years.

38
39 Q. Would there be scope sometimes for, say, a slightly
40 more interventional role in the sense that you might have
41 a policy that requires clinicians to inform patients about
42 new evidence that - in relation to a procedure they're
43 recommending?

44 A. We already do that through our clinical guidance when
45 there is already a shared decision-making process. We're
46 already suggesting to clinicians that they use the tools
47 that we have provided so that they are more systematically,

1 you know, touching on the key points. We've not mandated
2 it. However, in some clinical areas, there could be
3 a mandate for some of those tools.
4

5 It's the same with clinical checklists. We can
6 identify when we feel clinicians need to more
7 systematically go through specific criteria but again they
8 are not mandated at the moment as part of our work. We
9 would only propose to the ministry to do that when there's
10 absolute evidence that this is now standard of care to the
11 level where every single patient should go through it, and
12 at times, when we support the review of policies, we do
13 propose for those tools to be referred directly in the
14 policy.
15

16 Q. We might move to "Technical and Clinical Innovation",
17 which is your next section, so if we can just scroll down,
18 I think it is probably the next page. There we go, just
19 there - or maybe if we go to, sorry, paragraph 64. You've
20 described there some advanced therapeutics that ACI has
21 been involved with or OHMR has been involved with, and they
22 look like very interesting innovations obviously. Can you
23 tell us about the bacteriophage or "phage" therapy, and in
24 particular the clinical implications for this?

25 A. Yes, so bacteriophages viruses that are harmless to
26 humans that we know are harmful for bacterias. So that's
27 the concept. So some viruses do attack bacterias,
28 bacterias are a bigger organism compared to viruses. In
29 nature, we find a lot of viruses that are actually keeping
30 in check some of those bacterias. Therefore, phage therapy
31 is really the clinical application of that concept, where
32 we can use some viruses that we know will not harm patients
33 but will target some of the chronic infections that they
34 have.
35

36 The purpose is for us to create a system where we can
37 more systematically identify the bacterias, their
38 susceptibilities, and find in our bank of viruses some that
39 would enable to target a treatment to those bacterias.
40

41 It's mostly used as an adjuvant to usual care, so by
42 "adjuvant", I mean as a, you know, a complementary kind of
43 therapy, and it's mostly used in cases where patients have
44 got intractable infections that are not responding to
45 antibiotics anymore or have bacterias that are
46 multiresistant to all of our antibiotics, and there's been
47 cases treated where we cured them of those chronic

1 infections because we've found the right virus that can
2 then target those infections and kill them in the body, and
3 afterwards, all of those viruses are, you know, also
4 expelled from the body by the immune system.

5
6 So that's what we are doing. It's an emerging
7 science, and we're working very closely with the scientific
8 team at Westmead to progress that, but also progress
9 a model where it can be made accessible and available more
10 broadly across the system, and that's what our advanced
11 therapeutics team is working on at the moment, really
12 partnering around the science but also the delivery
13 component of it, just so that we can really harness the
14 benefits for our patients.

15
16 THE COMMISSIONER: Q. Just on that, so at the start of
17 64 you've said that the Office for Health and Medical
18 Research advanced therapeutics team supports the
19 development and delivery of, in this case we're talking
20 about bacteriophage - or "phaige"?

21 A. I think it's either said as phage or "phaiges" in the
22 literature, so --

23
24 Q. I'll probably use both. Just if you want to, could
25 you just - sorry if you haven't given a complete answer,
26 the way the OHMR supports the development of this
27 particular therapy, is there anything further you want to
28 point out in terms of what the OHMR does?

29 A. Well, what the office does, when we find a new area
30 where there's obviously emerging evidence about a new
31 treatment that will come and we could use, the first thing
32 we do is that we assess what's the current capability of
33 the system to actually integrate that new therapy into the
34 system; is there further research that we need to do in
35 support; is there some infrastructure that we need to put
36 in place?

37
38 In the case of phage therapy, for example, we know we
39 need a biobank to be able to deliver that as a service, and
40 by "biobank", I really mean a place where we will have
41 different viruses, different types of viruses available
42 then to be manufactured and produced, to be able to be
43 given to a patient. If we don't have that bank of virus,
44 then it's unlikely we're going to find a specific bacteria
45 in a patient that could be treated by that. And of course,
46 it's the role of OHMR to work with the system at
47 identifying, you know, do we need to work with regulatory

1 agencies to make sure that we can produce those new
2 therapies in a way that meets the TGA, for example?
3

4 We work sometimes with pathology and other groups to
5 make sure that we could bank those new therapeutics. We
6 work with local districts when they say that their staff
7 are not trained to be able to manipulate some of those new
8 therapies as well. So we've got programs in pharmacology,
9 for example, that aim at lifting that capability of the
10 system. That's where you can see that the Office for
11 Health and Medical Research has got mandates that relate to
12 the proximal part of research, you know, really making sure
13 that we accelerate research so that it translates into
14 useable products, and then the ACI can take the relay and
15 work with the clinical systems to embed them after. And
16 again, at some point, phage therapy is probably one where
17 some networks of ACI will start to work on models of care,
18 for example.
19

20 DR WATERHOUSE: Q. Just one other question about the
21 phage therapy, is it fair to say that that's part of the
22 answer, scientifically, to the problems we see with
23 antibiotic resistance in the community?

24 A. It's one of the tools that we have. Of course, we
25 need to make sure we use antibiotics in an appropriate way,
26 and we've got a lot of clinical models that do cover that,
27 and the CEC, of course, have got a very important role in
28 drug management. But this one is helping us - when things
29 start, unfortunately for the patient, to be really
30 difficult to manage, you know, we've got some patients that
31 we've treated that spend weeks in hospital because of those
32 chronic infections, this is an additional tool we can use
33 and offer clinicians so that they can resolve those
34 multiresistance issues.
35

36 Q. If we just scroll down to the second example, 64b, so
37 this is gene therapy, and in particular, viral vector
38 delivery technology. Can you just outline what OHMR's role
39 has been in that and what promise it holds?

40 A. Okay. So gene therapy is a very broad term that
41 means, you know, using fragments of genes and replacing
42 those fragments of genes into, you know, cells in different
43 organs to make those organs or biological systems, you
44 know, start to produce the protein that, from a genetic
45 perspective, they are not producing, or stop producing some
46 of those proteins that are creating illnesses. And viral
47 vector is a specific technology that enables the

1 transportation of those gene therapies into the appropriate
2 cell.

3
4 So let me just explain, a viral vector is again
5 a virus that is innocuous or harmless for humans, that we
6 use as a way to deliver a gene therapy to a specific organ.
7 And what we do, or what the researchers and the academic
8 teams do, is that they find ways to identify and package
9 viruses so that they will respond to a specific receptor on
10 specific cells, so that, a bit like a mailbox system, they
11 will deliver the gene therapy in the right place, okay?
12

13 We've all heard of the, you know, SARS-CoV2 virus and
14 the way it was linking to the spike protein, you know,
15 well, in a similar fashion, the adenoviruses and the
16 lentiviruses that we use in viral vector therapy identify
17 a specific protein on the surface of cells, and then they
18 get into the cell and they exchange the faulty gene for
19 a good gene and then that cell starts to produce the right
20 protein, okay? So that's, in a nutshell, the technology
21 that we're talking about.
22

23 It's not the only one to give genetic therapies, but
24 it is one that, in New South Wales, we knew we had
25 expertise and we had teams that were able to potentially
26 bring this not just in the research space but actually in
27 the clinical space, so that we would start to treat
28 patients and potentially even turn this into
29 a commercialisation endeavour.
30

31 The role of OHMR has been to work with the system at
32 identifying what were their needs in terms of the research
33 they needed to do to bring that technology to fruition,
34 work again with regulatory organisations so that we would
35 be able to bring the system to be able to manufacture those
36 new therapies in a way that would fit with the TGA, for
37 example, and also identify how would we start to produce
38 this in a way that commercially would make sense and in a
39 way that would also enable our system to access that
40 technology at a lower price, because obviously you can
41 purchase those technologies internationally at the moment,
42 they are extremely expensive treatment.
43

44 So the role of OHMR is to work with the system so that
45 we work on those different aspects, making sure it happens.
46 Of course, we never produce the actual treatment, that's
47 all done at the local level, with the research institutes,

1 but it's about being the catalyst of that change so that it
2 happens. Many research teams come to us and say, "We need
3 a bit of help on this aspect", or, "We need you to help us
4 with our intellectual property", or, "We need you to help
5 us in terms of training of some staff", for example. In
6 viral vector, we did all of those things through the last
7 few years so that we'd bring that manufacturing capacity to
8 New South Wales.

9
10 Q. Is New South Wales leading the way, in terms of the
11 nation, that is, in regard to these two, the gene therapy
12 and the bacteriophage therapy?

13 A. In many respects, yes. In terms of viral vector, we
14 have announced yesterday, actually, the creation of
15 a company that will lead the manufacture of viral vectors,
16 and it's the only such facility that will exist in
17 Australia, and in many aspects of gene therapies we have,
18 you know, world-leading teams, really, in certain areas.

19
20 But gene therapy is such a broad area. There are, of
21 course, pockets of excellence all over the place, but
22 New South Wales is really well positioned overall in
23 precision medicine, you know, and gene therapy and our
24 capability in that space, in the kids' gene therapy
25 treatment as well as increasingly in adults, is really
26 a strength that we can build on.

27
28 Q. Does that open the door perhaps for collaborations
29 with other states to be able to roll out innovations from
30 New South Wales?

31 A. Absolutely. And OHMR has in the past established
32 networks that contributed to the national scene so that we
33 would mobilise not just the experts and the leaders that we
34 have in New South Wales but the broader group or community
35 of academics that are working in a specific area, and
36 I would say that for phage it's a good example because we
37 have supporting the academic team to start a national
38 network of specialists in phage therapy, again making sure
39 that we collaborate and coordinate across states.

40
41 Q. Just moving down to an example of the technical
42 innovation, and you've talked there about virtual care, we
43 touched on that before, can you maybe just briefly outline
44 the advances that have been made in the last three years in
45 relation to virtual care?

46 A. Yes. So there's been obviously a really increased
47 rate of adoption of virtual technologies in NSW Health.

1 The fact that, you know, through the pandemic we were not
2 able to bring many patients to physical outpatient clinics
3 for the purpose of managing the pandemic has already
4 contributed to that. It has helped clinicians also to see
5 how they can use those technologies as part of routine
6 care, and we can see now we have higher adoption rates of
7 virtual modalities to treat patients, compared to prior to
8 the pandemic.

9
10 There's been advances in terms of the tools that we
11 have in New South Wales, so we've got a platform called
12 myVirtualCare, it's one of the platforms that is used to
13 treat patients on an outpatient basis or after they're
14 discharged from hospital, so that clinicians and patients
15 can have a joint consultation without patients having to
16 come physically to the clinic or to the hospital, and of
17 course, in rural settings, that means, you know, hundreds
18 or thousands of kilometres saved for those patients.

19
20 There's been advances in terms of what is known in the
21 literature as virtual wards, which really means - or
22 virtual hospital, where many of the functions that we do
23 for patients admitted to hospital can now be done at home,
24 if we deliver to the patients the right technology so that
25 they can be followed centrally from the hospital but by
26 remaining at home, and, you know, RPA Virtual is a good
27 example of that being progressed in New South Wales.

28
29 Of course, Telestroke is an example that I've given,
30 and it is a virtual care platform because the clinicians
31 that treat patients for stroke in the hub do receive all of
32 the imaging done locally through that virtual system so
33 that they can interpret directly all of the imaging for
34 patients.

35
36 So there are different modalities that we've
37 progressed. And I will just conclude by the example of
38 HOPE again, the health outcomes and patient experience.
39 It's a different type of virtual care. It's what we call
40 asynchronous virtual care, so it is virtual care that it is
41 not - where patients and clinicians are not looking at the
42 same thing at the same time, but ultimately it's virtual
43 care because it enables clinicians to see from their
44 patients if they're not doing well and if they need to be
45 contacted, without having the patients needing to come in,
46 in the clinical office, or the emergency department, and
47 therefore it is providing a virtual modality to provide and

1 deliver that care. So I just wanted to provide a few
2 examples of the things that have really progressed within
3 NSW Health.

4
5 Q. And HOPE is about patient experience as well as
6 patient outcomes; is that correct?

7 A. Yes, that's correct, and by "patient outcomes", we
8 really mean their symptoms, their quality of life, you
9 know, the things that they would express if they were to
10 come to a clinic, you know, to say, "I'm not doing fine",
11 so we're talking about pain, we're talking about sleep,
12 we're talking about their ability to move around, you know,
13 things that relate to their quality of life, but it is also
14 about their experience. And by "experience" we mean, you
15 know, do they feel that care was provided in a way that
16 promoted good continuity or did they have to repeat the
17 same information at every visit, for example? Do they feel
18 that they've got enough information to take care of their
19 problem when they go back home? So the platform covers
20 really both aspects.

21
22 Q. Let's move to paragraph 66. This is now talking about
23 identifying, assessing, developing and implementing
24 innovations. In 66a there you talk about the critical
25 intelligence unit. So can you perhaps just start by
26 discussing exactly what that is?

27 A. Yes. So the critical intelligence unit is a small
28 team that we have established during the COVID pandemic, so
29 it started as the COVID-19 critical intelligence unit, and
30 it's basically a small unit that has the mandate to provide
31 extremely rapid review of evidence to support
32 decision-making at the right time, you know, supporting
33 myself, supporting other decision-makers in the system,
34 ahead of specific meetings or ahead of specific decisions
35 that they had to make, very often during the pandemic on
36 a daily basis, as you can imagine, and making sure that we
37 were always going back to the literature and assessing how
38 knowledge was evolving.

39
40 Of course, during the COVID pandemic, you know,
41 a month away really meant that, at times, what we thought
42 we knew was completely changed, and that's why a critical
43 intelligence unit was required. We needed a dedicated team
44 that had the time to track the progression of the evidence
45 and provide, you know, independent advice to support
46 decision-making.

1 It was a highly successful model, you know, and
2 therefore, we were asked to keep this going, both for the
3 purpose of continuing to support clinical decision and
4 policy decision in New South Wales with that capacity to
5 review rapidly the literature and provide scientific
6 advice, but also as a way to be prepared if we got another
7 pandemic or a recrudescence of COVID-19. So it was part
8 of, you know, making sure we would keep an infrastructure
9 that had demonstrated that it could benefit the system.

10
11 Q. About just over half way down that paragraph, after
12 the brackets, it says:

13
14 *Publications that describe innovations in*
15 *clinical care in [New South Wales] are*
16 *compiled into an Evidence Digest ...*
17

18 Why is it limited to innovations and clinical care in
19 New South Wales?

20 A. Actually, it's not the right way to describe it. This
21 is the evidence that's coming internationally, but the
22 process is that within New South Wales we want to reach
23 clinicians from our system to inform them about that
24 international evidence. So it is absolutely about all of
25 those international academic journals, it's about the
26 international organisations that are providing advice as
27 well, and the critical intelligence unit provides the
28 weekly evidence digest, looking at all of those sources of
29 information. So it's not just - it's not just about the
30 innovations within New South Wales.
31

32 Q. I thought that might be the case but I wanted to
33 clarify.

34 A. Thank you for that.
35

36 Q. So it says that it goes out to 1100 subscribers.
37 Would you agree that this is actually a very small number
38 relative to the size of the workforce in NSW Health?

39 A. We obviously want to increase the number of
40 subscribers to the evidence digest. It is increasing on
41 a month-by-month basis. It is used - the subscribers are
42 70 per cent clinicians and 30 per cent are people that say
43 they've got a policy role in the system or more of
44 a managerial role in the system. We don't know if those
45 70 per cent of clinicians, you know, are they all the ones
46 that are organising care in New South Wales? We don't know
47 that. But we will certainly continue to publicise the

1 existence of the evidence digest so that we increase the
2 number of subscribers, but in just a few months of
3 operation, it is still quite a good reach. But we're
4 continuing to advertise it.

5
6 Q. So I appreciate it's too early to have been evaluated
7 as yet, but is there any sort of plan to look at whether
8 these evidence digests are actually translating into
9 decision-making on that basis of what the evidence is?

10 A. Yes, and what we do is that we do track the specific
11 papers that are open or accessed through the digest on an
12 ongoing basis, so we can see the reach, which type of paper
13 seems to have, you know, got interest from clinicians, and
14 the digest is not just used by the people receiving it
15 through our electronic mailing system; it's also used by
16 different teams that are currently developing and designing
17 models of care.

18
19 So we do have other processes where we discuss the
20 digest with specific clinical groups and therefore we
21 already have evidence of elements of the digest that were
22 picked up and integrated into new models of care, because
23 it's part of the evidence review tools that we have.

24
25 Q. Is there a requirement for policymakers to refer to
26 these evidence digests and align their policies to them?

27 A. No, there's no requirement. This is really provided
28 for the sake of disseminating that evidence. We do have
29 other tools that synthesise the evidence in specific areas
30 that we produce - evidence checks, et cetera - and very
31 often we're asked to produce them for policymakers at the
32 time of their review.

33
34 Q. So is there any way in place that you can manage
35 inconsistency in terms of some of the policies coming out,
36 relative to the evidence, that they may not be informed by?

37 A. There's currently no mandatory processes in place for
38 that to happen. What is happening at the moment is that,
39 you know, we receive requests from all of the different
40 branches of the ministry and many pillars and local
41 districts. When they are revising policies, then they ask
42 us to provide that kind of evidence support.

43
44 Q. So on the next line, it refers to this digest
45 subsequently being reviewed by a clinical panel to identify
46 potential game changers. What happens when they identify
47 such a game changer?

1 A. Yes, so just before I answer that, I just want to say
2 that a game changer for us is really an advance in clinical
3 practice demonstrated by the research that we feel will
4 change clinical care or will change clinical delivery of
5 care. So when our clinical panel reviews the digest and
6 identifies that there's really a breakthrough in the
7 literature, what we do is that we would either go to
8 a specific clinical network to discuss this and see how we
9 can translate that into an existing tool or if we need to
10 develop a new instrument, but also at times we will surface
11 it to our colleagues within the ministry when we feel that
12 it relates to a program of work that, you know, they're
13 working on, either in sustainability in health care or
14 virtual care or any different aspect.

15
16 So the ACI takes responsibility then of having
17 discussions with the appropriate group about what is the
18 best next step in terms of progressing that game changer.

19
20 It could still be that we need to wait for more
21 evidence to accumulate before we're convinced we need to
22 build a pilot, you know, or test some of those, or it could
23 be that the game changer is actually helping us to inform
24 the next iteration of a current program, and again, we
25 bring it to different platforms including the future health
26 steering committees when required.

27
28 Q. And at what point would the system - the health
29 services - be made aware that there may be something of
30 this nature on the horizon?

31 A. I would say that it's still variable because we're
32 really bedding this process at the moment, trialling to see
33 what's the best way to identify and then progress game
34 changers. We need to be cognisant of funding cycles. We
35 need to be cognisant of the fact that for some of those
36 game changers, there's a lot of things that we will have to
37 adapt or adjust before we can actually roll them out, and
38 therefore, we need to also adapt it to the specific areas
39 that it relates to.

40
41 You know, as you know, it takes longer time to train
42 people differently if a game changer is about using
43 a different type of professional to deliver a certain
44 service, or it takes time to adjust models of care if
45 a game changer is more about specific aspects of the
46 standards of care. So it will have to be variable, but
47 again we're learning to work with that system. We think

1 that the advance that we've made is to really make it
2 systematic, that we go through the literature and have
3 a mechanic in place to surface what's promising.
4

5 Q. Who's on the clinical panel that looks at these?

6 A. So there's two clinical panels that we can use,
7 depending on the game changer. The first one is the Health
8 System Advisory Council, and the membership of the council
9 is available on the website. You know, it's a broad group
10 of clinical leaders across the system and managers that
11 have leadership roles as well, and it covers a broad
12 range of clinical areas. So I won't - you know, I wouldn't
13 be able to name all of the members of the group. But we
14 also have what we call the clinical executive advisory
15 group within ACI, where we've got surgery, trauma,
16 emergency care, anaesthesia, intensive care, general
17 practice represented, and they help us to really identify
18 not just that the game changers in a specific clinical area
19 has demonstrated a potential benefit, but that it would fit
20 with the other clinical areas that they represent.
21

22 Q. If we could just scroll down to the next page, so this
23 is paragraph 66d, you note there that the OHMR and ACI
24 funded projects once completed are a potential source of
25 innovations for spread and scale. Does the ACI or the OHMR
26 monitor how they are spread and scaled up?

27 A. It's variable, depending on the program. Some
28 programs have much more mature monitoring processes in
29 place already. We are working at expanding that monitoring
30 to all of the different programs, and that's why we've
31 established, within OHMR, a specific monitoring and
32 evaluation expertise. They're building new measures that
33 enable us to better reflect on that process.
34

35 Within ACI we do have an evaluation team that's
36 available at the right time to do the, you know, surveys
37 and data collection required to be able to reflect on
38 a program. But for some of the programs, we still don't
39 have in place a fully fledged monitoring and evaluation
40 process.
41

42 Q. Do you have a sense of some that have been embedded
43 across the system, having started at that initial project
44 level?

45 A. Well, all of the measures that relate to our research
46 governance, clinical trial management, already have all of
47 that monitoring in place. All of the programs that were

1 funded through treasury grants also have that monitoring
2 and evaluation process in place. Also, I would say that in
3 areas like trauma, intensive care, surgery, we've got many
4 really well-established monitoring programs that cover the
5 entire state, and in many of those areas, you know, it's
6 a monthly review that our clinical teams are doing. So
7 those are a good example of where we've been able to really
8 progress a full statewide monitoring and evaluation of
9 impact.

10
11 Q. In the next paragraph it refers to the new technology
12 and specialised services committee. Can you just give
13 a bit of an outline of the assessment process that's
14 involved for the things that are put forward by districts
15 and pillars?

16 A. The first thing I will say is that I'm a member of
17 that committee and I do represent ACI and the office in my
18 attendance to that committee. It's a committee that
19 receives requests for assessment of, you know,
20 technologies, that could be brought to the state level, and
21 what's usually done are evidence reviews about the
22 effectiveness of the technology; at times, economic
23 assessment, to also ensure that we evaluate the cost but
24 also the benefits and the ratio of costs to benefits for
25 some of those technologies; and at times it does involve
26 specific work from the Agency for Clinical Innovation in
27 terms of assessing from a clinical perspective the
28 perceived need for those technologies and a reflection on
29 the challenges that would come from implementing them at
30 the state level. So those are broadly the kinds of things
31 that are put in front of the committee for assessment
32 before stating if a new technology will be supported for
33 statewide use and implementation.

34
35 Q. So if something were put forward by a pillar or one of
36 the networks, the clinical networks, so they put forward
37 a new technology, is it possible that a local health
38 district could be required to fund it going forward, even
39 if it wasn't something that they regarded as a priority?

40 A. Yes, it's possible. It all depends. Some of those
41 technologies are really part of, you know, standard
42 clinical delivery, you don't always need a statewide
43 program to support the governance around it, and when it's
44 something that should be used at the bedside and doesn't
45 need that coordination across different districts, then
46 really, truly, it's a local district's responsibility.
47

1 Sometimes we do feel - and the recommendation from the
2 committee can be that - a statewide program needs to be
3 implemented to support, you know, a safe and economical
4 implementation of those processes, and at other times, the
5 committee's recommendation is to recommend that it's only
6 done under a research process, if the evidence is emerging
7 but not quite supporting for a full statewide
8 implementation already.

9
10 Q. If we just scroll down to 68, and we've got there the
11 ACI redesign school, how does the course work in the
12 redesign school?

13 A. Yes, so what we do in the redesign school is we've got
14 three or four cohorts of students every year, and they
15 start at different times of the year, and then they go
16 through a process of monthly contacts where either they
17 receive onsite training, and it can be training about data
18 analysis, it could be training about project management, we
19 support them in their process of identifying and clearly
20 stating what is the clinical problem they want to solve.
21 And then we, through the year, through 12 months, give them
22 training so that they progress their work to a stage where
23 they can implement and evaluate the early impacts of that
24 work.

25
26 The people that come to the schools are clinicians and
27 managers from the districts. Most of the teams include
28 medical, nursing, allied health, management staff as well,
29 and they come as a team and they come with a project that
30 has been supported by the chief executive of the district
31 to be put to the school and when they get into the school,
32 then they work at trying to find a solution to that
33 specific problem.

34
35 So it's a very hands-on kind of course where they
36 have, at the same time, to learn new capabilities as well
37 as deliver on an improvement project, and that's why it's
38 called the school for redesign - really, redesign clinical
39 care in practice.

40
41 Q. On the fourth line there you refer to service
42 improvement sciences. Can you define what that means,
43 please?

44 A. Yes. So there are different ways to improve care in
45 the literature, in terms of implementation methods. You
46 know, there's a lot of PDSA processes, for example, that
47 are proposed, you know, "Plan, do, study and act". There's

1 methods like Six Sigma that aims at, you know, making sure
2 you really understand the way different elements work
3 together to improve the outcomes. There is full co-design,
4 where consumers and clinicians and managers will come
5 together, exchange on their perspective and redesign care,
6 when we feel that it's that adjustment that is not quite
7 right, you know.. so those are examples of improvement
8 methods that are taught in the school and are adopted by
9 different teams, depending on the problem that they're
10 working on.

11
12 Q. And just one more request on this. Does the ACI
13 follow up to see that the projects that have been done
14 through the redesign school do actually become embedded?

15 A. We do on a regular basis. We have innovation exchange
16 program and the digital platform that does showcase that.
17 Many of them are actually the projects that have led to
18 fully statewide implemented programs later on, so then,
19 when that happens, we've got clear evidence that they've
20 been picked up. And what we do is that we get in touch
21 with our community of practice that I talked about this
22 morning, which is the community of practice of directors of
23 innovation, and they can reflect when a specific program is
24 still ongoing. These are really the ways that we use to
25 assess the sustainability of those programs.

26
27 THE COMMISSIONER: We will adjourn until 2 o'clock.

28
29 **LUNCHEON ADJOURNMENT**

30
31 THE COMMISSIONER: Yes, thank you.

32
33 DR WATERHOUSE: Q. We are on 68b. So we finished just
34 before the adjournment talking about the ACI redesign
35 school. I would like to move on to the ACI innovation
36 exchange that you see at the top of the page there, or top
37 of the screen, rather. Of the 46,790 page views, do you
38 have an understanding of how many of those have been by
39 local health districts looking for projects that they might
40 be able to implement?

41 A. I don't have that information top of mind, but we
42 could certainly do an analysis of provenance of the
43 various - but that's not an assessment that we've made.

44
45 Q. Do you know if there are particular projects that get
46 very large numbers of page views relative to others that
47 have been particularly popular, say?

1 A. Again, that's not something I personally have top of
2 mind at the moment. What has to be said is that the
3 platform has been re-platformed recently, so that search
4 modalities are easier and therefore we're in the process of
5 expanding the platform at the moment. But I don't have the
6 top page being watched.

7
8 Q. But that will help with the metrics in terms of being
9 able to measure those things?

10 A. Yeah, that's something we can do using our usual web
11 based statistics to better understand which ones are
12 frequently visited.

13
14 Q. Just in that same point still, but the next sentence,
15 it refers to 275 projects that are live. What does "live"
16 mean?

17 A. It means that they're current, they're on the platform
18 and we consider them as being, you know, current examples
19 of innovation. Some of them have been retired through the
20 years, of course. They're not innovation anymore,
21 especially if they get rolled out across the entire system,
22 and then we add additional ones, and I think that we plan
23 to reach almost 300 projects at the end of this month.

24
25 Q. And where it says 29 were published in 2023, are they
26 live projects now or is publication a different thing?

27 A. They are live.

28

29 Q. So that's a subset of the 275?

30 A. Yes.

31

32 Q. If we just scroll down to paragraph 69, this is where
33 you talk about innovations that have been identified in
34 response to particular policy questions or challenges the
35 system is facing.

36 A. Yes.

37

38 Q. Can you give some examples of particular initiatives
39 that have come out of tackling surgical wait times?

40 A. Sorry, particular programs or initiatives that have --

41

42 Q. Yes, so it says that "the ACI was asked to investigate
43 ways" --

44 A. Yeah.

45

46 Q. -- so what did you come up with for tackling surgical
47 wait times?

1 A. So what we did for tackling surgical wait times is
2 that we first searched the literature about what were the
3 evidence based programs that we felt could impact on wait
4 times. And what we did is to build a comprehensive patient
5 pathway so that we would really take the patients'
6 perspective to identify all of the things we can do at
7 different stages of their illness, either whilst waiting
8 for surgery or whilst being assessed for surgery, but where
9 we could do interventions that would help to improve the
10 pathway.

11
12 So we identified that there are things we need to do
13 months ahead of time when patients are first put on the
14 list to start to make them ready for surgery, and that's
15 called our pre-habilitation programs. We've identified
16 that there are things we need to do in the month leading to
17 the surgery, so that at the time they come for surgery, you
18 know, they don't have uncontrolled diabetes or another
19 chronic condition that would, you know, prevent them from
20 being able to receive the surgery.

21
22 But also what we did is identified programs that
23 helped to better manage the intraoperative period, as well
24 as the things we needed to do early in the piece so that
25 patients can be discharged early after surgery and recover
26 early after surgery, and that's where our early after
27 recovery surgery program came.

28
29 So what we did is identify various programs that
30 either were helping to reduce the need for surgery, helping
31 to better manage the flow of surgery, and really avoid, you
32 know, cancellation, avoid things that we know would reduce
33 our capacity to tackle the surgical wait times, you know.

34
35 We wanted to have a comprehensive approach, not that
36 every district had to do everything, because obviously in
37 some districts the needs are more towards the pre-surgical
38 or post-surgical, but at least we had the suite of projects
39 and measures that we wanted them to be able to pick on and
40 we would support the implementation, you know. So that's
41 what we did in that particular area.

42
43 THE COMMISSIONER: Q. This is slightly tangential, and
44 someone can correct me if I get this wrong, but something
45 the anaesthetists have told us - and I'm paraphrasing, but
46 it's along the lines of, "We don't see patients in the
47 elective surgical list early enough to assist with things

1 like assessment of how suitable they are for the surgery,
2 providing advice about possible lifestyle changes that
3 might mean the surgery is not ultimately needed". Is there
4 work going on in that space?

5 A. Yes. So as part of the framework that we developed,
6 we clearly identified pre-habilitation and what we called
7 optimisation for surgery as key areas, and in optimisation
8 for surgery you've got different programs that can be
9 rolled out. Of course, one is all of the pre-habilitation,
10 behaviour change, control of risk factors, but there are
11 also pre-surgical clinics, especially for high-risk
12 patients, that we encourage local districts to implement,.
13

14 Q. So what do they involve?

15 A. Very often they're run by anaesthetists, because one
16 of the risks related to surgery is actually the general
17 anaesthesia that's related to it, and therefore it is
18 important that anaesthetists assess the patient early,
19 identify the risk factors that need to be changed, so that
20 at the time of surgery, you know, again, they're in a state
21 where we reduce the risk and they're more ready for
22 surgery.
23

24 Q. So are pre-surgery clinics routine across LHDs where
25 surgery is being performed?

26 A. For specific patients that need that assessment, so
27 there are criteria we can use - age, of course --
28

29 Q. What does that mean, patients with chronic diseases?

30 A. -- co-morbidities, and for specific surgical
31 procedures it's more warranted than others. We wouldn't
32 recommend that it's done for every single patient, because
33 this is --
34

35 Q. It may not be needed.

36 A. -- a use of resourcing that is rare, and therefore we
37 need to target, for the patients that are at risk, needs to
38 be assessed for that risk, so that we optimise them before
39 surgery.
40

41 Q. Just slightly related to that, in 69g you talk about
42 introducing same-day joint replacement surgery. Is that
43 routine? Say it's hip or knee, is it routine now that
44 you're in and out the same day?

45 A. In some centres --
46

47 Q. I'll fill this in. When we had a visit to the

1 North Sydney LHD at Royal North Shore Hospital, they
2 certainly had a program for people to have joint
3 replacement surgery and be discharged that night, that
4 they'd had the surgery. Is that routine across the state
5 or not?

6 A. What I would say is that in some districts, it's
7 routine to assess if patients need to be in their same-day
8 surgery program.

9

10 Q. Sure.

11 A. Okay? So all the patients are assessed for it, and
12 then some patients do not take that track because of
13 certain risk factors. Do we have a standard joint
14 replacement surgery in all of the districts --

15

16 Q. There's a type of patient? There's a type of patient
17 it might be ideal for.

18 A. -- we're not there yet. So there are some districts
19 where we still continue to support them to implement their
20 same-day joint surgery program. It doesn't mean that they
21 don't have any patients doing day surgery, but what we want
22 is a more systematic approach where patients are really
23 assessed for it so that we increase the proportion of
24 patients that go through those same-day surgeries, because
25 we know they're associated with excellent outcomes, and you
26 reduce the impact on the system, and we also know that for
27 many procedures they're actually associated with less
28 complication, because patients mobilise more quickly
29 afterwards and all of that is part of good recovery after
30 surgery. So it's not all implemented across the state,
31 but --

32

33 Q. Well, it's not suitable for every person that's having
34 a joint replacement for a start.

35 A. It's not suitable for everyone.

36

37 Q. Secondly, there might be a complication that means
38 you've got to stay in the hospital.

39 A. Yes, and you need to consider the patient's personal
40 circumstances as well, because same-day surgery works under
41 the assumption that people can go back home, have the
42 support that's required and not have to travel too long to
43 come back if, for whatever reason, they've got an infection
44 or a bleeding or another complication.

45

46 So there has to be some variation and some adaptation
47 to the patients' needs and specific circumstances, but we

1 do want more hospitals to routinely offer that program as
2 part of their surgical program.

3
4 Q. For the people it's appropriate for?

5 A. Yeah. And we've got models of care to guide surgical
6 units in identifying those patients based on the evidence.

7
8 THE COMMISSIONER: Thank you.

9
10 DR WATERHOUSE: Q. Just taking that one as an example,
11 if a district has actually set up a program whereby they're
12 doing 24-hour joint replacement surgery - ie, discharge
13 within 24 hours but not necessarily the night of the
14 surgery - is there an expectation that they will stop doing
15 that and transition to the same-day surgery program that's
16 been developed by ACI or have they the latitude to continue
17 doing what they - what works well for them?

18 A. They have the latitude to continue to do what works
19 well for them, because again, it may be that they really
20 need to make sure that the patient is stabilised overnight
21 before they ask them to travel significantly across the
22 state - New South Wales is a big state, of course.

23
24 It may be that in terms of their capacity to quickly
25 readmit or have advanced access clinics, et cetera, they're
26 not at that stage yet and therefore we need to respect that
27 it's a gradual process. But what we do is to really help
28 them to enhance their same-day or next-day surgery. That's
29 part of the program. Already we think that this will
30 provide a lot of benefits for patients and then local
31 districts have room to adapt it to their specific clinical
32 context.

33
34 Q. And some examples also, perhaps, in relation to the
35 management of end of life palliative care, are there ways
36 in which the ACI has investigated initiatives and developed
37 things for that?

38 A. Yes. We do have a palliative care network, it works
39 with the system about, you know, enhancing the models of
40 care, et cetera. And we also have increasingly what we
41 call supportive care models where, you know, when patients
42 are in specific clinical situations where they may - we may
43 think they need an intervention but that intervention may
44 actually have an impact on their quality of life towards
45 the end of life, we also increasingly have models that help
46 to support them without necessarily needing surgery or the
47 active treatment so that they're comfortable. That's part

1 of a broad kind of perspective on palliative care, which is
2 something that we've tried to promote in various clinical
3 areas - more supportive care, leading to palliative care
4 afterwards.

5
6 Q. If we can just scroll down to 70, and this is where
7 you talk about clinical engagement, now, you can see
8 there's a long list there of all of the ACI's networks,
9 task forces and institutes, and it goes over the page. I'm
10 just wondering, there seems to be some similarities. So if
11 you look at a, which is "Aboriginal Chronic Conditions",
12 and then just over the page, you have "Chronic Care for
13 Aboriginal People" at h.

14 A. Yes.

15
16 Q. Now, is there potential for sort of overlap or
17 duplication of what they're doing by having groups working
18 on similar areas?

19 A. So one is a team that manages our program as an
20 Aboriginal health program and helps all of the networks
21 across the agency to consider Aboriginal health issues and
22 in the appropriate way. The other is a network of
23 clinicians and local managers that work in that area. So
24 the reality is that they are complementary. It's not in
25 every clinical area where we've got a team and then
26 a specific network being progressed for Aboriginal health.
27 This is what, you know, the community wanted.

28
29 We are currently working - you know, we've got a new
30 director of Aboriginal health at the ACI and we're going to
31 revise our activities in Aboriginal health, and those, you
32 know, teams and network will be part of - will be part of
33 that stream of Aboriginal health, led now by our new
34 director of Aboriginal health.

35
36 Q. So given the very large number of groups that you
37 have, how does the ACI, as an overarching entity, ensure
38 that you minimise the overlap and duplication and also that
39 you minimise gaps where one network might assume that
40 another network has a particular body of work covered?

41 A. Yeah, so the first thing that we did to ensure
42 reduction of duplication and increase in synergies and
43 coordination is five years ago we restructured the
44 organisation and we created clinical streams. Those
45 streams are pulling together clinical networks that have
46 commonalities in terms of their patients or the type of
47 interventions that they want to do or the type of clinical

1 sector that is involved.

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That enables us, for example, to manage in a more integrated way all of the trauma, pain, rehabilitation related networks under a single stream. It doesn't mean that everything then gets subsumed into a single kind of big network. We still have those different clinical engagement programs, but now they relate to a clinical area where we ask them to plan in a more integrated way. We ask them to manage some programs collectively and across the networks instead of just the network specific work that they have to do.

So in 2018, what we did is to restructure so that we would have eight clinical streams where the 42 clinical networks are embedded, and then we started to engage with them at the stream level in addition to, at times, having relationship with the networks at the clinical level.

THE COMMISSIONER: Q. Sorry to interrupt, this is not a criticism of you or the people that helped draft your statement, but just so it's in the evidence, there's a few terms in your statement that - this will be my fault - I don't understand, and if they're not in the evidence I can't make it up or guess.

A. Yes.

Q. In 69f there's a reference to ACI being asked to investigate ways to deliver CAR-T cell therapies. I don't know how important this is. Someone has explained this to me once and, shamefully, I have forgotten. I know CAR-T cells are, I think, white blood cells and some of them are T cells and they're taken out of the patient and they're modified and then they're put back in and then I have forgotten what happens after that. They help your immune system attack a cancer or --

A. Yes, exactly. And my apologies if there are some terms in the statement --

Q. No, no, don't worry.

A. -- but we can certainly correct that.

Q. Was there anything you would add to the brief description I just gave - the thesis about CAR-T cell therapies?

A. Yes, so CAR-T cells are modified T cells. The T cells are the cells that we have in our body that defend

1 ourselves against a lot of things, infections but also
2 cancer. You know, it's a little known fact but our immune
3 system --
4

5 Q. But is this precision medicine, is this to modify them
6 to attack the actual cancer you've got?

7 A. It is. It is. And what happens is that our T cells
8 are constantly getting rid of cells that are abnormal in
9 our body, but when a cell gets to be abnormal but cannot be
10 recognised by our immune system, it continues to grow
11 without being attacked by our system, and that's one way
12 cancer grows.
13

14 When we modify T cells, we modify them so that they
15 identify the cancer cells and then they can attack it, and
16 that's why it is called a chimeric cell. We've mentioned
17 it there because we do have a blood and marrow transplant
18 network that works on all of the novel therapies around
19 cancer, you know, all of the blood and the marrow cancers,
20 and they've been the ones that have supported the system -
21 by this I mean specific hospitals and districts - to
22 actually build their capability to deliver CAR-T cells but
23 also work again with regulators and other bodies so that we
24 can integrate those technologies locally.
25

26 Q. When you used the term "network", that's involving,
27 what, hospitals and --

28 A. Yes, in this case, all of the blood and marrow units
29 across the state are part of our network. It's one type of
30 network that we have when the entire system is in, you
31 know, and therefore they all work together.
32

33 Q. So that's research as well as hospitals and --

34 A. That's clinical units within hospitals across the
35 state, you know, all of the blood and marrow are part of
36 that service.
37

38 THE COMMISSIONER: Thank you. Sorry.
39

40 DR WATERHOUSE: Q. Obviously that's a very specific
41 niche area where you've got all of those group involved.
42 As a general rule, though, how does ACI ensure that the
43 networks actually represent the breadth of different types
44 of clinical practice?

45 A. Yes, so I think your question hints at the fact that
46 it's difficult to cover all of the clinical areas all the
47 time. You know, we know that health is a very diverse

1 group, and the ACI does not have a clinical network for
2 every single clinical area.

3
4 Some networks do, you know, come on board for a while,
5 and then after a while, if we see that, you know, there's
6 no innovation emerging, there's no real significant
7 transformation to make, sometimes what we ask them is to be
8 subsumed into another network. So we have merged networks
9 together to create space for other networks as well, when
10 the time came. Some networks have been stopped, again, if
11 we feel that there is no critical need for those networks
12 going forward.

13
14 Of course, there are some networks that have been
15 there since the inception of the ACI, I mean, trauma,
16 emergency care, surgery, anaesthesia, these are really big
17 clinical areas where there's always something to do in
18 terms of refining care or implementing new models. Whilst
19 for others, for example, we've got a series of networks now
20 in the child, maternity and paediatrics space, where we
21 know that there's emerging innovation, and what we've done
22 is to create a new stream so that those networks could come
23 together and start new work that we were not doing in the
24 past at the ACI.

25
26 So as much as possible, we're trying to be flexible
27 and agile and dynamic in how our networks are managed.
28 Some of our networks have gone from being a network to
29 being a reference group, and I know it may sound technical,
30 but basically what it means is that instead of having an
31 ongoing plan or, you know, series of activities that we're
32 working on with the system, sometimes we need to ask
33 clinicians to establish a group that can be there for us if
34 we need advice, if we need to provide advice to somebody
35 else, but more as a reference group that we consult on
36 a more ad hoc perspective, and we limit the resources that
37 we have, which are limited, of course, for the ongoing work
38 for the networks that have, you know, a plan of activities
39 over many years. That's the way we try to manage that
40 breadth and depth because, you know, we know it's difficult
41 to mobilise such a big system.

42
43 Q. And the networks are invitation only effectively; is
44 that right? People are invited to join the networks,
45 whereas, is it correct that the communities of practice are
46 more groups or individuals, rather, that opt in so that
47 they can be kept informed of the work of the network?

1 A. There's no difference between the networks and the
2 communities of practice in terms of how we recruit. People
3 that want to volunteer for a network can contact the
4 network and sometimes we proactively seek new members. At
5 other times, you know, new members come in the network
6 because they get to know about it, they approach us and we
7 integrate them into the network.

8
9 Communities of practice just tend to be broader in
10 terms of numbers of clinicians involved, and their focus is
11 to share ideas together, not so much to come with an action
12 plan for the organisation to support. And that's really
13 the big difference between the two.

14
15 So a community of practice is really, you know - our
16 role is to facilitate them coming together and then, by
17 getting together, they exchange, they share, that's it.
18 Networks, we expect that they will propose things to do and
19 we give them support from an ACI perspective to achieve
20 those projects that they want to progress.

21
22 Q. If we look at 71a, which is the surgical care network,
23 now, that one is by invitation only, according to the fifth
24 line - fourth or fifth line - and you've got the bigger
25 community of practice sort of underpinning that or working
26 with that. Given that it's all directors of surgery for
27 the districts, if all of those directors were to come from
28 the bigger hospitals in those districts, the big teaching
29 hospitals, et cetera, how do you ensure that you've
30 reflected the range of levels of clinical practice and what
31 people are doing in the districts, if you have got the one
32 person from all of the teaching hospitals?

33 A. It's not one person from each of the teaching
34 hospitals, it's more based on the local districts'
35 representation. So we're talking about the directors of
36 surgeries, they have to be nominated by their chief
37 executives, and there's a representative from all of the
38 districts.

39
40 So we don't have an overrepresentation of metropolitan
41 hospitals, given that process.

42
43 It's surgeons but it's also directors of anaesthesia,
44 they are involved as well, and we've got also nurse
45 managers in surgery as part of the surgical care network,
46 and it's representative because we do have someone from
47 each of the local districts and, in return, we ask them,

1 when they go back to the surgical committees or, you know,
2 divisions of surgeries that they lead at the district
3 level, to convey back the information that we lead within
4 the surgical care network.

5
6 The surgical care network used to be called the
7 surgical task force or the SST - yeah. We've transformed
8 it as a network to really reflect on its ongoing role in
9 quality improvement and innovation in surgery.

10
11 Q. At 73, you talk about consumer engagement. Does the
12 ACI have a role in educating the community about new models
13 of care that might challenge longstanding views, for
14 example, where care is delivered or by whom?

15 A. Yes. So we do that not just through our consumers,
16 because obviously 128 consumers is quite a big group of
17 consumers involved in our work, but at the same time, it's
18 not a lot of people in terms of disseminating back to
19 various communities what the new models are about. So the
20 128 consumers are really part of our networks, they are
21 co-designing with our clinicians, you know, the models of
22 care or the tool kits or the various products that we
23 create.

24
25 But then what we do is that in many areas where we
26 feel that there's a need to provide education and advice to
27 patients and communities, then we produce these documents,
28 make them available, so that clinicians can then use those
29 documents in their interactions with patients, or local
30 managers can at times also use those kinds of tools if they
31 have got information sessions with community, for example.
32 And we've done that in some of the, you know, bigger
33 statewide implementation programs that we've had, ensuring
34 that we had some patients and community-facing material
35 available as well. But we don't do it directly. You know,
36 it's not the ACI that goes into a community, talks to, you
37 know, town hall meetings. We rely on the local clinical
38 teams and the local districts' managerial teams to do that,
39 our role is to give them the tools so that they can do it
40 correctly.

41
42 Q. What about if it was something like an expansion of
43 scope of practice that was actually being rolled out
44 statewide - say, for example, an increase in the role for
45 pharmacists? Would ACI then have a role in trying to
46 educate the community or create materials for that?

47 A. So we do work on media relations when required, which

1 means that we do use either formal print media or
2 television and radio to talk about some of our programs,
3 and we also use social media as a way to connect. So in
4 this way, when we feel that, you know, there's something
5 new and it needs to be shared more broadly to inform people
6 that this new program is available, we would use those
7 routes, in addition to the more clinically based kind of
8 work that we do through the information sheets and other
9 material that we produce. But we don't do it for every
10 program. I think it really depends if such a broad kind of
11 communication is required.

12
13 Q. If we go now to paragraph 75, where you discuss
14 interstate collaborations - so you've identified there just
15 a couple on that page, the paediatric improvement
16 collaborative and the national surgical quality improvement
17 program, or NSQIP. Have these resulted in changes being
18 embedded into practice across New South Wales?

19 A. Yes. Absolutely. So if we look at the paediatric
20 improvement collaborative, for example, it really enabled
21 us to avoid duplicating standards of care and models of
22 care that were already produced by one of the lead
23 institutions in paediatrics in the country, which is the
24 Royal Children's Hospital Melbourne.

25
26 Clinicians told us that the guidelines that they used
27 come from the Royal Children's Hospital Melbourne. So what
28 we did is we collaborated with Queensland, Victoria and
29 New South Wales to structure a joint approach where we
30 would have one single way to produce those clinical guides
31 and then we would promote their adoptions in the three
32 states, and in this way, we can mobilise, you know, our
33 limited funding to other clinical areas.

34
35 We know that those guidelines are used by the
36 paediatric community, they've confirmed that, and of
37 course, we've mobilised a group of clinical leads from
38 New South Wales to be part of the paediatric improvement
39 collaborative to make sure that the work was reflective
40 also of some of the needs that we had in terms of updates
41 of standards.

42
43 In terms of the national surgical quality improvement
44 program, it's a program that is different in nature from
45 the paediatric improvement program, and that's why we've
46 put it in the statement. What we do with the NSQIP program
47 is we support clinicians to measure their practice, we

1 extract data from the electronic records, we ask patients
2 to reflect on outcomes.

3
4 What we have is a collaborative of surgeons and
5 anaesthetists and other clinicians involved in surgery and
6 they look at the results, the variation. They receive
7 a benchmark compared to not just the participating sites in
8 New South Wales but also participating sites in the US and
9 in Canada, so that they can actually compare their practice
10 with an international benchmark and then identify where
11 they need to improve.

12
13 For example, there have been programs aiming at
14 improving urinary tract infections following surgery and
15 clinicians have worked together to identify what are the
16 things they can do, even though we have to put catheters in
17 place, to avoid the risk of UTIs following surgery, and
18 that includes, you know, early mobilisation and extraction
19 of the catheters. So it's a good example of a way to
20 mobilise clinicians to look at data and self-identify
21 things that they can do locally to improve on some of those
22 outcomes.

23
24 Q. Has there been any evaluation of the patient outcomes
25 whether there have been actual demonstrable improvements
26 with either of those?

27 A. There has been an evaluation of NSQIP as a program,
28 but the beauty of the program is that because it is
29 a program that monitors and tracks outcomes, we can
30 actually see if we're improving as part of that program,
31 and in many areas we have hospitals that have seen ongoing
32 improvements in some of the complications and in the
33 outcomes of care.

34
35 It's not implemented across the entire state, it's one
36 of those programs that, you know, we're gradually
37 integrating new sites, and it's one of the programs where
38 we do have an interstate collaboration as well with
39 Queensland, for example, collaborating with us on that
40 collaborative.

41
42 Q. If we go to paragraph 82, and this concerns the NSW
43 Telestroke Service that you spoke about before, and you've
44 provided more detail there, I would be interested to know
45 what are some of the challenges that ACI encountered when
46 implementing the Telestroke service?

47 A. I mean, there were shared challenges, not just

1 challenges that the ACI faced. We're talking about
2 a program where we had to align clinical change, you know,
3 behaviour change from clinicians, but also technology
4 enhancement, and we needed to ensure that we found the
5 right communication and clinical management processes to
6 make it work.

7
8 So in some areas, we did struggle to uplift the
9 technology to make sure that we would have, you know, good
10 images to transfer to the hubs so that they would make the
11 right decision for patients. In some areas we also faced
12 challenges that related to the workforce available and
13 their coverage of, you know, 24 hours versus only a part of
14 the day, and therefore we had to work with the different
15 districts to, at times, pause implementation, make sure
16 that we reassessed things and we consolidate what needed to
17 be consolidated, and then get back to implementation
18 afterwards.

19
20 Q. And I see there in c that the Menzies Centre is
21 currently undertaking an economic evaluation. Will that
22 take into account allocative efficiency as well as
23 technical efficiency?

24 A. I think so. The evaluation will compare standard
25 practice versus this one, and I do have to say that the
26 economic appraisal that we did ahead of time, before
27 deciding to implement Telestroke across the state, did such
28 a comparison as well.

29
30 THE COMMISSIONER: Q. What's actually involved in an
31 economic evaluation of a new model of care like that?

32 A. So what you have to consider is both the inputs, so
33 all of the costs related to the costs of the technology,
34 the cost of the workforce.

35
36 Q. Setting them, right, yes.

37 A. But also the cost for patients, you know, in terms of
38 travelling or not, in terms of having to spend a night in
39 hotels or anything. Then you look at the benefits both
40 from a direct economic benefits, and that could be cost
41 avoided if you reduce length of stay, for example, or if
42 you don't have to transport patients - ambulance costs, you
43 know - but also the transfer of health outcomes into
44 economic measures. Because we know, you know, from the
45 economic science, how to translate what would be the
46 economic impact of people not having disability, for
47 example, you know, in terms of their economic productivity.

- 1
2 Q. How long they're out of work, that sort of thing?
3 A. How long they're out of work, and if they can return
4 to work, and also, in some of those economic evaluations,
5 we can put a cost, a dollar figure on preventing illness
6 and death.
7
8 Q. So all of that is part of this evaluation that is
9 taking place?
10 A. Yes.
11
12 Q. Do you know when Menzies are meant to finish that
13 work?
14 A. I think that the draft has been circulated. I was
15 hoping that we could release the report incessantly [sic].
16
17 Q. So it's imminent, is that the answer?
18 A. It's imminent but I'm not directly involved in that
19 process.
20
21 Q. Leaving aside - I suppose it's related to it, but has
22 there been a health outcomes evaluation?
23 A. Of Telestroke?
24
25 Q. Yes.
26 A. Well, I think you have to understand that for
27 Telestroke, what we're doing is that we're expanding
28 coverage for patients of therapies that they would not have
29 had, so the impact is quite --
30
31 Q. I mean, it's part of it.
32 A. It's quite immediate.
33
34 Q. It's early intervention, isn't it?
35 A. Absolutely. And we already know the number of
36 patients that have received a thrombolysis, you know, and
37 we can compare it --
38
39 Q. In circumstances where they may not have without
40 Telestroke?
41 A. They may not have in the past because of time.
42 Because stroke is a time-critical condition, and if you're
43 outside of the window where some therapies are known to be
44 effective, then the patient won't access them.
45
46 Q. The damage is already done?
47 A. Yes. And therefore, we can see the benefit of

1 Telestroke already through that early assessment.

2

3 THE COMMISSIONER: Thank you.

4

5 DR WATERHOUSE: Q. Just to clarify, in terms of the
6 economic analysis, so you had people internally who were
7 able to do that initial evaluation and now it's been
8 referred out to Menzies?

9 A. Yes, yes.

10

11 Q. So you've got the right skill set in-house for that
12 initial phase; is that correct?

13 A. So we tend to concentrate our evaluation team's focus
14 on assessing if a program should be established or not, you
15 know, what are the expected benefits, does it make sense to
16 invest resources in doing it? We want our evaluation teams
17 to focus on what we call formative evaluation, which is
18 about testing things in the middle, you know, of
19 implementation, do we need to change things, do we need to
20 adjust certain parts of the program? But when we need to
21 report on the effectiveness of our work, it's good to have
22 an independent organisation running the evaluation, with
23 our support, because sometimes we've got the data, you
24 know, that they need, but at least they do an independent
25 assessment and we feel that this is stronger in terms of
26 providing evidence about the effectiveness of the program.

27

28 Q. And the skill set of those people that do that - the
29 internal people - are they health economists or what is
30 their sort of background to be able to do the evaluation?

31 A. Yeah, we've got people that are specialists in the
32 designs of evaluations. We've got experts in economy - you
33 know, economists that can especially support the decisions
34 that relate to modelling. But increasingly we also have
35 people within our team that have expertise in modelling, in
36 predictions, because that's an area we want to emphasise.
37 We want to make sure that before requesting funds to invest
38 in a statewide implementation program, we've done an
39 assessment of the potential impact not just on the specific
40 area or intervention we want to do, but potentially on the
41 flow of clinical care at the local level, and that's where
42 economic modelling and predictive modelling is a skill that
43 will be really important going forward for our team.

44

45 Q. If we go now to paragraph 85, you mentioned two
46 intensive care models there. One is the intensive care
47 service model and the other is an exit block project. What

1 was the ACI's actual role in those two projects?

2 A. So for the intensive care service model, we were
3 charged in developing a model of care, what it would look
4 like in level 4 ICUs, and then we had to facilitate
5 a community of practice where level 4 ICUs would come
6 together, look at the model of care, identify the things
7 that they had to do to lift some of the services and really
8 make sure that they would meet the requirement of a level
9 4 ICU.

10
11 And a level 4 ICU sits below level 5 and level 6, and
12 those higher levels really mean that they can actually care
13 for more complex patients. But level 4 are important
14 because they're really there in regional settings, you
15 know, to provide a big part of the intensive care. So this
16 was a quality improvement program. We run it as
17 a collaborative program and ACI was really, again, the
18 catalyst of those different teams coming together,
19 providing them with the tools to improve, but then the
20 change happened locally through the leadership of those
21 local teams.

22
23 In terms of the ICU exit block project, there was
24 a lot of analytics that was involved in that project,
25 really trying to identify what were the reasons why
26 patients were at times delayed from being discharged from
27 the ICU to the ward, when they were well enough to go on
28 the ward. So we're talking about patients that technically
29 are discharged from the ICU but don't physically have a bed
30 to go on a ward, and the issue - and the reason why it is
31 called an exit block, is that it takes an ICU bed that we
32 need to use for somebody else.

33
34 This is really a critical project to ensure that we've
35 got a good flow of patients across the system. What the
36 ACI did in that work is to support the ministry whole of
37 health team, which really is the one managing the flow of
38 patients across the system, to identify what were the
39 blockages and work with local teams to try to get rid of
40 those blockages. It could be lack of transmission of
41 information, it could be about the way the ward's bed
42 availability is managed, you know, depending upon the local
43 circumstances, then we provided the support to the whole of
44 health team to support the local teams to change. This was
45 a collaborative work.

46
47 Q. You say there that it was interrupted by the pandemic.

1 Given we're now four years into the pandemic, is there
2 a time frame in which it will be re-established?
3 A. That's something that I would have to ask Intensive
4 Care NSW. I think that they're probably getting ready both
5 in terms of readiness with the local teams to re-engage
6 with the project, and when the local ICU teams feel that,
7 you know, they've got some room and energy to be able to
8 roll out such a program, they'll be re-engaged. It's
9 really important for us to adjust to the receptivity for
10 change at the local level as well, given the pressures that
11 clinicians have every day in delivering care.

12
13 Q. Were there measurable outcomes from that project just
14 from where it got to before the pandemic?

15 A. Yes, I don't have all of the findings in my head but
16 in some of the ICUs where they had a sustained, you know,
17 effort, they were really able to reduce the amount of hours
18 that, you know, or minutes, even, that patients were
19 delayed before they could be discharged. But I wouldn't be
20 able to reflect on the outcomes across the state.

21
22 Q. And in relation to the service model, did it actually
23 demonstrate better access and reduction in variation?

24 A. I think that the outcomes are more related to the
25 quality of care provided, the consistency of care provided
26 in the level 4 units. Of course, for patients, it means
27 that they access the right level of critical care, but the
28 outcomes that we've been measuring through audits and, you
29 know, reflective practice with those units, were more about
30 the increase in resourcing and quality of care provided.

31
32 THE COMMISSIONER: Q. Tell me if you don't know, but
33 this sort of project, ICU exit block project, is probably
34 still being interrupted by the pandemic, is it?

35 A. I would say that there's probably a lot of intensive
36 care units that wouldn't say they are ready to tackle
37 a quality improvement program at the moment, but again,
38 that's something that I would have to refer to my clinical
39 network to gather data about.

40
41 DR WATERHOUSE: Q. If we just scroll down to the next
42 subparagraph, c, the leading better value care program, can
43 you tell us a little bit about that?

44 A. Yes. So that program was a program that we rolled out
45 across the state in specific clinical areas such as
46 osteoporotic refracture, chronic obstructive pulmonary
47 disease, bronchiolitis, chronic wounds, renal supportive

1 care, chronic heart failure, hip fracture and diabetes.

2
3 The goal of the program was really to implement,
4 across the state, models that were different from what was
5 the standard of care before. So, for example, in
6 osteoporotic fracture, we know that refracture prevention
7 clinics are successful at preventing people that come to
8 hospital with a hip or a fracture of another bone, to
9 refracture afterwards, and that's through identification of
10 their risk factors, providing them with the right
11 medication, the right advice about preventing falls
12 afterwards, and the osteoporotic fracture program was
13 really about increasing the volume of patients that can
14 actually access that assessment for their risk of
15 fractures.

16
17 If we look at renal supportive care, the goal was to
18 implement clinics that provide what we called supportive
19 renal care instead of dialysis. We know from the
20 literature that for many patients, dialysis will not be
21 associated with better outcomes for patients, and
22 therefore, our goal was to really push across the system
23 for more units to adopt a supportive approach and reduce
24 the number of patients on dialysis, or at least enable us
25 to not have to further invest in services where we had
26 a big proportion of patients that we knew would be better
27 treated by that supportive care. And that supportive care
28 included, you know, a broad range of providers, allied
29 health providers, so that patients are better able to take
30 their medication, remain active, control their symptoms,
31 et cetera.

32
33 Q. Is this a statewide program?

34 A. It's a statewide program and for most of the
35 conditions where we started the program, we've got clinics
36 in all of the local health districts. There remain some
37 clinics or hospitals that have not fully implemented the
38 program, and some of our networks are continuing the work,
39 even though, from a statewide perspective, you know, the
40 entire program has finished recently.

41
42 Q. It has actually finished. But it is a value based
43 health care program?

44 A. It is part of what we call value based health care,
45 yes.

46
47 Q. Would it be the biggest body of work rolled out so

1 far in relation to value based health care?

2 A. Certainly from an ACI perspective it was the biggest
3 investment, we had many clinical networks dedicating all of
4 their time supporting local districts to implement those
5 clinics and we know that, at the local level, many of the
6 innovation and improvement teams were also dedicated to
7 that one. It was a significant investment for the state in
8 terms of a focused kind of program of work around value.

9
10 Q. In terms of the investment, was this something that
11 districts were funded to roll out or did they need to do it
12 within their existing resources?

13 A. It was a mixed approach. So there was some funding
14 initially given to districts to start the process and being
15 able to have support on the ground. ACI continued to
16 support the districts without asking for any resources
17 throughout the five or six years that in many of those
18 clinical areas the program went for. At some point,
19 districts had to transfer it into a "business as usual",
20 because this was really about replacing a previous way to
21 deliver care into another one that was associated with as
22 good, if not better, outcomes for patients, at times at
23 a lower cost. So that's how we, you know, supported the
24 embeddedness of the program as part of the BAU afterwards.

25
26 Q. Let's go now to paragraph 87. You have referred there
27 to the National Health Reform Agreement and to trialling
28 new and innovative approaches to public hospital funding.
29 Then you say:

30
31 *To date [New South Wales] is the only*
32 *jurisdiction to have explored funding for*
33 *trials through these mechanisms ...*

34
35 Can you give us some examples of successes that New South
36 Wales has had in that regard?

37 A. So I think the example I will give is probably related
38 to collaborative commissioning, which is really where we
39 collaborate with primary health networks in identifying
40 needs that are present at the local level, and we need to
41 combine funding available from the state and funding
42 available from the Commonwealth to ensure that we, you
43 know, commission or purchase those services for the
44 population. You know, it's the type of services where, if
45 it were to be provided in hospital, it wouldn't be the
46 right place, but general practice is not necessarily the
47 right place either for it. So that's one area where

1 New South Wales has been especially active, working with
2 the groups of primary health networks at identifying those
3 areas where we could, you know, to meet the local demand,
4 purchase something in a joint way.

5
6 THE COMMISSIONER: Q. Sorry, so if it's a service that
7 is not necessarily appropriate for a hospital or for a GP,
8 it's, what, some sort of community clinic or - what are you
9 talking about?

10 A. It could be a community clinics; it could be services
11 to support people at home; it could be outreach in aged
12 care facilities. You know, there's different types of work
13 that would fall under that space, you know, which is
14 between hospital and between community services or GP
15 services.

16
17 Q. And please don't think this is a criticism, it's not,
18 but when you talk about this trial being a collaborative
19 approach, shouldn't the Commonwealth, the state and the
20 primary health networks and the LHD all be talking to each
21 other to collaborate anyway for these sorts of - what's
22 different about what you're talking about as a trial? How
23 is it specifically set up?

24 A. It's not so much a trial as we need the establishment
25 much a more systematic way to bring those parties together.

26
27 Q. So it's creating a network of people that talk
28 together?

29 A. And we do have a joint group in New South Wales where
30 all of the PHNs, you know - sorry, not all the PHNs, but
31 the PHNs are represented as well as other parties from NSW
32 Health, to proactively look at what is the next thing we
33 need to do to make the system work all together. Obviously
34 the separation of funding between state funding and
35 Commonwealth funding at times --

36
37 Q. Makes it difficult?

38 A. -- can create issues, and therefore establishing that
39 platform was really important to make it work as one
40 system.

41
42 Q. And so if there's an idea about something that emerges
43 from it, then there's a discussion about who funds it?

44 A. Yes.

45
46 Q. What percentage, those sorts of things?

47 A. Yes. And for some of the programs that we've rolled

1 out, such as Telestroke, there was a Commonwealth
2 contribution because we could clearly see that this was
3 a new way to deliver care that would benefit, you know,
4 general practitioners working in emergency departments,
5 et cetera, in some of those remote communities, to improve
6 care closer to the community.

7
8 THE COMMISSIONER: Thank you.

9
10 DR WATERHOUSE: Q. Has New South Wales put forward
11 proposals for initiatives that have been refused under this
12 program?

13 A. I wouldn't be able to answer that. I don't have an
14 example that comes to my mind.

15
16 THE COMMISSIONER: "Not supported", I think, not
17 "refused".

18
19 DR WATERHOUSE: "Not supported", yes.

20
21 THE COMMISSIONER: Maybe it's the same thing in the end.

22
23 DR WATERHOUSE: Q. Could we go to paragraph 94, please.
24 So you say there:

25
26 *Current arrangements are effective in*
27 *supporting innovations and models of care*
28 *but they have not always been fully*
29 *integrated and maximised.*

30
31 What do you mean by this?

32 A. There are some programs that at times we're not able
33 to scale, even though we think that there's, you know,
34 a promising model emerging. And of course, we keep our
35 eyes on that and, you know, we come back at a later stage
36 or another financial year to try to progress some of those
37 models as well. And I think it's fair enough to say that
38 no healthcare system can tackle all of the innovative work
39 that needs to happen in such a complex system. But I think
40 what we would like is to be able to more proactively plan
41 what are the things that we would like to start rolling out
42 in two or three years, and maybe being able to be supported
43 on a longer-term kind of approach to innovation, because we
44 know it takes time to demonstrate that something works, but
45 it takes resources also to evaluate appropriately, progress
46 a pilot towards a spread test, where we try to reproduce it
47 somewhere else, and by not having a clear forecast of the

1 funding available, then it reduces, at times, our capacity
2 to fully commit to a pipeline approach and being ensured
3 that if this is successful, we would be able to scale it
4 up. And that's what we mean by the consistency of funding.

5
6 It's not just the amount of funding, I think, that's
7 important here, it's also the time frame to really truly
8 enable organisations like ours but also the local districts
9 to fully implement that scale, and sometimes it's longer
10 than the usual three or four years that we have as part of
11 specific programs to really fully roll things out at scale.

12
13 Q. Is it sometimes, do you believe, that the programs
14 have not been fully integrated and maximised because the
15 districts bear the cost and responsibility for implementing
16 them and they don't necessarily rate it as a priority in
17 their population?

18 A. Sometimes we can see that there's variable adoption of
19 some of those, and of course - of course - at times we are
20 told that there are financial implications for local
21 districts in adopting some of those new models, either
22 because of their impacts on activity based funding or any
23 other activities. When this happens, we try to work with
24 them to identify what are the things we can do to reduce
25 those barriers and again fully support their adoption of
26 those new models.

27
28 Q. Now, you have summarised the approach that you're
29 taking currently or moving towards in that sentence. The
30 third sentence says:

31
32 *The system does not have an innovation fund*
33 *to scale new models and a strong mechanism*
34 *to embed innovations that have been proven*
35 *to be good value into business as usual.*

36
37 THE COMMISSIONER: Q. That's the New South Wales system
38 you're talking about there, doesn't have the funds?

39 A. Yes.

40
41 THE COMMISSIONER: Sorry, go on.

42
43 DR WATERHOUSE: Q. If an innovation has been proven to
44 be good value, as it says there, wouldn't there be an
45 incentive to embed it anyway, even if there isn't
46 a dedicated innovation fund to scale it?

47 A. I think it's about the challenge that relates to

1 implementing at scale sometimes. Implementation is not
2 a very short-term kind of exercise, because, you know,
3 clinical settings are made of clinicians that have worked
4 in the system for 30 years as well as clinicians that have
5 worked in the system for one year, and the challenges in
6 terms of supporting their adoption of a new way to work are
7 not the same.

8
9 In addition, healthcare systems have to integrate
10 innovation in a way that preserves safety. That really
11 means that we need at times to run in parallel an
12 innovation and an improvement work with a business as usual
13 consistency kind of approach. That, at times, means that
14 additional funding is required to push in a significant way
15 and really ensure that we transform care before we
16 disinvest in the previous way to deliver care, and
17 consistency of funding through multiple years, and for some
18 programs, I can say that it took, you know, 10 years to
19 really truly achieve change at scale. We can see that the
20 programs are going longer than sometimes the funding that
21 we receive.

22
23 So the statement around the innovation fund is
24 a statement - you know, this is the current fact. It's one
25 thing that we could explore to ensure a more consistent
26 source of funding on a longer perspective as well, given
27 what we've learned from other jurisdictions.

28
29 THE COMMISSIONER: Q. The alternative for funding is
30 through the route described in paragraph 87 of your
31 statement, through the agreement?

32 A. For paragraph 87, it's really about the translation
33 into business as usual afterwards. You know, we need to
34 ensure that the way hospitals and clinicians are reimbursed
35 for their activities, at times, doesn't just rely on
36 activity based funding but, instead, can fund care from
37 a blended perspective.

38
39 Q. 87, in part, involves IHACPA getting involved; is that
40 right?

41 A. And we don't - we don't want a new model.

42
43 Q. Sorry, if you agree, say yes.

44 A. It could.

45
46 Q. If you don't, please feel free to say no?

47 A. It could involve that national body, yes. But what we

1 don't want is for a new model not to be adopted because
2 implementing it would reduce the activity that is actually
3 the way to generate reimbursement in health care. That's
4 a well-known issue around the world, and therefore it's
5 something we need to address through those negotiations
6 with the Commonwealth and the health reform agenda.

7
8 Q. Can I just also ask you - you touched on this, and
9 Dr Waterhouse did, too - I'm sorry, my brain is not keeping
10 up, but it's only just occurring to me how odd that last
11 sentence of 87 is. So the agreement - this version of the
12 National Health Reform Agreement - started in 2020;
13 correct? Sorry, 2020 to 2025, it is?

14 A. Yes.

15
16 Q. And without having it in front of me, I know it says
17 something along the lines somewhere that innovation,
18 innovative models of care are going to be critical, which
19 is why it's surprising me that New South Wales is the only
20 jurisdiction, et cetera, that you've said in your
21 statement. Are there any trials in the pipeline?

22 A. Again, I wouldn't be able to reflect on that. This is
23 not the area that I'm managing. The only thing I will
24 reflect on, though, is that, you know, the current
25 agreement does have some clauses that enable novel models
26 to be trialled. What we need is to emphasise that so that
27 it becomes even more "business as usual" for those --

28
29 Q. I think the part of innovation and innovative models
30 of care being critical, I think, is in the schedule of the
31 agreement that deals with long-term health reforms.

32 A. (Witness nods).

33
34 Q. Which is why it surprised me to see that New South
35 Wales is the only jurisdiction to have explored funding for
36 those sorts of trials. You mentioned one. Are there any
37 others that New South Wales has put up?

38 A. There are others. I wouldn't be able to --

39
40 Q. This is not your area?

41 A. No, this is not my area.

42
43 Q. We can follow that up with someone else.

44 A. It relates to our work when we develop an innovative
45 model and we find a bit of a hurdle in terms of the
46 reimbursement model, but I'm not the one managing the
47 portfolio of collaborative work with the Commonwealth.

1
2 Q. The way I understood it, just from reading the
3 agreement, is that what's meant to happen is that people
4 with the relevant expertise through - no doubt through the
5 senior public service, public servants, say, "Here is
6 a great idea for a new model of care that will have better
7 outcomes and it might be cheaper, who knows?" And that
8 IHACPA is meant to get involved and work out a way of - if
9 there's going to be a trial funding it, to see how it
10 works, and then either it does work as hoped or it doesn't.
11 But it doesn't seem as though that's being taken up, at
12 least in --

13 A. I would say there are still instances where we are
14 pushing for certain new models of care where people are
15 reflecting on the challenges that it causes in terms of
16 funding and appropriate funding.

17
18 Q. Thanks.

19 A. And again, it's not the cost of implementation. This
20 is more about funding health care on an ongoing basis.

21
22 DR WATERHOUSE: Q. If we were to seek more evidence
23 about that, whose area would it be who would be able to
24 speak to that?

25 A. It would have to be strategy, planning and patient
26 experience.

27
28 Q. If we can just go back, please, to 94, I just wanted
29 to clarify the term in the second-last line "a strong
30 mechanism" - what did you have in mind for a strong
31 mechanism?

32 A. My apologies, which number are you?

33
34 Q. At 94, I beg your pardon.

35 A. Thank you.

36
37 Q. And it's the last sentence that I read out previously.
38 It refers to "a strong mechanism to embed innovations" -
39 what would that strong mechanism be?

40 A. I think it's about the intensity of effort, when we
41 decide that something needs to be implemented in all
42 clinical settings, so that we have the appropriate number
43 of people that will be mobilised for an appropriate amount
44 of time, so that we truly embed it in regular practice
45 afterwards.

46
47 The literature on implementation does suggest that

1 it's difficult to commit such an amount for implementation,
2 but it's increasingly recognised that if you don't commit
3 enough resources and for a long-enough time, it's unlikely
4 that the benefits will be sustained afterwards, because you
5 didn't take the time for the true behaviour change from
6 a clinical perspective to be adopted and for all of the
7 processes to have been integrated as part of business as
8 usual.

9
10 That really means that from an ACI perspective, we
11 need to be parsimonious in the number of initiatives that
12 we roll out across the state as each hospital and district
13 have a certain amount of resourcing available for this kind
14 of change. But we also need to make sure that when we
15 propose to implement at scale, that we've got a realistic
16 request in terms of the resourcing required to implement
17 that scale, especially when the change is significant.

18
19 THE COMMISSIONER: Q. Don't let me put - and I know
20 you won't - words in your mouth, but is what you're really
21 saying in that last sentence of paragraph 94 - and
22 accepting that it's a matter for executive government,
23 I suppose, as to how much money it spends on certain things
24 - you're saying that at least to scale models of care that
25 have proven to be good value into, as you say, business as
26 usual, there really needs to be more funding to help you do
27 that?

28 A. It's about the amount of funding, given the challenges
29 of transforming health care, but it's also about the
30 agility, so that we don't always have to plan from day one
31 what things will look like over the next four years of
32 implementation. Because sometimes things don't go this way
33 in complex systems, and we need to have a way to fund those
34 initiatives in a way that provides that flexibility - with
35 still good accountability, don't get me wrong, but it's
36 about being able to sustain the effort and adjust when
37 suddenly we can see that the system is not responding to
38 what was initially planned and funded.

39
40 DR WATERHOUSE: Q. In the following paragraph you talk
41 about the three main routes by which projects that have
42 been demonstrated to have strong potential can be
43 implemented at scale, in paragraph 95, and then if we just
44 stroll down to the top of the next page, I want to explore
45 a couple of those. So the first one is a business case.
46 Where does the money come from, if there is such a business
47 case put forward?

1 A. Well, there are various sources of funding, depending
2 on how government structures, you know, its budget. So
3 we've progressed, for example, business cases aimed at IT
4 funding that was available in the system. Sometimes it
5 comes from treasury as an additional allocation to health
6 to allow these programs, and at times it's been business
7 cases that we've submitted in partnership with the
8 Commonwealth and the state government for funding as well.

9
10 So those business cases are progressed to treasury or
11 the relevant assessment body, but the money comes from
12 government.

13
14 Q. Does the ministry have any sort of contingency fund
15 that it holds for the purposes of business cases like this?

16 A. Sometimes we do have to absorb within the budget, you
17 know, by reallocating from one program to the other to
18 accommodate some of the programs. That's something we do
19 within ACI as well, within our base allocation, and when we
20 don't need additional resources, we don't ask for
21 additional resources. But when a program really requires
22 implementation at scale, in hundreds of hospitals,
23 obviously, the available resourcing we have internally may
24 not be sufficient and that's when we ask for additional
25 funding through business cases.

26
27 It's the case also, if there is a significant
28 investment to be made in either a technology or a specific
29 device or therapeutic, we wouldn't be able to absorb all of
30 those kinds of new initiatives within, you know, the
31 operating expenditure of the ACI.

32
33 Q. Are business cases sometimes funded by a levy on local
34 health districts?

35 A. Not from those that we are progressing.

36
37 Q. So taking the example of Telestroke, since we've
38 talked about that a bit, how would something like that have
39 been funded?

40 A. So this one was funded through a business case process
41 and it was co-funded between Commonwealth and state, so
42 there was a contribution from the Commonwealth, and there
43 was an additional allocation provided to the Ministry of
44 Health to manage, and the ACI received funding that related
45 to the activities that it needed to support as part of that
46 program.

1 Q. Moving to that second route, you refer there to
2 "dissemination of new models of care via ACI", and further
3 down in that paragraph you refer to - it is the middle
4 there - "Connecting with LHD staff promotes some
5 standardisation and efficiency in implementation of the new
6 models". Is this efficiency for ACI because the local
7 health district is absorbing the cost?

8 A. This is actually when ACI mobilise its own resources
9 to support implementation across the state. And for some
10 of our program, it's perfectly appropriate to do that. You
11 know, we have network managers, we have project officers
12 that, if the program is not extensive, you know, we can
13 just use our internal resources to do that.

14
15 At the local level, in many of the districts, they
16 also have implementation teams and innovation teams, and we
17 work in partnership with them, asking them to prioritise
18 those programs, you know, compared to other local issues,
19 and that's part of the discussions that we're having with
20 them.

21
22 In some rural settings or smaller settings, at times
23 we have to mobilise the entire resourcing, because they
24 don't have that internal capacity to support the programs
25 compared to bigger metropolitan local districts. So we do
26 adjust, depending, but in no way do we transfer, you know,
27 the brunt and the burden of implementation entirely on the
28 districts.

29
30 Q. But it is possible, isn't it, that a district might
31 actually find it quite costly to implement even if there
32 isn't major system redesign or technological uplift?

33 A. It is possible, and if we hear that feedback, you
34 know, we're exploring ways to try to support them. We have
35 given spot grants at times when required, when districts
36 were telling us, you know, "We just can't cope with the
37 volume of change required at the moment." And at times
38 we've also delegated our own staff to go work with them on
39 a more ongoing basis.

40
41 So you're right, sometimes the ask is significant,
42 especially if locally the change management is not going
43 smoothly, and that's obviously when we would step in and
44 try to mobilise resources as much as we can.

45
46 Q. If we go to paragraph 97, that second sentence there
47 says:

1
2 *However, a project may demonstrate that it*
3 *is feasible and acceptable and provides*
4 *value to the system yet at the end of*
5 *a trial period, there is not always*
6 *capacity and flexibility in providing*
7 *funding support for its incorporation into*
8 *business as usual across [local health*
9 *districts].*

10
11 What happens in that instance?

12 A. So this is obviously when we have to prioritise our
13 limited resources and some programs cannot be supported
14 even though they were promising, and this does happen.
15 I think it's part of managing a healthcare system and an
16 improvement program to have to make those decisions, of
17 course.

18
19
20 What happens is that at times, what we will say is
21 that we will either pace the implementation on a longer
22 time frame to reduce the ask; at times what we will say is
23 that we will just go to a spread process, support the local
24 districts to implement in other hospitals, without
25 necessarily going to statewide implementation straightaway.

26
27 THE COMMISSIONER: Q. Give me an example of a project
28 that demonstrated it was feasible and acceptable and
29 provided value, yet at the end of its trial period, it
30 wasn't funded?

31 A. Well, TeleECG is one example.

32
33 Q. TeleECG?

34 A. Yes, yes, which is that tele-echocardiography program
35 and what we're doing, what we're doing at the moment --

36
37 Q. Explain that.

38 A. So that program is about the remote access to the
39 echocardiography results so that local connections --

40
41 Q. So someone is in a rural hospital, are they, hooked up
42 to a machine?

43 A. Yeah.

44
45 Q. And someone, a cardiologist or someone else, another
46 clinician with similar expertise, is at a hospital here,
47 helping local doctors?

1 A. Reads the echocardiograms and says, you know, "This an
2 ST elevation infarct. This is the type of treatment that
3 you need to do". So it's about remote support.

4
5 Q. So that sounds like it has a benefit straightaway?
6 A. It does, but it's also a very broad program. It's
7 very different from Telestroke. There's a lot more ECGs
8 done in a healthcare system like NSW Health than there are
9 assessment for stroke, given the prevalence of cardiac
10 diseases, and therefore the safest thing to do at that
11 stage was to support the local health district to implement
12 it further within the local health district and then
13 reassess at a latter stage, because the cost of
14 implementation was significant as well and this needs to be
15 considered as part of the decision to roll out or not.

16
17 Q. Sorry, I didn't quite understand the first part of the
18 answer - help it roll out in that local LHD?

19 A. So Hunter New England's clinicians - because that's
20 where it started - are really committed to continuing to
21 implement, continuing to support the rolling out of that
22 program. Hopefully, they will provide further evidence
23 about its effectiveness. If, you know, for example, we do
24 an evaluation and we don't find such strong benefits, then
25 we will have been informed, but we're not stopping the
26 work, we're continuing to work with them to implement
27 across the entire local health district, even though we're
28 not ready at the moment to implement at the state level.

29
30 Q. So what was the issue with this TeleECG - that the
31 costs of rolling it out across the state are so high that
32 you're not sure that there's the benefit there on the other
33 side? Is that the equation or am I being too basic?

34 A. No, we think that there's a benefit related to that
35 program, but the cost of implementing at scale is
36 significant and therefore we would have had to deprioritise
37 a lot of other programs.

38
39 Q. So the equation I gave is correct?

40 A. We would have had to deprioritise a lot of other
41 programs to be able to do that and, you know, when you've
42 got a limited amount of money for innovation, then --

43
44 Q. So in terms of the benefits of it, when you look at
45 the costs, you've also got to assess that that's money that
46 could be spent on other programs or models of care as well?

47 A. Absolutely.

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DR WATERHOUSE: Q. In those circumstances, are local districts ever required to implement it within their current budgets or do they have the discretion to decide if it's a priority for them?

A. They can do that if they want and the tools - you know, we have developed a model of care, we've developed with Hunter New England various tools that they could use and roll it out if they want. So there's still the possibility of emergence of that innovation, it was just not possible to fund it at the state level given our current financial situation.

Q. Let's have a look now at paragraph 103. So this refers to the evaluations and what they typically assess. What actions are taken if an evaluation is positive in the pilot sites but not when it's rolled out to other locations?

A. Oh, it informs our decision to not roll out or go back to change the program. Either we say it's not that the program is not worthwhile but it's just that it's not ready for scale, we need to change some of, you know, its characteristics, maybe we don't have the right technology yet - you know, there's various reasons that would explain why something that worked locally is not reproduced somewhere else, but it could also be that the program needs to be adapted to various contexts, because the spread test is important because it tells us if something worked just because, you know, you had a really dedicated group of clinicians that somehow made it work, even though it was a challenge to implement, or it informs us that there are characteristics in the environment - and it could be a rural versus a metropolitan setting, it could be the size of the hospital, it could be the local availability of resources - that forces us to change the program.

So when an evaluation of spread tells us that it's not working, then we would have a rethink with, you know, the people leading the program to assess: do we need to transform the program so that it fits in those new contexts, or is this truly a challenge in terms of demonstrating the effectiveness of the program?

You know, things may not spread or scale not because they're - sometimes because they're not truly effective, and then we need to learn from that and not invest there, but sometimes it's because they're not adapted to other

1 clinical areas and we need to work with the system to make
2 this happen.

3
4 Q. Can there be cultural differences that influence
5 implementation, either at a district or even between
6 hospital level?

7 A. Yes. And culture, organisational culture and clinical
8 culture, is well known in the literature as something we
9 need to measure so that we better understand the
10 receptivity of different contexts to an innovation but also
11 the barriers that will come in the way and the things that
12 need to be worked out before we start to implement. So
13 absolutely, specific cultures are really important to
14 consider.

15
16 Q. Would you have a look at paragraph 107 for me. I just
17 wonder if you could expand on the greater agility in rapid
18 evaluation and the more dynamic situation modelling that
19 you're planning?

20 A. Yeah, so what we want to do is to really be able to
21 mobilise our evaluation teams to identify very early when
22 an implementation program is not going in the right
23 direction, when we need to make some adjustments to make
24 those programs a success.

25
26 It's really important because it's not true that you
27 always design things in a perfect way right from the start,
28 and that rapid evaluation enables us to tell local teams,
29 you know, "You may not be implementing the program the
30 right way", or, "Maybe we need to stop for a while, raise
31 the local capability, work on sponsorship or culture, and
32 then come back to make sure that we use the limited
33 resources we have for innovation in a way that really would
34 be effective."

35
36 When I say "agile", it's really about being able to
37 mobilise ourselves quickly. So if a district says, "We're
38 struggling", we should be able to mobilise resources
39 quickly, evaluate things, give them some feedback, move on.

40
41 In terms of the dynamic simulation modelling, that's
42 about predicting what's going to happen. We're lucky
43 because we live in a time where data computing capability
44 has really increased and we can increasingly do modelling
45 that is almost a replica of the healthcare system and the
46 way things move within the healthcare system. That can
47 better inform us in the future about the potential impact

1 of some of those new models and new technologies, but also
2 potential unintended consequences that we need to take care
3 of.
4

5 You know, if we implement something that has got an
6 impact on emergency department functioning, but ends up
7 putting more pressures on the beds on the wards, for the
8 entire system it may not be as positive as if we just look
9 at the emergency department's impacts.

10
11 So dynamic simulation modelling helps us to better
12 understand the interdependencies in the system and propose
13 to the system innovations that we know overall will have
14 a good impact in addition to the - you know, the already
15 trialled kind of processes within specific clinical units.
16

17 Q. How do you gather information for that modelling?

18 A. It's by linking different types of data. So we know
19 we've got intensive care data, emergency department
20 datasets, hospitalisation datasets. We've got workforce
21 data we can put in the mix, financial data. There's
22 increasingly capacity in the system to link different types
23 of information and then being able to provide that dynamic
24 simulation modelling.
25

26 But this being said, the clinical input is extremely
27 important because it's the clinicians that ultimately tell
28 us, you know, "If we do it this way, this task takes five
29 hours. If we do it that way, we can reduce it to one", you
30 know? And then we put the right parameters in the model to
31 have something that's not just based on historical data but
32 also based on what it could look like if the innovation is
33 successful. And that clinical input is absolutely
34 fundamental and that's why we feel that ACI is an
35 organisation that needs to use those tools because we've
36 got the clinical foundation to really get those kinds of
37 models right.
38

39 Q. You will probably be very happy to see the word
40 "summary" in the middle of the page there, because that
41 means that we're nearing the end.
42

43 Commissioner, do you want me to press on? I haven't
44 got a great deal more rather than have a break or would you
45 prefer to have a break.
46

47 THE COMMISSIONER: I got told at lunch that the transcript

1 people didn't mind going all the way through. If that's
2 still the case, we'll just keep going.

3
4 DR WATERHOUSE: Q. If we can go to paragraph 110,
5 please. Just roll down to subparagraph c. So you talk
6 there about prioritising innovations that are potential
7 game changers. Can you give us some examples of game
8 changers that have been identified to date?

9 A. There are obviously a few in virtual care, for
10 example, when studies demonstrated that some types of
11 remote monitoring would really help to reduce length of
12 stay in hospital, for example, or when remote monitoring or
13 virtual care would enable us to avoid hospitalising
14 patients by sending them back home instead, with the
15 appropriate technology that would enable us to track them.

16
17 But there also are the game changers in the advanced
18 therapeutics space where we can see that some new
19 treatments actually are at times costly, but can prevent
20 many episodes of illnesses and hospitalisation, and
21 therefore, they're game changers, because for some of them
22 it's a single treatment or a very short course of treatment
23 that can prevent a few years of the more traditional type
24 of treatments. That's really a game changer because it,
25 you know, completely changes the way we think about things.

26
27 I mean, the advances in cystic fibrosis are a good
28 example of that, where those treatments are really
29 positively impacting the health, the quality of life, you
30 know, of patients, of people with cystic fibrosis, and we
31 can see it is having an impact on the type of services we
32 need to provide for them as well. So they're truly
33 changing the game, you know, and that's something that we
34 need to increasingly be proactive about, provide the right
35 assessment and then design model that would support their
36 integration going forward.

37
38 Q. You mentioned there about requiring system changes,
39 and obviously ACI would not be responsible for all of
40 those, but what sorts of changes have had to be made to
41 accommodate new game changers like this?

42 A. Well, I think that maybe I will talk about CAR-T cells
43 again, you know, those cells attacking cancers. We knew
44 the technology was coming, but we also knew that to treat
45 patients with those technologies in the right way, we had
46 to somehow design things differently in terms of, you know,
47 what would be the referral patterns, when would we want to

1 provide them with those treatments, what kind of outpatient
2 follow-up would we have to do afterwards?
3

4 What we did is to work with relevant branches in the
5 ministry, with the local districts, and basically co-design
6 with them what would be the right processes to ensure good
7 access to those treatments.
8

9 It's going to be - well, it was the same with
10 Telestroke, you know, we really had to assess how it was
11 changing care, because obviously if you see a patient but
12 you can't access the actual technology that would enable
13 you to transmit the images to the hub, then you can't
14 provide Telestroke, and that, therefore, required at times
15 to even redesign the places where some instruments were
16 located within emergency departments in some of those
17 hospitals.
18

19 So those are the kinds of things that we increasingly
20 work with the system, giving them the support to provide
21 the redesign, but ultimately, of course, it's the local
22 districts and the local hospitals that, you know, do make
23 the change physically and from a process perspective, at
24 the local level.
25

26 Q. Let's move to 112, which is where you have listed some
27 challenges. I'm going to just highlight a few of these.
28 So there's a bit of similarity in the first two, a and b -
29 they deal with variation across the system in adopting new
30 models of care, and b deals with local health districts
31 that are working in isolation and developing their own
32 models of care. Isn't there a place for local health
33 districts to develop their own models of care because they
34 know their population best?

35 A. There's absolutely a place for local districts to
36 adapt models of care to their local circumstances. What
37 we're talking about here is work that redesigned the entire
38 model of care that is produced at the state level. And in
39 some areas, you know, the evidence is quite clear, there
40 shouldn't be a big variation between local, you know,
41 processes and models of care, and we need to find a way,
42 then, to tell the local districts, you know, "This is
43 there, just adapt it to your local area, but we're very
44 confident this is the best model for your clinicians".
45

46 THE COMMISSIONER: Q. Professor, would you mind - in
47 your answer to Dr Waterhouse's question, could you give an

1 actual example of - in relation to subparagraph b, for
2 example - LHDs working in isolation to develop de novo
3 guidance and models of care and also models being developed
4 by LHDs that aren't brought to your attention and the
5 system's attention?

6 A. I wouldn't want to single out a specific clinical area
7 because I feel that it's happening in many different
8 clinical areas, but we're really talking about, you know,
9 models of care where clinicians would be mobilised for
10 a period of time, reviewing the literature locally,
11 starting to agree on what is the right way to deliver care,
12 and ultimately ending up with a result or an outcome very
13 similar to what we will have in parallel developed at the
14 ACI. The reverse happens --

15
16 Q. I'm sorry, I'm definitely not trying to be difficult,
17 but I don't know - I understand your general proposition,
18 but I don't know that it helps me as much. I mean, you're
19 in a section of your statement that's headed "Challenges",
20 which I assume means might be in the context of, "This is
21 a difficulty we face." It would really help me if there
22 was a more concrete example of what you're talking about
23 here rather than the general?

24 A. It's a difficulty because the amount of resources we
25 have to dedicate to mobilise clinicians, write up models of
26 care, is limited.

27

28 Q. Sure.

29 A. And we need to make sure that we also invest more
30 efforts in actually supporting adoption of those models of
31 care at the local level. And that's why, at the ACI, we're
32 working now with other states not to duplicate a model of
33 care if there's already a very good spinal cord injury or
34 maternity model of care developed in another state, and we
35 reduce the amount of work we would have to have to make it
36 locally adapted, but by avoiding redoing many of the steps
37 that they've taken to develop those models of care.

38

39 So we need to be more systematic at making sure that
40 we know what the districts are working on so that at times
41 we let them come up with the first, you know, draft and
42 design of specific clinical guidance, but also to make sure
43 that once they know we're working on a statewide model,
44 they don't invest all of the time required to mobilise
45 clinicians to produce one at the local level in addition to
46 that statewide one. Then we can mobilise resources to
47 support dissemination in the system, the appropriate

1 engagement with clinicians, and really the effort that's
2 required to support adoption locally. That's really our
3 goal.

4
5 Q. Okay. Well, this is your statement: "Models
6 developed by LHDs are not always brought to the attention
7 of the system" - what's an example of that?

8 A. It could be that a local district has developed their
9 own optimising surgical theatre guideline, when we already
10 have one that gives key elements that need to be considered
11 to make operating theatres more efficient.

12
13 Q. And this only comes to the attention of the system,
14 what, anecdotally or --

15 A. Either through the consolidation and then the work
16 that we do at the state level and then we realise that many
17 districts have developed in parallel similar kinds of
18 tools, or at times, it comes out if, you know, they tell us
19 that they already have a model of care following the
20 consultation.

21
22 Q. Well, just on that, wouldn't this be solved by
23 a monthly meeting where all new models of care that LHDs
24 are developing are discussed?

25 A. Well, it's - I think it's part of it, but it's also
26 about the commitment of the governance structures to
27 surface those and be transparent about it. It's not just
28 about collaborating. At times, it's about committing to
29 coordinate things. We certainly are committed to that
30 because the reality is that to run a healthcare system like
31 NSW Health, you need hundreds of clinical guidance
32 documents and models of care and they need to be up to
33 date.

34
35 Q. You don't need to go into specifics about this but
36 does that mean there are instances of some LHDs
37 deliberately not sharing models of care they're working on?

38 A. I think there's different drivers for that. Sometimes
39 it's just that clinicians may take the initiative to do it
40 and it doesn't quite surface up to the clinical governance
41 structures quickly, so that happens. Sometimes, to be
42 honest, it's universities that are reaching out to specific
43 clinical areas and starting to work on some of those models
44 of care. And at times, it's because they're required for
45 accreditation purposes or for other regulatory purposes,
46 and all of those things are things we can work on as
47 a system. The statement here is really a desire and

1 a commitment to reduce the burden that all of those models
2 of care impose on our system so that we can mobilise more
3 resourcing to actually implement them.

4
5 DR WATERHOUSE: Q. So the main concern, by the sound of
6 it, is duplication of resources or effort; is that correct?

7 A. Yes.

8
9 Q. But is it possible also that there may be more buy-in
10 from clinicians if they've personally been involved in
11 investigating and developing the model themselves?

12 A. Well, that's where championing and other things we
13 could do in collaboration can actually make a real
14 difference. If everybody agrees that we need one clinical
15 practice guide in a certain area and then local districts
16 work on translating it in terms of local processes, and
17 everybody agrees to that, I think we can achieve a more
18 coordinated approach, like in the English NHS, for example.
19 There's lots of examples where you can see that different
20 levels can actually contribute in a coordinated way with
21 other more locally driven levels, so that you avoid
22 duplication, and instead you increase tailoring and
23 localisation of the guidelines.

24
25 Q. In paragraph c you refer to reluctance of local
26 communities and clinical groups to adopt or support
27 innovative models, and then further down, at f, it's
28 a similar issue of reluctance to incorporate successful
29 pilots into business as usual. What do you see as the
30 driver of this challenge or these challenges?

31 A. There's a lot of different drivers and, of course,
32 culture is one --

33
34 THE COMMISSIONER: Sorry, do you mean the drivers of the
35 reluctance or --

36
37 DR WATERHOUSE: Of the reluctance, yes.

38
39 THE WITNESS: So culture is one. Training of clinicians
40 and the way they're trained and the way they've practised
41 for a very long time is a driver of that. At times it's
42 also perception about, you know, what is the right care,
43 surgical versus non-surgical, home care versus
44 hospitalisation. Then, of course, there's the complexity
45 of the interaction between patients' expectations and what
46 clinicians feel they need to do for patients.

1 There's financial drivers to that, there's regulatory
2 drivers to that at times, and, of course, the paramount of
3 safety is really something that also at times is
4 a challenge for organisations like ours that have to
5 demonstrate that we can do things in a different way, in
6 more innovative ways, and it's still safe for patients, and
7 as the times, to be honest, even safer from the perspective
8 of preventing complications.

9
10 So it is complex to change clinical practice because
11 clinical practice is made of habit, it's made of - you
12 know, the word says it, "practice", you know, you get
13 better and better from a clinical perspective when you do
14 more surgeries of a certain way, and if the evidence
15 changes and suddenly you have to practise in a different
16 way, then it's challenging for those providers. So there's
17 a lot of different drivers but it's also part of the nature
18 of delivering health care.

19
20 Q. Let's move on to the opportunities in paragraph 113 --

21
22 THE COMMISSIONER: Just before we leave that.

23
24 Q. In 112d, lack of integrated data and capacity for
25 modelling or artificial intelligence techniques to support
26 assessment of potential innovations, et cetera, I think we
27 all know what "modelling" means. Integration of data or
28 integrated data, I take it that means you've got data over
29 here, you've got data over there, you know, workforce data,
30 some other data, diagnostic data, whatever, but we don't
31 have a system that integrates that together; is that what
32 you mean by --

33 A. Yes, there are improvements that could be made in
34 terms of that integration, and the COVID pandemic has
35 demonstrated that to manage personal protective equipment,
36 for example, we needed to link different types of
37 information to be able to predict the amount of masks that
38 would be required. This being said, I do want to
39 acknowledge that NSW Health is the most advanced and
40 structured healthcare system as far as I'm concerned in
41 terms of data linkage, but --

42
43 Q. I will take that on notice. Victorians may say
44 something different, who knows --

45 A. They may, they may.

46
47 Q. -- but anyway, I'll believe you.

1 A. My experience in other countries as well suggests that
2 we've got a strong foundation, but now it's the types of
3 data that we need to better link, so that it's not just the
4 clinical data that we link together, it's also data that
5 relates to management of the system so that we're better
6 able to really provide advice about the right allocation of
7 resources to promote innovation and that's what that
8 statement is pushing for.

9

10 Q. We'll no doubt get into this in more detail later, but
11 to just get a few basic things in, and so we know what
12 we're talking about, when you use the term "artificial
13 intelligence", what do you mean?

14 A. It's a very good question, because it can mean many
15 different things, and in this case, it can mean - and I'm
16 talking about artificial intelligence techniques, so it can
17 mean algorithms derived through artificial intelligence,
18 but once they're derived, they're just automation of, you
19 know, information that we provide to clinicians, but at
20 times it could be that there's truly an artificial
21 intelligence software constantly learning about how to
22 better read wounds or x-rays or other imaging.

23

24 Q. That's sometimes called "machine learning", is it?

25 A. Yes.

26

27 Q. That's raw data in, the machine gets --

28 A. That's one --

29

30 Q. -- learns more?

31 A. That's one of the methods of artificial intelligence,
32 that machine learning.

33

34 Q. And I think a subset of that is, like, neural
35 networks, where the more data you put in --

36 A. Yes.

37

38 Q. -- the machine actually ultimately gives you an answer
39 to the problem - hopefully, the correct one?

40 A. And refines the algorithm so - or other signal that
41 it's generating, according to not just the breadth of data
42 but potentially its evolution if things are changing.
43 That's where some of those tools are learning whilst others
44 are based on artificial intelligence techniques but then
45 fixed in time. In health care, mostly it's fixed
46 algorithms developed through artificial intelligence that
47 we're seeing at the moment.

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Q. And if I were to ask you, which I am, as to what are the areas where artificial intelligence in the broad scope we've just discussed might have an impact on the healthcare system, can I ask you what they would be? One I've read about obviously is opportunities for diagnostics, radiology and pathology?

A. Yes.

Q. Can you explain a bit about that - looking at pictures, et cetera. That's one area?

A. Yes. So one obvious area is diagnostics because, you know, radiology, we're talking about scans and films that have millions of pixels and therefore, analysing those millions of pixels requires artificial intelligence to be involved. It's the same with pathology where the movements of, you know, different molecules in different tests can be really, you know, enhanced by artificial intelligence techniques.

But there are other areas where artificial intelligence can really impact health care as well and --

Q. Predictions, you mentioned that before, predictive technology?

A. Yes. Yes, predictions by looking at different measures, you know, and multiple measures changing all at the same time and capturing signals that maybe human beings are not as quick to capture, but there's also --

Q. Like, for example, the patient's data going into the machine and the machine --

A. Early signal of deterioration --

Q. -- sending a message to the doctor or clinicians and the nurses, or whoever, saying "This person might be about to go into kidney failure or sepsis", or something like that?

A. Yes. There are tools that have been developed through artificial intelligence that do exactly that. They're currently being refined and evaluated and tested, but yes, it can be an adjuvant to clinical decision, because it captures early changes that again wouldn't be evident if you just looked at the patient without mixing together a lot of different pieces of information.

Another area is drug discoveries, research.

1 Increasingly artificial intelligence can help to reduce the
2 time that it takes to identify which molecules would be
3 a good candidate for treating that specific condition and
4 guide the repurposing of drugs so that we, you know,
5 respond to some illnesses where the current therapies
6 available are not quite responding to the needs.

7
8 In the past, we would have to do that manually. You
9 know, drug per drug, testing with new indications.
10 Artificial intelligence really helps to speed that process
11 and identify the most likely candidates to work in the
12 repurposing, and it's going to be the same in many
13 different areas of proteomics, metabolomics where there's
14 a lot of proteins in the body and artificial intelligence
15 is increasingly helping us to understand what are the
16 configurations that are a marker of a certain condition or
17 the evolution of disease, and therefore we need to get
18 ready to better assess those technologies using artificial
19 intelligence and wrap them around the right governance
20 framework so that it reaps the benefits, whilst we also
21 manage the risks associated with those going forward, and
22 that's why the artificial intelligence task force was
23 established.

24
25 Q. Right. So diagnostics, predictions like early warning
26 systems?

27 A. Research and discovery.

28
29 Q. Drug development?

30 A. Yes.

31
32 Q. What else could there be?

33 A. Back of office management of some tasks. There's
34 literature --

35
36 Q. Funding models?

37 A. There's literature emerging in many different areas
38 and that includes --

39
40 Q. There could be an algorithm that solves this entire
41 Inquiry.

42 A. This is outside of my specific area of expertise --

43
44 Q. Yes, it's outside of mine too.

45 A. -- but I know that there's a lot of trials in many
46 areas that relate to managing the healthcare system as
47 well.

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Q. And there are more basic uses of artificial intelligence like chatbots that remind people, "Don't forget to take the drugs that you've been prescribed", that sort of thing?

A. Some of them are indeed integrated into medical devices at times to support, you know, patient behaviours and adherence to some treatments as well.

Q. And in your role as head of the task force, artificial intelligence task force that has just been set up, I know you haven't finalised your terms of reference yet, but --

A. They are.

Q. -- what are the key risks that you see to health from artificial intelligence?

A. So from what we know in the literature and various frameworks adopted internationally, obviously, you know, privacy is extremely important, you know, management of information is really one of those. But also regulatory frameworks, we need to better understand for some of those tools what would be the implications from a medicolegal perspective. We need to ensure really that when we assess those technologies we consider all of those risks before we start to integrate them into mainstream clinical settings.

Q. There's still a risk of machine error like there's a risk of human error at the moment?

A. Yes. And one of our roles is to survey the literature and compare when algorithms have been compared to clinical decisions, and then reflect on how do we need to use our clinicians and the expertise that they have to be enhanced by those technologies when we find that there are some tasks that those technologies can do in a more consistent way. And that's the kind of translation that we will have to do, but again within our safety frameworks, which are extremely important from a health perspective.

Q. Your task force, I think I read, is time limited at the moment. What does that mean?

A. Oh --

Q. I know what it means --

A. -- we don't know --

Q. -- but what does it mean specifically?

A. We don't know how long it's going to be there for.

1 The goal is to accelerate a lot of the changes within the
2 system across different organisations because artificial
3 intelligence, just like data and information, is not going
4 to be something managed only by one team within a complex
5 system like NSW Health, you know, there's going to be
6 implications for workforce, finances, clinical settings,
7 et cetera. And for the task force --

8
9 Q. You wouldn't have set the task force up for fun --

10 A. No.

11
12 Q. -- given the number of meetings you have to go to?

13 A. Yes.

14
15 Q. Is AI amongst the biggest challenges/opportunities
16 coming to the health system generally?

17 A. It is top priority for us, so that we get ready for
18 a lot of the developments that will appear in the coming
19 years. And the task force is there so that every component
20 of the New South Wales health system now starts to think
21 about what is it that we need to do now to manage the
22 current challenges related to AI, and how do we get ready
23 for the next few years? And that can be in terms of,
24 again, regulation-specific policies, clinical information
25 systems, you know, there's a lot of different aspects that
26 need to be progressed and we're just bringing all of the
27 leaders from the system to co-design it together.

28
29 Q. So one of the research institutes described to us in a
30 meeting that the number of gene therapies, cancer
31 therapies, precision medicine therapies that are coming,
32 literally within the next 12 months to five years, is like
33 a tsunami hitting the system - AI is like a second tsunami
34 or building on that tsunami in terms of its potential
35 impacts on the system?

36 A. Yeah, so, as I was saying, in terms of research, AI is
37 going to increasingly - you know, it's going to increase
38 the speed of change. So for gene therapies, for example,
39 AI is really enabling us now to analyse millions of gene
40 mutations and better understand the potential of some of
41 the therapies. So that means that the pipeline of
42 innovation is going to rapidly increase and we need to be
43 ready to harness that. And that's the goal of the task
44 force, to put in place the right, you know, administrative,
45 clinical engagement, data infrastructure, et cetera,
46 processes so that we take that wave for the benefit of the
47 system and the population of New South Wales.

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Q. Do you want to be cheeky and tell me how much money you need to be right on top of all of this?

A. I wouldn't be able to say that.

DR WATERHOUSE: Q. I had a few questions myself about AI so I might just cover off on those now. How was the AI task force that you're co-chairing selected?

A. So we did an expression of interest across the system, asking chief executives of organisations of local districts, of various stakeholders across the system, to identify their key people that would be able to come to the task force and share their expertise but also come back to those organisations and be the leaders of change. Because we're really talking about a task force that will not be able to do all of the work on its own. It's really about leveraging the work of pathology, eHealth, ACI, the local districts and we've got a really good representation of all of those organisations.

Q. Does it include external experts who actually develop AI programs?

A. There are some, and we also have other mechanisms for us to be connected with that, so we've got a living evidence table on AI that's available on our website and constantly updated, but we're also part of the artificial intelligence, you know, national network, where we receive information about the key developments, and we've been a member of that national group for four years.

Q. And one of the roles of the task force, will that be to look at the lack of integrated data for modelling, et cetera?

A. I think the task force will look at what is the potential that AI would give us to have a more streamlined integration but also potentially how can we use new methods that would protect privacy, reduce some of the risks related with linkage through designing synthetic datasets, for example. And by synthetic datasets, I really mean datasets where we could still analyse data and find relationships, but nobody in that dataset is an actual real person, if you see what I mean. It's almost like you tweak the data so that it preserves the association so that you can do the studies, but nobody's information is identifiable anymore, and, of course, AI can help us to develop new ways to analyse data like this.

1 Q. The task force is charged with developing a framework.
2 What will that framework cover?

3 A. That framework we intend would cover what is the
4 regulatory approaches; what are the key priority areas we
5 need to explore; what are some of the risks and issues;
6 what are the clinical applications that we want also to
7 prioritise and explore; what are the applications that may
8 actually help the system to run efficiently as well? The
9 framework should help us to give guidance to the system for
10 the next few years about, you know, accompanying that
11 introduction of those technologies in different parts of
12 the system, or through different devices and technologies
13 that we use otherwise.

14
15 Q. We've talked a bit about resistance to change, and you
16 identified this as being an area of profound change. What
17 is ACI or the task force doing to manage this anticipated
18 change and what you can expect to be the resistance to it?

19 A. So, I mean, establishing the task force and building
20 the framework is, of course, the first step. We are --

21
22 Q. I'm talking specifically about how are you going to
23 manage the resistance to this profound change?

24 A. I think it's about being transparent about truly
25 what's being demonstrated there. So what is the evidence;
26 what is the comparative effectiveness of a medical device
27 that uses or not; what is the comparative effectiveness
28 between human based processes versus processes that are
29 enhanced by AI?

30
31 But it's also about - going to be about working with
32 the developers of AI so that there's more transparency
33 about the AI tools, because clinicians will want to know
34 how is this working, and we cannot propose to them a black
35 box where they can't see how is this algorithm arriving at
36 a certain result.

37
38 The challenge, of course, is that for some of those AI
39 tools, it's very difficult to explain how it works, because
40 it is, you know, a neuro system or a deep learning system,
41 and therefore, it's going to be a challenge for some of
42 those applications. It will have to be through research
43 and trials so that we will demonstrate that those things
44 work, just like we do for pharmaceuticals, and I think that
45 then clinicians would be willing to explore using some of
46 those tools.

47

1 Q. If we could just go to paragraph 113, you say at the
2 beginning there, in the second sentence:

3
4 *There are opportunities for greater*
5 *linkages between the delivery arm of NSW*
6 *Health and the innovation arm ...*
7

8 Can you clarify what you mean by those two arms?

9 A. I really mean between ACI and local health districts
10 and local hospitals. We need to continue to strengthen
11 that relationship and that collaboration. You know,
12 there's no point in having a central agency doing all of
13 that work, assessing what's emerging in the literature,
14 what's emerging in different clinical settings, and then
15 not have a system based approach to ensure that it
16 translates into clinical practice, you know, and therefore,
17 I think we need to further that linkage through different
18 ways, and that's really a commitment that we have.
19

20 Q. But there is already a lot of innovation happening at
21 a district level. It's not all coming from ACI, is it?

22 A. Absolutely, absolutely.
23

24 Q. You talk also about no jurisdiction having fully
25 achieved this. Are there other jurisdictions you're aware
26 of that are doing it better that we can learn from?

27 A. There are some that I would consider gold standard,
28 some American HMOs, for example, that really have been able
29 to fully integrate a lot of their innovation ecosystem with
30 their delivery arms. I think that we sit in a good place
31 at the moment in New South Wales and we can build on that
32 platform, but we're not achieving the level that some of
33 those systems are achieving at the moment.
34

35 Q. Did I hear you say HMOs?

36 A. HMOs, or other types of organisations in the US, some
37 systems in Canada as well. There are European systems
38 where they've established quite embedded innovation
39 processes. We're scanning those to be informed by them and
40 learn from them, either through our international expert
41 advisory group or through the international scanning that
42 we do otherwise.
43

44 Q. And by "HMO" do you mean health maintenance
45 organisation?

46 A. Yes.
47

1 Q. In 113a, in subparagraph a there, you refer to ABF as
2 being a barrier. But ABF is not actually an impediment to
3 change, is it? Would it be fair to say there's nothing to
4 stop a district adopting a model of care that's more
5 efficient, even if it doesn't translate to counting towards
6 hospital based activity?

7 A. That's correct. There's nothing that stops districts
8 from doing this, and there's even ways within the National
9 Health Reform Agreement that would allow for some of those
10 innovative models to be delivered, explored and funded.
11 I think that a lot of it is because of culture and habit
12 and at times people take for granted that the new model
13 will disrupt things and therefore it's perceived as not
14 being supported by the current funding model.

15
16 Q. So it's a perception that's out in the system --
17 A. At times.

18
19 Q. -- is that correct?
20 A. At times it is.

21
22 Q. You talk about blended reimbursement approaches. Can
23 you explain what you mean by that?
24 A. Yeah. So blended reimbursement approaches are when
25 you start to combine funding that comes per capita, for
26 example - you know, number of patients within a certain
27 roster. A certain amount would come from activity, where
28 if you give more vaccines, you get paid for those vaccines.
29 Some of it is block funding and, of course, block funding
30 is already present in NSW Health, but we need to find a way
31 to use it strategically for the purpose of innovation. And
32 at times also there could be other funding models or
33 reimbursement models that are based on outcomes, for
34 example.

35
36 So blended models are really models where you use
37 outcome based, activity based, capitation models as well as
38 block funding to provide a flexible approach to clinical
39 settings so that they make the decision based on the
40 patient's needs, not so much, you know, just to produce
41 more services.

42
43 Q. Let's scroll down to subparagraph e.
44 A. Did you say e, sorry?

45
46 Q. Yes, e for "echo"?
47 A. Thanks.

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Q. You talk there about greater rationalisation of the vast numbers of local models in the second-last line there. How does ACI plan to achieve that given the extent that you've highlighted of the variation in uptake and districts doing their own thing?

A. So the first thing is that we've started to revise our own internal processes to develop those models of care and those clinical practice guides. We're talking about hundreds of models that we need to keep current, keep up to date, and therefore, we needed to ensure that we had a systematic approach internally first, to make sure that people would believe that our models are always, you know, current, valid and should be used, and we're implementing at the moment those approaches.

We're also reducing our own burden by collaborating with other states and we've established collaborative platforms that enable us to do that. We actually led the establishment of those platforms and I've been the chair of some of those committees for a while.

And then we need to discuss and engage in a conversation with local districts about the reasons why sometimes they develop their own models or want to replicate some of the work that we've done so that we better understand the drivers and then we can collectively find solutions.

I think the reality around the world is that many organisations are now struggling to maintain those guidelines, because we've covered the various clinical areas and now it's coming back at us because, you know, some of them are five years old, we need to update them. This is putting a pressure on organisations that in reality should be looking at the future, innovation, and now we're caught at revising what in reality is standardising care, and for us that's not the right balance. We need more time for innovation and to reduce the impost of maintaining - the maintenance of those standards, and to be informed by that, we've also been active participants in some international groups that are looking at different ways to generate evidence and generate guidelines, as well as national groups that do so, such as the evidence task force that is led at a national level.

Those are the different ways we've put together to

1 make sure that we've got best practice in that space and
2 can, you know, rebalance our efforts towards innovation and
3 a bit less towards standardisation.
4

5 Q. If we scroll down, please, to subparagraph h, this
6 refers to streamlining decision-making in government and
7 improving links with other government bodies. I want to
8 ask you about a scenario that's a bit closer to home than
9 the big sort of enterprise investment and trade, et cetera.
10

11 We heard evidence last week from the chief executive
12 of a local health district that suggested that the ACI
13 clinical networks should be more involved in providing
14 advice before state contracts are negotiated for clinical
15 products.
16

17 We then heard from the chief executive of HealthShare
18 NSW, who said that technical evaluation committees will
19 decide if advice is needed from ACI when they're
20 considering entering into a state contract for a clinical
21 product, so that the ACI may or may not be involved
22 depending on what the product is.
23

24 Then subsequently we heard from the chief procurement
25 officer who said that the ACI has a role in monitoring the
26 patient outcomes that are related to clinical products that
27 have been procured under state contract. So those are, if
28 you like, three slightly contrasting views in terms of
29 ACI's role, but all highlighting where they see ACI either
30 should or does play a role.
31

32 So how would you describe the ACI's role in
33 procurement of clinical products on statewide contracts
34 that are negotiated by HealthShare?

35 A. By HealthShare?
36

37 Q. Yes.

38 A. So currently, our involvement is through providing
39 clinical advice in specific areas when, you know, we have
40 to, for example, provide contracts that would impact on our
41 surgeons in the state or when they're contracting devices
42 or instruments that, you know, would have an impact on
43 clinical care. What we do is that we either mobilise
44 a network or we identify clinicians, you know, to be part
45 of those assessment committees, and inform their processes
46 from the clinical perspective, okay?
47

1 So far, every time we were asked, we provided that
2 support. We've had significant work with HealthShare in
3 the surgical space. We have significant involvement with
4 HealthShare in other areas that relate to disability and
5 the types of procurement that need to be done for people
6 living with disability that may need support - nutrition,
7 you know, many areas where there are interventions that
8 really would relate to what is being procured.

9
10 We're not involved in pharmaceutical, which is really
11 under the remit of the Clinical Excellence Commission. And
12 at times what we've done also is to do evidence reviews to
13 really understand also what are the current practices
14 internationally with regards to procurement for some of
15 those and what is the level of evidence about the risks or
16 benefits of changing some of those procurement approaches.

17
18 You know, you may want to go to more or less options
19 for certain types of clinicians as part of, you know, the
20 list of products available in the system, and it needs to
21 be based on evidence.

22
23 So, so far, this is really the way we have supported
24 HealthShare in its work.

25
26 Q. So, to be clear, that's on an as-needs basis when you
27 are asked for advice. Do you ever offer up advice on some
28 sort of clinical area that you're working on to make
29 HealthShare aware of something so that if they're looking
30 at state contracts, they can take that advice into account?

31 A. I would say this is not an area where we have had
32 proactive work ongoing to be able to, you know, proactively
33 alert them of this, apart from if there's clearly the
34 emergence of a new technology, a new prosthesis, et cetera,
35 then our clinicians are alerting us that, you know, "This
36 is coming", and then we inform HealthShare about that,
37 providing the advice ahead of time. But it remains an
38 ad hoc perspective because it really depends on our
39 clinicians identifying those emerging innovations as having
40 an impact on potential procurement activities.

41
42 Q. Do you think that ACI should take a more consistent
43 role in terms of being involved routinely rather than
44 ad hoc?

45 A. I think that that's something we could explore.
46 There's obviously work implications and potential
47 reorientation or reprioritisation of some of the work, if

1 we were to do this on a more systematic basis, but that's
2 something that we could explore in discussions with
3 HealthShare and other partners.
4

5 Q. In terms of the monitoring function, once a statewide
6 contract is in place, how does ACI monitor the effects of
7 the clinical products that are being procured this way?

8 A. So I would say that it does that in an indirect way.
9 We're not the organisation in charge of, you know, post
10 marketing or post commercialisation monitoring. But we do
11 have clinical variation work where - and contribution to
12 clinical registries, for example, where the data that we
13 collect would reflect on changes in outcomes and sometimes
14 it can actually be related to a specific procedure or
15 a specific device that is used in certain clinical areas.
16

17 It is limited. It is not systematic, and it really
18 depends on the current measures that are measured as part
19 of those registries or as part of our clinical variation
20 work. But certainly, it's not systematic and it's not for
21 the purpose of alerting the system that, you know, there
22 would be anything wrong with those medical devices. We
23 track outcomes overall to identify needs for innovation.
24 At times, it can be related to specific devices or
25 prostheses, but the purpose is not to monitor, you know,
26 the outcomes of those procurement processes.
27

28 Q. And finally, in paragraph 114, your statement ends
29 with the description of the clinical innovation and
30 research division having strong foundation but identifying
31 that there's always room for improvement. Going forward,
32 what are you most optimistic about in terms of innovation
33 for the New South Wales health system?

34 A. I've written that statement because I'm extremely
35 proud of the work that the teams have done over the last
36 few years through the pandemic, really keeping focus on
37 innovation, keeping focus on identifying new ways to work,
38 engaging with very broad and big clinical groups, you know,
39 to ensure that we design things that will harness
40 innovation but in a way that fits with clinical practice
41 and clinical expectations.
42

43 I believe that there's going to be ongoing
44 improvements in surgery and value based surgery, and that's
45 really a key priority program for us and we continue to
46 push.
47

1 I believe that there's going to be massive disruptions
2 coming out of personalised medicine and we're currently
3 working with our clinical networks so that it's not just
4 a responsibility of the genetic, you know, clinical group,
5 it's really something that will impact other clinical areas
6 as well and they need to pay attention to that.

7
8 THE COMMISSIONER: Q. What do you mean by "disruptions"?

9 A. I mean technologies that will suddenly force people to
10 think differently and will challenge the way we provide
11 care at the moment. You know, how do you link a patient
12 with a specific clinical condition - and they may be the
13 only one in a hospital that year - to connect them with the
14 right treatment that, you know, may be available somewhere
15 else in the system? That's not the way we work at the
16 moment, just to give an example. So personalisation of
17 medicine will have its challenges and we need to work
18 across the different clinical areas and networks to get
19 ready for that.

20
21 Q. Is one of those challenges cost?

22 A. Cost can be a challenge, of course, because some of
23 those technologies are expensive. Sometimes, they are
24 expensive but we need to compare them with the current
25 investments and sometimes lifelong investments, but those
26 lifelong investments, you understand, will be in many
27 different places, many different cost centres, whilst, as
28 a single technology, there may be a single one, and that's
29 a disruption on its own and we need to support the system
30 to make the right arbitration, but also reorganise the way
31 care is planned and delivered so that sometimes we can make
32 those decisions to allocate towards those expensive
33 therapies as well.

34
35 DR WATERHOUSE: Commissioner, I have no further questions
36 for Dr Levesque.

37
38 THE COMMISSIONER: Thank you, Dr Waterhouse. Mr Gyles?

39
40 MR GYLES: No, thank you, Commissioner.

41
42 THE COMMISSIONER: All right. Okay. That ends this
43 hearing block, am I right?

44
45 MR MUSTON: Subject to one very small technical matter.

46
47 MR GLOVER: Just a couple of housekeeping matters to wrap

1 up, Commissioner. There are some further documents to
2 tender, some of which have been referred to in the
3 evidence. I will hand up a list. They have been given
4 notional markings in the usual way, so I tender those.

5
6 THE COMMISSIONER: Yes.

7
8 MR GLOVER: In addition, you should have coming to you now
9 a folder that should have been labelled as "Confidential
10 Exhibits".

11
12 THE COMMISSIONER: Yes.

13
14 MR GLOVER: We seek to tender those and at the same time,
15 there is a proposed order under section 8 of the Special
16 Commissions of Inquiry Act.

17
18 THE COMMISSIONER: What does that say?

19
20 MR GLOVER: You will see it now. The redacted portions --

21
22 THE COMMISSIONER: Is gives me power to do something, does
23 it?

24
25 MR GLOVER: It gives you power to make directions limiting
26 or restricting the publication of evidence or documents
27 that are before you.

28
29 THE COMMISSIONER: This is all by agreement?

30
31 MR GLOVER: It is.

32
33 THE COMMISSIONER: All right. Well, I will make the
34 order.

35
36 MR GLOVER: Thank you, Commissioner. Nothing further from
37 me.

38
39 THE COMMISSIONER: And I will look at the section later.
40 I'm sure it's there. I trust you.

41
42 MR GLOVER: It is there. I have read it. It says what
43 I said. You have the power.

44
45 THE COMMISSIONER: Excellent. Very good.

46
47 So I think, formally, we are adjourning until Monday,

1 18 March in Wagga Wagga --

2

3 MR GLOVER: Correct.

4

5 THE COMMISSIONER: -- for the next hearing, subject to
6 giving a bible or taking an affirmation from somebody
7 randomly before that. All right. We will adjourn until
8 then, unless there is anything else. I should say,
9 Professor, thank you very much for your time, it is greatly
10 appreciated.

11

12 THE WITNESS: It was a pleasure, thank you.

13

14 <THE WITNESS WITHDREW

15

16 **AT 4.10PM THE COMMISSION WAS ADJOURNED TO MONDAY, 18 MARCH**
17 **2024 AT 10AM IN WAGGA WAGGA**

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