THE LEGISLATIVE COUNCIL SESSIONAL COMMITTEE GOVERNMENT ADMINISTRATION A SUB-COMMITTEE INQUIRY INTO RURAL HEALTH SERVICES IN TASMANIA MET IN COMMITTEE ROOM 2, PARLIAMENT HOUSE ON THURSDAY 17 FEBRUARY 2022.

Ms PAM DOOLE CLINICAL CHIEF ADVISOR NURSING, OFFICE OF THE CHIEF NURSING OFFICER *I TE TARI o te TAPUHI RANGATIRA* APPEARED VIA WEBEX.

CHAIR - Welcome to the committee and we apologise for being a little bit behind schedule here. I don't know how easy you can see members of the committee but our secretary is right down the front of the screen, Sarah Lovell, myself, Ruth Forrest, Nick Duigan and Mike Gaffney, who I think you probably know of.

Ms DOOLE - Yes.

CHAIR - It is a public hearing. It is being recorded and transcribed on *Hansard* and the evidence you provide will form part of the public record. It is also being streamed I think. The broadcast is on. Everything you say will be recorded. It is not covered by parliamentary privilege because you are not in Tasmania. If you have any concerns about anything you have said or wanted to review the transcript before it was published do let us know.

Ms DOOLE - Okay.

CHAIR - Otherwise it will be published along with the rest of our transcripts. Do you have any questions before we commence?

Ms DOOLE - No. I am happy with what you have said.

CHAIR - We invite you to speak more generally about how the New Zealand system works. I know you have seen our terms of reference and we are looking into rural health services. I have been to New Zealand looking at the health system some years ago. I understand there are some significant differences. I would appreciate your insights into what works in the rural health setting and what doesn't and what Tasmania could perhaps learn from New Zealand.

Ms DOOLE - Okay. I will give you some of my background to give you some context about what I can comment on. I am currently an adviser at the Ministry of Health and I work in the nursing team in the Chief Nurse's office. Prior to that I worked for the Nursing Council of New Zealand for 18 years in senior policy roles so my greatest knowledge about the rural health setting is the role of registered nurses and nurse practitioners within that setting.

Particularly today I wanted to talk about nurse practitioners as they are a key component of our rural workforce.

CHAIR - That would be great if you could explain. In Tasmania we don't have a lot of nurse practitioners. It is a growing area but we are certainly lagging behind other parts of the country and other parts of the world, like New Zealand, so it would be helpful if you could explain more about how it works.

Ms DOOLE - I will give you a little bit of background about the role in New Zealand. It was established under government support, the conservative government at the time in the late 1990s wanted to unleash the potential of nursing so did a taskforce. The outcome of that taskforce was to establish the nurse practitioner role. The first nurse practitioner was registered in 2001 and there was quite slow development in that first decade and they were often supported to become nurse practitioners through public hospitals and district health boards. So often nurse practitioners ended up in quite specialised nursing roles to do with chronic health conditions like diabetes et cetera but the role was originally determined to be a role that would provide access to health care for people in vulnerable communities. In New Zealand this is particularly our Maori and Pacific communities but it is also acknowledged that there are other vulnerable communities. Rural communities are definitely seen as having less access to health care and as our GP workforce ages and moves more into the central cities, the nurse practitioners are definitely filling a gap in that sector.

We are also noting that nurse practitioners are having a bigger and bigger role in our aged residential care sector as well as GPs providing less care in that sector and it differs across the country. I guess what has happened in recent times in the last decade is we have seen a lot of the legislative and funding barriers being removed for nurse practitioners to fully function in what we call primary health care so they have exactly the same payments for general medical services. Also, for our accident compensation corporation payments. That is a fund that is set up for anyone who is injured through a home or work recreation accident and that is all funded separately through that no-fault scheme -

Ms LOVELL - Sorry to interrupt. When you say the same payments under those schemes, do you mean the same payments as GPs, for example?

Ms DOOLE - Yes.

CHAIR - To clarify, your accident compensation scheme, that is capped, isn't it? It used to be. Is it still capped? There is a limit to how much anyone can claim for any injury?

Ms DOOLE - Yes. For the rehabilitation in a primary care setting, that is pretty straightforward. There are schedules of payments but when people are going for higher levels of compensation there definitely is quite a different process that the corporation uses for those people. I think that is all I want to say on that.

CHAIR - Before we move on to something else, Pam, you talked about a funding barrier. What about the legislative barriers that were there that needed to be removed to enable nurse practitioners to work across that scope?

Ms DOOLE - I suppose there are things, particularly with the Medicines Act, so nurse practitioners became designated prescribers with a broad list in 2005 and in 2013 they became authorised prescribers which means they have the same prescribing rights as general practitioners. The scope of practice was broadened in 2017 and a lot of statements were put in that scope of practice to recognise that nurse practitioners can order diagnostic tests. They can be the lead health care provider and they can admit and discharge from hospital. So, we deliberately put in those statements and their scope of practice so it was clear that their legal role was higher than that of a registered nurse and that they could function as independent health care providers.

We have a capitation section - funding for general practice. Nurse practitioners can access that and they can own their own general practices and we do have some nurse practitioners who are practice owners and they will often ask GPs to come in to do locums. Particularly if they are in a rural area, they might ask a GP to come one day a week to see particular patients who need that level of GP care.

CHAIR - Sort of the reverse of what we are seeing here.

Ms DOOLE - I think that's a decision that's been supported by both major parties: that we need to have an enabling health workforce. There is so much demand, and there is growing demand with an ageing population. There are moves to allow professionals, not just nurse practitioners, but all health practitioners to work at the top of their scope. Sometimes the professional groups don't always agree with the direction, but importantly, I think the ministry has stayed on track with the vision despite some pushback from some professional groups .

CHAIR - I'm a nurse and midwife by background and I was involved with the College of Midwives for a long time, so I understand the body of work that has been done around this over a very long time. It seems that in New Zealand there's obviously been a lot more success in overcoming some of those turf war barriers, if you like.

Bipartisan support is really important. I'm interested in how New Zealand, whether it's the parliament, or the minister for health or whatever, smoothed over some of those barriers - and I'm sure they were real barriers at times - from some of the medical professions and perhaps others. Could you explain more about how New Zealand was successful in making quite significant progress in a relatively short space of time?

Ms DOOLE - One of the other pieces of work the ministry has done is to put forward some omnibus legislation to change the term 'medical practitioner' in a number of acts to 'health practitioner'. That work took about six years to be enabled. So, I think it's doing work over time: having all that work go through the health select committee, allowing different groups to make submissions but also keeping an eye on the purpose, which is about enabling access to care for patients, for people.

Framing what is done to be for the benefit of the public is really important. Sometimes there are different responses. I have found in the medical profession in New Zealand that there are groups that are willing to go with new models. Some are more cautious and some perhaps are against change, but trying to make alliances with the groups who can see the benefits, telling the story that the sky hasn't fallen when changes have been made; in fact, it's actually better for everyone. I think the medical profession can see this. Sometimes they just have a problem with nurses they don't personally know extending their scope. We have a track record now where I don't think there have been any significant harms to patients through nurses extending their role through registered-nurse prescribing all through the nurse practitioner role.

Ms LOVELL - Pam, you have talked about some of the benefits to members of the community and in terms of access and health benefits. Can you just talk us through how some of those benefits have been demonstrated and how the ministry has monitored and measured those results?

I guess one of the challenges to changing health care systems is how you demonstrate that the outcome has been worth it.

Ms DOOLE - Yes, you are right.

I guess one of the measures I have seen used is looking at nurse prescribing and looking at the population that nurses prescribe for, and also the medicines they prescribe.

We have an organisation called Pharmac, which is responsible for making decisions about medicine and then funding medicines. They have certainly looked at nurse prescriber results, and can see that nurses are prescribing 80 per cent of what they prescribe as common medicines and it is reaching those populations, particularly Maori and Pacific, to a larger extent than medical prescribers.

There is also some published research about non-medical prescribing in New Zealand, which is publicly available and shows the same outcome.

Mr GAFFNEY - You mentioned the health select committee. I am interested in that aspect. Just a couple of questions. How was it formed? What's the composition of it? And what is its relationship with the ministry and the parliament?

We have select committees here for a specific purpose. I am wanting to understand how the New Zealand health select committee works.

Ms DOOLE - I'm not an expert on this but my understanding is that it is a standing committee. It has cross-parliamentary representation and it probably has a number of functions to review legislation as it makes its way through the House, and to hear submissions on legislation. I think it also receives reports from health entities annually so there's an opportunity for scrutiny. That's probably the limit of my knowledge.

Mr GAFFNEY - That's fine. With that, I know there were probably eight or nine pieces of legislation that had to be changed in New Zealand, as would have to be amended here in Tasmania. Was one of the purposes of that health select committee to help drive that legislative change to do that work? Sometimes here that's a bit of a hold-up for us, to say it's the government of the day that pushes forward legislative change or amendment. Is that part of its role, do you think?

Ms DOOLE - I think it's more the government of the day that decides the priority of legislation and there are a number of processes the government has to go through in terms of regulatory impact statements and gaining cabinet agreement before it enters the House. Once it enters the House, there's that opportunity for the House select committee to review.

CHAIR - If I might clarify as much as you know, Pam, I've talked to a lot of New Zealand MPs over the years and because the New Zealand Parliament is only one House, all bills before the parliament go to the relevant committee. The health select committee, as the standing committee, looks at all the health bills, the legal one looks at all the justice bills, education and so on.

Just clarifying what you say: the government brings forward the legislation then the committee does the work on the consultation, they're getting submissions and reporting back on it. I hear from members of the New Zealand Parliament that it's not that often that amendments are made through that process, even though that's the purpose of it. But it does

mean that every health-related bill will go through this committee and the opportunity is there for public input.

Ms DOOLE - Yes, that's correct.

CHAIR - It's a bit different from the way we operate here.

Mr DUIGAN - I am interested as to whether you get a cultural or a social divide. If I'm in the leafy suburbs of Auckland, I can go and see a GP which is, I guess, gold standard. But if I'm out in the sticks, or a bit further north, or whatever, or in a nursing home, my primary health care will come from a nurse practitioner. Does that throw up the haves and the have nots?

Ms DOOLE - I think that already happens within our health system. I think that's a really good point that although we have a publicly funded system, there is the general practice system as a private system that is funded through public money. There are efforts to rebalance so we have some funding for very low-cost access practices and those sorts of things to try to rebalance some of that access. A nurse practitioner could be based in the leafy suburbs as well.

Mr DUIGAN - Was that an argument or a conversation that was had as this was rolling out earlier and has largely gone away or does it still continue?

Ms DOOLE - We have lots of conversations in New Zealand about equity of health care and we're going through some major health reforms at the moment. One of the purposes of that health reform is to improve health equity. The Minister of Health has said he wants people, no matter where they live, to have access to the same quality of health care. He has indicated differences between regions, and providers are one of the areas of concern to him.

CHAIR - We are having the same issues in Tasmania and in Australia more broadly. The health outcomes for people living in our rural and remote areas, even within the small state of Tasmania, are quite significantly and markedly different from people who live in the urban areas. In terms of what the New Zealand minister is seeing as the headline matters that he is seeking to do to address this inequity, can you identify what they are or is it still a work in progress?

Ms DOOLE - Do you mean what the inequity is or what the strategies are?

CHAIR - The strategies. I think we all understand the inequities. I am trying to understand what approach New Zealand is taking to address these inequities because that is the same question we are facing here.

Ms DUIGAN - Given we are a much smaller country the main thrust of the health reform is to establish two new entities. One is going to be called Health New Zealand and it will replace 20 district health boards. The idea about that is to drive more consistency between the way health care is delivered across the country.

Secondly, New Zealand is setting up a Maori health authority. This is to enable that entity to influence the delivery of health care. It is part of the government's obligations under the Treaty of Waitangi to ensure the Indigenous voice in health care decision-making and also

the right for Maori to have health care delivered in ways that are culturally appropriate to them. So, that entity will also commission some health services specifically for Maori.

CHAIR - You don't have any of that at the moment in New Zealand?

Ms DOOLE - We do. We have lots of iwi providers but they are all different and I guess this is a way of strengthening that provision and expanding it to other areas of health.

CHAIR - I want to go to an area that is in our terms of reference and I am not sure how much of an issue it is in New Zealand. It is the use of Telehealth - access and digital literacy as well as digital access. Can you talk us through how that is managed in New Zealand and how much that is relied upon in your regions?

Ms DOOLE - Again, I am not an expert in this area. We have seen a huge uptake with the COVID-19 pandemic. There have been a lot more virtual consultations and it is definitely seen as a way of the future. We also have a lot of investment going into data and digital as a way of reforming our health system.

CHAIR - Is the internet access all pretty much to all New Zealanders or have you got areas of poor connection?

Ms DOOLE - Yes, we have the same problems of poor connection. We also have problems of population groups not being able to access devices and the cost of internet as well.

CHAIR - In many respects we are not too dissimilar.

Mr GAFFNEY - One of the things we have heard for a long time in Tasmania is that we probably need around another 140 GPs, and that number hasn't seemed to have changed. Is that a similar scenario to you in New Zealand, the shortage of GPs?

Ms DOOLE - Yes there is a shortage of GPs and the government's done a number of things to try to improve the numbers going through the GP training programs. But I don't think those training programs on their own will be the solution, so that's why we are looking at complementing that workforce.

Mr GAFFNEY- What funding has the government decided to provide regarding New Zealand and NPs over the next few years? I know there is some money available to improve or increase the numbers of NPs or training; have you got any information on that?

Ms DOOLE - Yes. We have had a number of ways that nurses can train to become nurse practitioners. They can do it themselves and fund themselves. We also have a clinical training fund for post-registration nursing and that's open to nurse practitioners, but they need to be supported by their employer. We also have a nurse practitioner training program which provides funding for about 40 nurse practitioners each year. One of the requirements for that program is that the candidate is supported by their employer and that there will be a job for them at the end of the training. They get quite a bit of funding around back filling the position and also for the supervision that is required within that program.

Mr GAFFNEY - That must be a significant amount of funding to be able to do 40 a year. Are you aware of the budget for that?

Ms DOOLE - Yes, I think it might be something like $40,000 per candidate.

Mr DUIGAN - In terms of the job you get, what is the difference in pay between a nurse practitioner and a registered nurse?

Ms DOOLE - I think the differential in public hospitals would be maybe $30 - $40,000; I am not exactly sure.

CHAIR - We are just running out of time and it's probably not your area of competency, but does New Zealand support, encourage and engage paramedic practitioners and pharmacists being able to work across their full scope of practice too? If you don't know that's fine, I just thought I would ask you.

Ms DOOLE - I don't know that much about it but I know that there have been efforts for paramedics to work differently in terms of responding to health need and also community pharmacists. There is a pharmacist prescriber role, and community pharmacists have been gaining more abilities to administer and supply medicines and they have a big role in vaccinations. In fact, the COVID vaccination was open to all health practitioners to participate in as well, so things like that are hopefully breaking down some of the barriers.

CHAIR- It makes you see what is possible when you have to do something.

Ms DOOLE - Exactly.

Mr GAFFNEY - Pam, is there anything that you would like to tell the committee that we haven't asked you, that would be helpful for our terms of reference and what we are looking at? You might think, you didn't ask me this question and it would have been good if you had? Any important closing points?

Ms DOOLE - Taking advantage of opportunities when they arise. Sometimes I know our nurse practitioners have pushed for things and that is great, but it can be incredibly frustrating when things don't happen straight away. Forming alliances and looking for opportunities in the legislative agenda, and being aware of who the true decision makers are in terms of relationships with whoever is the minister of health or that sort of role within the system.

CHAIR - Thank you very much for your time. We really appreciate it. It is good to hear that whilst things are similar, there has also been significant progress made in some of the areas we have been getting evidence around during this inquiry. I know the New Zealand midwifery scheme is a lot better than most in the world too.

Thank you for your time and hope you have a good day over there.

Ms DOOLE - Thank you. It is really good to meet with you all.

THE WITNESS WITHDREW.

Mr **DALE WEBSTER**, DEPUTY SECRETARY, DEPARTMENT OF HEALTH, Mr **RICK MONTY,** ACTING GROUP MANAGER, ORAL HEALTH SERVICES TASMANIA and Dr **IOAN JONES**, CLINICAL DIRECTOR, ORAL HEALTH SERVICES TASMANIA WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

CHAIR - Thank you Dale and your team for coming to the Rural Health Committee Inquiry. The reason we have invited you is because we don't have a lot of evidence around dental services and oral health generally in the evidence we have collected and it is a point on our terms of reference. Thank you for coming, without a specific submission.

As you know, this is a public hearing. All the evidence you provide to the committee is recorded and transcribed and everything you say before the committee is covered by parliamentary privilege. If there was any confidential information you wanted to provide to the committee you could make that request and the committee would consider that, otherwise it would be all part of the public record.

Do you or your team have any questions before we start?

I will invite you to take the statutory declaration and then, as I said, if you wish to remove your masks to speak to make it clearer for *Hansard* and for anyone watching please feel free to do so.

Thankyou. Dale, if you and members of your team would like to make an introductory comment and then the committee will have questions for you.

Mr WEBSTER - Thank you Chair, and committee. Firstly my role here is as Deputy Secretary Community Mental Health and Wellbeing in the Department of Health. With me today is Mr Rick Monty, who is the Group Manager of Oral Health Services Tasmania (OHST), and Dr Ioan Jones, who is the Clinical Director of OHST.

OHST is Tasmania's public dental service providing general services to eligible Tasmanians including a universal service for all Tasmanian children and services for adults who hold a healthcare or pensioner concession card. OHST provides services across rural Tasmania, with this coverage including 21 fixed clinics, including clinics at Smithton, Queenstown, St Helens, Sheffield, Huonville and on both King and Flinders islands. They have eight mobile dental units including visits to Rosebery, St Marys, Nubeena and Dover and 52 dental van sites across our public schools as well as 16 contracted private dentists for emergency dental services across rural areas and 14 contracted private prosthetists and dentists for denture services in rural areas.

This provides us with a wide coverage and we have seen capital investment improvements in recent years, including the opening of a new clinic at the St Helens District Hospital in 2019, the purchase of three new school visit vans in 2020 and renovations to the Devonport Clinic in 2021. Pleasingly, planning is underway for a two-surgery clinic to open in Legana in 2024.

This financial year, the state government funding for public dental services is $25.4 million. This is an addition to funding received through the National Funding Agreement and Medicare, as well as co-payment revenue. With respect to new funding, the state government has committed $5 million to provide an additional 20 000 appointments by the end

of this calendar year. I am pleased to report this is on track, with 5494 appointments provided up to the end of January 2022. The allocation of existing additional funding has enabled the employment of 11 graduate dentists and therapists, as well as dental assistants and digital upgrades to dental laboratory equipment and the purchase of care from contracted dental professionals across the state.

Also, I want to mention the work of the Royal Flying Doctor Service (RFDS), which has recently received state government funding to provide care to Tasmanians living in rural areas. Through this arrangement, the RFDS is currently visiting Queenstown every second week. This is in addition to the service already provided by RFDS in the north-east, along the east coast and the far north-west. These services support those provided by OHST, as they work to coordinate service delivery in rural areas where both organisations operate. The additional funding provided to OHST will help assist with oral health waiting lists, including the impact seen earlier in the pandemic where some services were impacted.

Pleasingly, OHST has been offering the full range of services for some time now, with all clinical care provided in high-level PPE on the advice of Tasmania's Chief Medical Officer. During earlier COVID-19 restrictions, OHST utilised tele-dentistry for some services and following that, now has tele-dentistry protocols in place, which allows us to use phone and video-based appointments across particularly rural areas, to maintain regular contact with parents of children with high-risk of oral health issues. This will save travel time for patients and is a particular benefit for those living in those rural areas.

Also of benefit to Tasmanians living in rural areas, is the implementation of digital dentures and I might get Dr Jones to explain that a bit -

CHAIR - What are digital dentures?

Mr WEBSTER - Oral Health Services recently purchased digital denture equipment, including scanners, 3D printers and milling machines. It is hoped that this will have significant gains for those living in rural areas, notably those in the north-west, often halving the number of appointments required for dentures to be made and reducing the need for travel. The technology is expected to be fully implemented by June of this year.

I hope that is a good overview for you and we're happy to take questions on that and I'm sure Dr Jones is happy to explain digital dentures.

CHAIR - It makes sense in my head, once I get my head around it. If I might, I know there's a number of clinics around the state and they've certainly expanded which has certainly increased access in our regions. I do hear at times that there's no dentist, or no dental nurse, or someone to actually staff them. So the clinics are one thing, the staffing is the other. Can you talk to us about the number of staff, the vacancies? They actually create access barriers if there's not the staff to run the clinics.

Mr WEBSTER - I'm very pleased with the efforts by the team in oral health over the last six months. We've been on a particular recruitment process, which has actually allowed us to recruit a number of dentists, eight in total in one selection, which topped us up at that point. Also, because of the additional funding we've been able to attract additional graduates this year.

In addition to, with the changes in how we're dealing with the pandemic, we were able to restart our student program this year, so all of those will mean that we've actually been able to increase the number of services available throughout 2022. One particular area of concern is dental therapists and we are working on a strategy to increase the number of dental therapists as well, but I'm pleased to say that the number of dentists that we have in the state in oral health services has dramatically increased over the last few months.

CHAIR - With regard to the strategy to improve the number of dental therapists, which obviously for children - well for anyone really, but particularly for children - are really important. What does that strategy look like?

Mr WEBSTER - It's working with the providers of the training to start with. The strategy with our dentists is obviously we attract graduates and students from across - James Cook University, for instance, sends students down. We need to do that with dental therapists as well. The second part of it is making Tasmania attractive. The particular program we ran for dentists involved dentists who have moved to Tasmania, in our rural areas, who actually then did the promotion of 'this is the place to come and work' and it worked. It was a short, sharp program that actually allowed us to fill up our dentist vacancies at that point, which is really pleasing. We will replicate that for the numbers that we need there.

CHAIR - How many vacancies are there in both dentists and with dental therapists across the state? Where are the vacancies geographically?

Mr MONTY - There are always staff who come and go, but the area with most need at the moment is northern Tasmania. We have four or five vacant therapy positions. That's out of about 12 or 13 that we would normally have working in the service, so it's quite significant. At the same time the graduate program, which Dale mentioned, has topped that up by two, or three in the north. We are looking at a mid-year graduate intake for therapists in the north as well and we're currently advertising our statewide recruitment campaign and we're hopeful to get another therapist to start early this year.

I think it is important to note as well that any parent who contacts us from any part of the state to request an appointment will get an appointment straight away. Every clinic is still operating. There are no waiting lists for children, so while we're behind in staffing in the north there is no impact on general children community care.

CHAIR - This is slightly off the oral health bailiwick perhaps, but there are a lot of people who are not health care card holders or pensioners or children who have quite poor dental health and find it very difficult to afford to visit a private dentist. Does Oral Health Services have any capacity to assist any of these people, or is it just, no, we've got our cohort and that's it?

Mr WEBSTER - The defined cohort is really children for oral health services and the universal service. So, obviously, giving people the best start is what we are focused on. But over the years as the federal government has funded adult services and the state government has provided funding, we have wandered into the adult service. That will continue as long as the National Partnership Agreement is rolled over but it is not the core service of oral health services; it is the children cohort. Unfortunately, to expand that beyond that is probably beyond the resources currently provided.

I have with me this map to table. It shows where all our services are with some highlights. I will hand that over.

CHAIR - So any parent who rings to make an appointment will get one, how do you reach out to some of the quite disadvantaged families with children who really need the service but perhaps don't know they can access it? In their view, they don't get anything else and they are often quite disengaged with schools, sometimes from other community services and they avoid government services for reasons we understand. Is there a proactive approach families with children?

Mr WEBSTER - The first is using the network of child and family learning centres - I think that is what they are called these days - across the state, which is expanding. So, some of the services we visit; we have spots to visit those child and family centres, and promoting services through those. Obviously, the ongoing visits to schools across the state is part of that as well and also visibility in local areas.

Having clinics like the new one, which will be a Legana, matches to where we are seeing population growth in our 0 to 17s. We are trying to have that visibility as well as running ongoing learning campaigns, advertising campaigns and things like that.

The main method is visibility and accessibility so it is important that we maintain our network of clinics, that we visit schools, that we visit child and family centres and things like that. It is important we have visibility and accessibility across the state.

Mr MONTY - We also have a really good health promotion program, which perhaps Ioan Jones might like to comment on.

Dr JONES - To build on that, we have a health promotion manager who works very closely, as Dale has already said, with the child and family learning centres. She has developed amazingly good contacts through a strategic health promotion plan, working with child and parenting services, school nurses and so on, and working with other NGOs. She is trying to increase knowledge and understanding, the impact of poor rural health on general health, but also recognising that there are barriers in place. So we are trying to increase the capacity of other people to help us in our mission. We can't be everywhere, so we're recognising there are other organisations out there that can help us. If we can embed rural health into curricula; if we can embed rural health into early childhood development, that is where we can prevent the disease.

CHAIR - Into early pregnancy?

Dr JONES - Absolutely, yes. We have a program called Smiles for Two. This was a program that was put in place as a pilot in the north west of Tasmania about five years ago.

CHAIR - When they changed the Mersey over - because I negotiated that a bit - things were being taken away from that community, as they saw it, in birthing services. That program is still running?

Dr JONES - Yes.

CHAIR - Is it being expanded?

Dr JONES - Really interesting. I had a conversation yesterday with the University of Tasmania who were quite interested. They have a PhD candidate who is looking at the effects of pregnancy and the synergy between rural health. We said we would be more than happy. The program operates statewide now, rather than just in the north west and it would be a good opportunity to look at increasing knowledge again.

One of the biggest problems is while we found we had great engagements with the nursing and midwifery group but, just like rural health, they have churn. They have people who go through and decide to make Tasmania their home for a while and go off to do something else, so it is recognising that both organisations need to make things sustainable. It has been successful.

CHAIR - I don't know if you have the figures on this, but are most eligible women accessing that service?

Dr JONES - I would have to take that on notice, I am sorry. I couldn't give you figures, but we can get that back to you.

CHAIR - It would be helpful to understand the number of eligible women who are actually accessing that Smiles for Two program.

Dr JONES - It has been positive. How can I say it? It is something the clinicians feel is very important as well, not just the organisation but people delivering the care. They get a lot from it. Having an opportunity -

CHAIR - The women do too.

Dr JONES - Absolutely. We know if we improve outcomes for them, we know we can improve outcomes for the child and we can improve outcomes for the family. You can create a dental home, and a dental understanding at that point.

Quite often, anecdotally, the comment back from the mum-to-be is: 'I didn't realise that. I didn't realise the connection, I didn't realise the impact'. Empowering people with knowledge is an important part of our work as well as delivering the care.

Mr DUIGAN - I am interested as to whether we are potentially winning the war, or are we making progress? Is the dental health of our kids better now that it was 5, 10, 15 years ago?

Dr JONES - When we look at measures through the national child or health survey, when it was run last couple of years ago, we fared much better in Tasmania than the previous one.

They usually run in about five-year cycles, depending on funding for a national survey. I believe 10 years ago we would have been bottom of the pile. I think we have risen now. We are not at the top; but we have risen up the state rankings. We have got improved health outcomes. We've still got a long way to go.

Mr MONTY - Third nationally. Child oral health.

Dr JONES - We've gone from joint bottom up to third in the table, top half. We see that as a thing to celebrate, to build on.

CHAIR - What is being measured? Is it the number of children engaged in oral health services? Is it their health outcomes?

Dr JONES - You are looking at a direct measure of oral health. There are different indices used, but one of the indices that we use in dentistry is called DMFT - decayed, missing and filled teeth.

You can look at it in the adult population. You can look at it in the child population. It is a fairly blunt tool but it is a tool that is universally recognised.

As time goes on you can build in other health outcomes. You can look at other data. You can look at other indices such as CEIFA and ICSEA looking at building in areas of economic disadvantage, and looking at the mapping. That is what we are trying to do. We are trying to increase our intelligence to really target the effort. As I said, we can't be everywhere and do everything for everybody. We are trying to really target those areas that really need us.

So, through an oral health survey, you are looking at the measure of disease present in the population at that time, whether it be adult or child. This occurs nationally. Again, I think there is negotiation on at the moment that is usually run out of Adelaide from the Australian Research Centre for Population Oral Health, ARCPOH. At the moment, they are negotiating with the states and territories to line up the survey for the future.

So that's where we get our benchmarking. We also have our benchmarking internally. We look at our figures. They are usually broken down into LGAs and we look at some indices there. But again, we can build.

CHAIR - How often is that survey done?

Dr JONES - Five yearly.

CHAIR - The last time was done when?

Mr MONTY - I would say four or five years ago.

CHAIR - We need another one.

Dr JONES - We do.

Ms Lovell - Is it done for the adult population as well, or just children?

Dr Jones - Yes. They don't run at the same time because that would just overwhelm everybody. They are usually interspersed.

Ms Lovell - Where is Tasmania sitting for adult oral health?

Dr Jones - I think it has improved as well over the last 10 years. Again, we have probably seen better gains in the child population than the adult population. As Dale said, our focus

really is early years. We know if we spend a dollar in prevention we are going to save $7 in treatment or further impacts. We need to put our mouth where our money is, and really follow prevention.

Whatever we do dentally, is not as good; it is a replacement for good oral health. It is a replacement for natural teeth. If I end up doing fillings on teeth, or I make digital dentures, it is a replacement for the good oral tissue that was there originally.

CHAIR - Can you tell us a bit about the digital dentures. How they work? How much did the machine cost?

Dr Jones - They vary. If I take a step back. I remember my lab technician saying to me a few years ago, 'Jonesy, it's going from vinyl, going to digital, going to iPods'. It is that sort of big, big, big jump.

CHAIR - With floppy discs in the middle.

Dr JONES - Essentially, with denture construction - and again, I need to reiterate, I would like not to have to make dentures for people, we want them to have their own natural teeth, but it is a reality - a big chunk of our work is actually restoring people's smile function, ability to chew and interact with people in the community by making dentures. Classically, dentures are quite a time-consuming process. It is the linkage between a clinical stage and a laboratory stage. This takes time, so you will find the appointments can be spread out over time. The clinician does their work then the laboratory technician crafts the artistry, then he has to go back to the patient and do the next stage, measurements, impressions, moulds.

What this allows us to do is to actually remove some of those classic steps. We are looking at digital scanners that will scan the impressions so the information then can be transported to a lab digitally and reconstructed or printed on site. We can use not only our own labs but we can use labs on the mainland or other parts of Tasmania to speed up the process. Measurements can be altered digitally, try-ins can be manufactured virtually, so it does cut down, as we say, hopefully about half the number of appointments.

If you are travelling from the east coast of Tasmania to New Town Dental Clinic, you know you only have to have half the appointments. The accuracy is the other great thing. And the reproducibility. If I've got your denture and all your images digitally on file then you ring up and say, 'I've dropped my denture, it's smashed'. How long ago was it? Oh, we made it only six months ago or 12 months ago. Print. 'It will be ready for you tomorrow or the day after tomorrow.'

With the technology, what we are trying to do is look at what the industry - there's lots of different things on the market. Obviously, we go through procurement processes -

CHAIR - That should also cut down the waiting times and the numbers of people waiting on the list.

Dr JONES - Absolutely. 'Game changer' is a big word but it really will make a huge difference to the impact on those patients who need dentures.

It won't be just dentures either; other prostheses that we need to construct can be done through it as well. Hopefully, we are taking on technology that, as it updates, we improve as well. It is a group benefit for our workforce as well. You can imagine stimulating some people in the workforce, the people who don't have the patient contact and get to see the outcomes and get to see the patients going out smiling, because some of them do go out smiling. These people now, they are feeling like they're having a boost in their enjoyment and increasing their scope of practice in the work that they do.

Mr WEBSTER - I would just add to that. When the $5 million was announced, the headline is 20 000 appointments but the underlying thing is the improvement in the waiting list. It is part of that $5 million that we are spending on digital dentures because that will definitely have an impact on the waiting list. If we can produce the dentures quicker with half the number of appointments we can do far more dentures. We haven't just looked at $5 million billed buys 20 000 appointments. We have looked at $5 million improves our waiting list, and that's our focus with that.

Also, I think it was Mr Duigan's question, or it might have been yours, Chair, around how we get the message out there. There is also a focus from the team at Oral Health in educating other health professionals and integration of oral health into the total health picture. In recent times, in the last 12 months, Dr Jones appointed as clinical director is now part of the Department of Health clinical executive so that we have that direct input of oral health into general health services.

The team at Oral Health also provides training and education at UTAS for general medical students, for pharmacists and in the nursing program as well. We also now do in-service training for our emergency doctors and nurses in all of our ED departments. We've got to focus on educating more than just the oral health team but educating the general health team about the need for oral health going forward.

CHAIR - Oral health injuries present to the department of emergency medicine, yes.

Ms LOVELL - I wanted to go back to where we were talking about the surveys, outcomes and measures. I don't know if this is outside your scope but maybe you're aware of whether there is or isn't something. I'm very curious to know whether there's any data collection or any of those types of surveys done into the flow-on impacts of poor oral health, like engagement with employment and education, nutrition, social engagement, other health problems that it can lead to. Are you aware of anything? Is that something that Oral Health Services considers or looks at? Are you aware of any of that sort of data collection being undertaken?

Dr JONES - It's a great question because, as you say, it flows on. Nationally, the picture is improving in the awareness. I can't quote the exact figure but when you were looking, it was a figure from the Australian Institute of Health and Welfare. It came out at the end of last year. I think we were talking as far as $8 billion was the burden of dental disease on the nation. You picked out right, the ability for somebody to go to work. If you're in pain, will your employer let you take time off work and go and deal with your problem?

Ms LOVELL - Or if you're embarrassed about how it looks.

CHAIR - Even getting employment.

Dr JONES - Absolutely. We work really well locally with some of the NGOs that identify some of these barriers that patients have if they can't go out and get there. It might be using your dentures or it might be doing something fairly simple, to us, for the patient and it might be an absolute life-changer. We do bear that in mind. There were figures several years ago backing that up around Australia, and Tasmania would be part of that, giving the impact of the burden on the population because of oral disease.

We've tried to look at things. I don't think we've really drilled down in Tasmania what the impact is or the financial burden is, but it's there and we all need to learn from that. If it's been recognised nationally now, that's great, but people disconnect.

CHAIR - It's not part of Medicare. I think they see it as separate. Somehow your mouth's not part of your body. It does my head in.

Ms LOVELL - It's so hard for adults because there is all this focus on children. We understand why, but -

Mr MONTY - A good reference is the National Oral Health Plan. It has some good background information and I can send that to you. It describes the interrelation of oral health with general health and key focus areas: aged care, young people, people in rural areas.

Dr JONES - It's one of the four target areas on the National Health Plan, people who are disadvantaged financially. It's our framework. We were involved, Rick's predecessor Emma Bridge was involved. I was involved in part of the development of that plan and that's up for review over the next few years. It's a guiding framework for all of us, whether we work in the public sector or the private sector, to try to achieve what Australia needs for the future.

As Dale touched upon, the education working with the health professionals, that's the bit of my job I love the most. I'm really lucky, I have a great job. I get to work with all the other health professionals and educate them again to build their capacity. The University of Tasmania has been a really good partner on increasing the knowledge of their medical students, of their nursing students, of their pharmacy students. Quite often there won't be a dental surgery in some of the towns we have but there'll be a pharmacist with knowledge who can advise and provide advice. It can be a good port of call so, again, it's recognising we can't be everywhere but we can certainly upskill others.

CHAIR - The report that you mentioned, or you might have other information yourself within a department, our first term of reference is health outcomes, including comparative health outcomes. Do we have any granular detail in Tasmania about the health outcomes, oral health-wise, in our regions as opposed to Launceston and Hobart?

Ms LOVELL - And the waitlist. That was going to be my question whether there's a breakdown of the waitlist.

Mr WEBSTER - We don't break it down to local government area. We do break it down by region so we can provide that but we don't break it down to a more granular level than that. We are focused on the service level and the waitlist by particular surgery, because people do move around.

Ms LOVELL - It is a good indicator to know whether people are having more difficulty accessing the service in rural areas than they are in urban areas.

Mr WEBSTER - In one area its dentures; the waitlist in the north-west is higher than the rest of the state so Digital Dentures is one of the programs we are running to try to address that. It needs a specialist laboratory which means that you are travelling, and we want to get that down. We are happy to provide a regional breakdown.

CHAIR - In terms of the outcomes and the waiting times and numbers on the waiting list. That would be good. To me it is not surprising that the demand for dentures is higher in the north-west because of the demographic there, and the high number of people living with social disadvantage. It all goes together. It is a shame we don't have a holistic approach to oral health from the national perspective.

Mr GAFFNEY - I have a general question about how the salary rates and conditions compare between Tasmania and the mainland. Are we attractive to other states to try to get people here, or are we the poorer cousin, as sometimes happens?

Mr WEBSTER - At the level we are at the moment, the fact that we have attracted graduates and dentists and we are attracting dental therapists says that we are competitive within the market. The students from James Cook University come down from Queensland to do student placements here, so we are an attractive service. We are probably attractive because we are a holistic service. The other thing is that we have a good relationship with the private sector in Tasmania. We do attract people to Tasmania who have then ended up in the private sector as well. That is important to say. I will throw to Rick, but I think we are comparable in terms of salaries.

Mr MONTY - They are really good points. The pandemic affected our ability to recruit. It's not just us; the private sector in Tasmania couldn't get anyone because people come from the mainland and people weren't moving for work. It was happening nationally. Generally speaking, over the last 10 years we have had very little difficulty with attracting dentists to the state. One of our important strategies is our student program. We have a high-quality final year student placement program -students from James Cook, University of Adelaide, and the University of Queensland. We recruit from that. We do need to focus on a similar program with therapy students. It is a little more complex to implement, but we will get there. Our graduate program has a lot of potential for our therapist workforce. Salary isn't everything, but when it comes to dentists we are one of the better paying jurisdictions. We have been for a long time. Therapists not so much, and that is where we need to focus on what our workplace provides to the therapy workforce, particularly final year students and graduates, because it is an attractive place to work. Salary is ok but it is not top of the other jurisdictions for therapy.

Mr GAFFNEY - International numbers - are we attractive to international dentists or students coming across?

Mr MONTY - Fifteen years ago we recruited a lot of our workforce internationally, South Africa in particular - there was a program called the Public Sector Dental Workforce Scheme. We are not reliant on international recruitment anymore.

Mr WEBSTER - Clearly we have attracted from Wales.

Dr JONES - Clearly it is not a Tasmanian accent but I am trying!

CHAIR - Can you tell us where the main training centres are for the dental therapists? Are they the same universities as the dentists?

Mr MONTY - We don't have therapy students this year. Previously we had students from La Trobe University.

Dr JONES - And Newcastle University. It is interesting. You would think that wherever there is a dental program there would be an oral health program but there is not.

CHAIR - Is it a turf issue?

Dr JONES - I think it is where universities want to put their money and investment in programs. Dentistry programs actually don't make a lot of money for the university. Dentistry is very expensive to run, but it's a good enticement for a university's look. If the University of Queensland lost its dental program, which it nearly did a little while ago, they were very concerned that it would affect the numbers going into the business school because it gives it an accolade: medical program / dental program. We have had all health therapy students. They have changed now; the dental therapist is no more and the scope now is called oral health therapy. That changed about ten years ago. We have still got people who are dental therapy qualified, but everybody coming through now are qualified as oral health therapists.

CHAIR - How's the scope broadened that?

Dr JONES - It's broadened differently to where you qualify, and that has been one of the problems. There has been no one unique scope for oral health therapy. There have been varying scopes but essentially it's some of the procedures. Classically, dental therapists just treated children - that was their limited scope - now they have branched into oral therapist they can treat adults. They can do different treatments for adults whether it be hygiene treatments, periodontal treatments. They can do restorative treatments. Again, it depends where they trained - the scope of their training - but again we have got …

CHAIR -That's a bit awkward isn't it?

Dr JONES - You've only taken a few seconds to realise that. It is, and that's why it's quite tricky to fit this new scope into certain models such as public dentistry.

CHAIR - And even to recruit, because you're not certain what the scope is going to be.

Dr JONES - You're not sure of the product you're getting. The student program with the dental students, again that was invaluable. You try before you buy. I am unashamedly proud we have the best dental student placement in Australia - best rural placement in Australia. I put my hand up, you know; we've got a really good scheme, a really good program.

CHAIR- The rural clinical school also has a very good reputation.

Dr JONES - We teach into that. We will go up to Burnie and will teach the rural clinical school and have a joke with the Burnie students face to face, and my colleagues can et cetera. Again, giving them a good time when they come down as students, showing to them you can

have this type of career in the public service, and ok if you don't want to be in the public service still consider Tasmania as a place to come and practise dentistry in the private sector. I would love them to stay with us in the public sector; but if they consider Tasmania as a place to come and live and work - tick. Our program has been successful. If you look at the dental registrants who are registered in Tasmania as their place of practice for the last few years, you see a big shift. It used to be Melbourne, Adelaide. It's all changing - and if you look at the number of registrants - sorry, Dale.

Mr WEBSTER - We've supported that program with infrastructure. At Archer Street and Launceston and Devonport we have a student area, so the infrastructure is there that they have their own space during the student placement …

CHAIR - Is that part of the rural clinical school?

Mr WEBSTER - It's part of our facility at Archer Street in New Town and part of our facility in Launceston and Devonport. They don't just come and are shoved in the corner; they have their own clinical space. It is a fairly large room but there are individual spaces and it allows for the mentors within the service to interact with them as a group. It has been built into our service that we have student spaces. Obviously during the pandemic, we didn't use them, but they are there and they are good spaces so the students know they are coming to learn rather than just coming down and sitting in a boardroom.

CHAIR - Will they be opening up now?

Mr WEBSTER - The program is full speed this year.

Mr DUIGAN - I am interested whether we have any Tasmanian dental graduates?

Mr WEBSTER - We would, but they have to graduate from other universities.

Mr DUIGAN - Yes, I understand that. Just on the basis that we are hearing through this inquiry that a lot of the real barriers to getting a GP to practise in Wynyard, or somewhere like that, is the fact that we are asking them to come from Brisbane and relocate to Wynyard and that creates a relatively transient workforce - they might be there for a couple of years. The best way to do it is to get someone from the north-west coast to go to med school. But we're not seeing that in dentistry - is that what you are saying?

Mr WEBSTER - There would be a few who are in that category. But it's really the student program. You get them down here, liking the place and look after them during the student program, then we find that when they graduate they do want to come back to us. It's a combination of the locals who might go off to dental school coming back but it's also the graduates who have come through our student program who have had a good experience of our service and want to come back.

CHAIR - Any other questions? Okay, well thank you very much for your time. I really appreciate that, that's been really helpful. We'll write to you with those couple of questions for you to follow up. Is there anything you want to add that you haven't told us that you thought is important for us to know about the service?

Mr WEBSTER - I probably want to put a highlight on the Aboriginal program, the program that we're running with Aboriginal organisations. A particular focus, particularly in the zero to five population, with the lower health outcomes that are reported for that cohort and particularly the program that is running out at Brighton or Bridgewater, early learning program, but also the program we're running jointly with the South East Tasmania Aboriginal Centre. It's early stages but it's part of our general program of focus on the Aboriginal community. I think Oral Health, again, is leading the way in creating programs. We look forward to the next -

CHAIR - It's one of those other areas of social determinants of health, isn't it?

Mr WEBSTER - That's right, absolutely.

CHAIR - I know the Royal Flying Doctor Service is doing things in Smithton, for example, and working closely with Circular Head Aboriginal Corporation (CHAC). So you wouldn't really need to go there because they're there, or is it -

Mr WEBSTER - In Smithton, we're there.

CHAIR - You are there, right.

Mr WEBSTER - Yes. At the moment they're in Queenstown, St Helens, Swansea and on King and Flinders islands. We work with them to coordinate where we go, so we don't duplicate services and we also don't want to duplicate the private sector, who are providing some good services as well. We need to make sure that we've got coordination of that.

CHAIR - Thank you all. It's been really helpful to hear from you.

THE WITNESSES WITHDREW.

Dr **DENNIS PASHEN**, GENERAL PRACTITIONER, FORMER PRESIDENT ACRRM APPEARED VIA WEBEX.

CHAIR - Dennis, thank you for appearing before the committee - sorry we can't see you, we'll just hear from you. Members of the committee are Mike Gaffney, Nick Duigan, myself and Sarah Lovell. We appreciate you giving some evidence to the committee. Have you received the information from the committee about presenting to the committee?

Dr PASHEN - I received some information, including a document I've signed and I've forwarded through.

CHAIR - A statutory declaration? You've done that. Everything that you say in front of the committee today is recorded on *Hansard* and will be transcribed and published as part of our public record.

Dr PASHEN - Yes.

CHAIR - You are also protected by parliamentary privilege while you are speaking to the committee, but that may not extend beyond the committee hearing, if you could keep that in mind.

Dr PASHEN - Yes.

CHAIR - Everything will be in public session, it is being streamed. It must be very exciting for people to watch. If you have anything that you consider to be of a confidential nature, if you could make that request to the committee at the time and the committee will consider that, otherwise it's all public evidence. Do you have any questions before we commence?

Dr PASHEN - No, that's fine thanks Ruth.

CHAIR - I acknowledge that you've signed the statutory declaration. We'll make a start. Thank you for the written submission that you've provided to the committee. I invite you to speak to that and any other broader issues you'd like to raise. Try to focus around our terms of reference, which I know you've also had a copy of.

Dr PASHEN - I haven't got a copy on my desk, it's in my computer.

CHAIR - That's okay.

Dr PASHEN - The point I was trying to highlight to the committee was the issues around opportunities in Tasmania, to improve the health of rural communities and the rural health services within this state. I've roughly put it into three areas listed there: the facilities; the workforce; and then into governance structures. Probably some of those are outside your brief, but I've had a fair amount of experience in rural and remote communities and in research and in development of innovative models of workforce, some of which have been successful, some of which have died through lack of impetus and support, essentially from government and bureaucracy.

The problems I've seen with the facilities in towns within rural Tasmania, of which I have seen many, is under-equipment. The actual buildings are fine. There's no problem with that. But they are under-resourced with equipment and with the pharmacopoeia provided within those institutions. I've listed some of those in there and I don't want to repeat or go over it. I will leave that for you.

The issue I would like to highlight within the facilities is there is a very cheap option for a state health department to develop a good telehealth service in Tasmania.

Prior to coming down here I had been led to believe that Tasmania had a fairly strong telehealth program with a good infrastructure. I was somewhat dismayed when I landed in Tasmania and working in the rural community that there was, in fact, very little infrastructure in telehealth within the state.

This isn't new information. This was a fairly longstanding resource provided to rural and remote communities throughout Australia. There are over 450 sites in rural Queensland, for example, as of the late 1990s, with telehealth facilities supporting their rural and remote health workers.

The point I was making, particularly is the gap in emergency services within Tasmania Health Service. I could work, for example, in Doomadgee in the Gulf of Carpentaria or Mornington Island that link directly to either the Flying Doctor Service or the emergency department in Mt Isa, Cairns, Townsville, or even Brisbane, to have advice from the emergency physicians there if I had a critical patient. They could actually watch what I was doing, advise me on what I was doing and support me as a clinician in that remote and often scary environment.

That actually doesn't cost a lot. I think the price when I last looked at it, which was some years ago, was about $16 000 to set up. I think it is somewhere over $25 000 to $30 000 but still that is a cheap price to have that kind of support available to your rural clinician. That includes the remote area nurses. It includes a number of other people who can access those resources.

At the moment it seems to me that telehealth in Tasmania is basically held for meetings. The private sector has embraced it because there is a Medicare remuneration but there is a fair resistance within the specialists in Tasmania to actually accessing from the public system to another public system.

For example, I had a patient in Scottsdale with a fractured subcapital humerus, which is the neck of the humerus. She was in a lot of pain. The orthopaedic people expected her to be ambulanced across to Burnie for them to cast their eyes on it. They already had the X-ray. They knew what it was. And they knew that there wouldn't have been anything they could have done with it. They would have cast their eyes on it then put her in an ambulance to go back to Scottsdale. Unnecessary travel, unnecessary pain and discomfort for the patient.

That could have been handled simply with a telehealth video conference link. The facilities were there in the Scottsdale hospital but there is a failure to engage on the part of the specialists within the public health service.

It is not a unique problem for Tasmania. When it's introduced everywhere, the same resistance from our specialist colleagues seems to exist.

That doesn't exist in the case of the haematologists and the renal physicians, I might add. They tend to support that because they have often very sick patients and telehealth seems to be a favourable opportunity for them to reduce the discomfort of their patients.

CHAIR - Just before you go off that, Dennis, you talked about the set-up costs. It also relies on having the other back-up staff like specialists in the main centre available to support the rural doctor or remote-area nurse, or whoever it is, to provide that advice. Is that something that has been a challenge, as well? We don't have the proper set-up in some parts, I accept that. But if you're going to make it work, what are all the factors you need to make it work effectively?

Dr PASHEN - Having set up a program in the Darling Downs, it wasn't easy because of resistance from staff. You need a dedicated room in the tertiary hospital, which could be an outpatients consultation room with video conference facilities in there so the consultant can access medical records as well as the video conferencing unit. Then you need that to be linked into the system. The emergency department needs linkages to the major emergency departments, for example, North-West Regional Hospital, Launceston General or Royal Hobart Hospital emergency departments. Most of the tertiary centres, in the emergency physicians room, there's usually a room there where they can do office work and there's usually on the wall the large video screen with cameras attached, where they can give advice and discuss this at the same time as look at records. They can look at the ECGs, they can look at X-rays et cetera from the peripheral end.

It is easily set up, not by me, obviously, but certainly by IT people because they're now quite succinct units.

CHAIR - That's the receiving end that's providing the back-up and advice. What's the minimum requirements you need at your end, say, in Queenstown or on the east coast or wherever?

Dr PASHEN - The ideal set-up is a large television video conference screen on the wall above the bed of the resuscitation bay. There's usually three cameras - one on top of the television, one at the foot of the bed and one to the side of the bed. They need to be controlled by the tertiary centre so while the person can be working on the patient, they can have a 360-degree view of the patient and advise the rural practitioner at the other end. They have a full visual sight on the patient during that time. Meanwhile, the rural physician can see their consultant at the other end observing them and seeking advice.

CHAIR - Are you aware of any facilities in our regions that have that set-up in Tasmania?

Dr PASHEN - No. I can give you a list of many in Queensland, though.

CHAIR - In order to facilitate that, when you talk about the set-up cost, does that $25 000 to $30 000 include that set-up as well as in their tertiary centre?

Dr PASHEN - No, that's each centre.

CHAIR - So in Queenstown you'd need that much.

Dr PASHEN - You'd certainly get away with it under $30 000, as you would in each of the major facilities.

Mr DUIGAN - In terms of bandwidth, Dennis, I guess you need a suitable amount of bandwidth in order to communicate those images as well. I assume there are areas of the state which have issues in that regard?

Dr PASHEN - One would assume that if you can make it work in Doomadgee, Birdsville or Mornington Island, you'd be able to make it work in Tasmania. We're promised a lot by Telstra and Optus so maybe it's time for them to fulfil their commitments.

CHAIR - Is there anything else on that telehealth aspect of your submission, Dennis?

Dr PASHEN - No. I think that probably gives you an idea of the kind of resources that are required to make this work. You've got to remember we've got King, we've got Flinders Island, we've got the west coast of Tasmania, the east coast of Tasmania then you've also got places like Dover and the Midlands. There are a number of facilities but not too numerous. There are, as I said, 450 of these places in Queensland alone.

CHAIR - How were the Queensland ones funded? Were they funded from the state health budget?

Dr PASHEN - Yes. I was involved with the early pilot. That was funded initially out of a reset grant which has long since passed by. It was Commonwealth money. Following that Queensland Health made a commitment and updated -

The perception was the money they saved from not having to transfer people out of there, saved them transport costs what it cost to provide these centres. Opportunity costs and better outcomes reduced the ongoing cost to the health service so there were significant savings.

Mr DUIGAN - Are your specialists happy to look at things like wounds, for example via telehealth?

I had a friend on Flinders Island who had had a hip replacement. His wound was about 10 days old and he had to go back to Launceston for a four-minute consultation to look at his wound. That are a lot of moving parts to attend an appointment like that. Is telehealth the answer for that sort of stuff? Are doctors and specialists happy to use it in that space?

Dr PASHEN - Absolutely. The group that particularly utilise that service are the wound management nursing staff. They have been quick to grasp the advantages of this. We have had our nursing staff here FaceTiming the nurses in Royal Hobart's wound management group, so you can do it via FaceTime. You get a better picture with the better camera but you can do it. You can even do it with still photos. There is absolutely no necessity for wound management to have to come down from Flinders Island unless you need a surgical solution to the problem.

CHAIR - So if the wound is looking ok or even if it looks a bit inflamed but isn't breaking down, for example, that could all be dealt with?

Dr PASHEN - Yes, absolutely. You can take a wound swab, you can take a photo. You can send the photo through. Telehealth has many guises. The accident management and emergency departments are probably another level from that. Day-to-day telehealth is not a difficult process, not with our technology these days.

Mr DUIGAN - You were saying there is some resistance to it. Is that fair to say?

Dr PASHEN - I think that is entirely fair to say. There is significant resistance to adopting this and it is not just in Tasmania, I can assure you of that but once it is structured into the service provision and once it is in place, it is usually accepted and adopted in a very positive manner. That is happening in some places in Tasmania but predominately with private practice.

CHAIR - The committee is looking at those aspects through the general practices in our rural communities and the availability of GPs and so on, on the private practice side, there have been some challenges with the remuneration for a telehealth appointment, for example. Is that still a barrier? Has it been addressed? Changes were made early in the pandemic period. Is that one of the barriers now? Will it be ongoing, particularly in the private settings, not so much in the state perhaps?

Dr PASHEN - It will be an inhibitor of the ongoing private practice, telehealth. Certainly, in psychology and psychiatry, which is an important part of telehealth, that is going to be an issue. The Rural Doctors Association of Australia is constantly lobbying the minister and the minister for rural health about the accessibility of rural communities to access telehealth and the specialists that they utilise. It is a very difficult area. It does not make sense for them to reduce the access to services in rural and remote areas, once they have established them and have been shown to be effective.

CHAIR - Is the remuneration piece of the Medicare rebate for consultations and things like that, which, I appreciate, is a federal government matter likely to continue to be a barrier to more effective and regular use?

Dr PASHEN - It's an election year so anything can happen.

CHAIR - If you're happy, we might move on to the workforce issue comments that you've made. We appreciate them. Obviously, workforce issues cut across all the different areas of health service. Do you want to add to the comments you made in relation to the workforce?

Dr PASHEN - Not particularly. I think I have summed up most of it.

It has been interesting that the rural generalist model that we developed in Queensland as a way of reversing the skills decline in rural and remote health has been now adopted by both nursing interstate and also allied health. A number of allied health people are now talking about generalism in allied health. Rural allied health people are perceiving that specialisation in their allied health field is an inhibitor to rural services: to call it specialisation and sub-specialisation is the enemy of rural health services. The more people who flowed into those areas, the less available they are to rural communities.

We have significant improvement in communities that have adopted the rural generalist model for their facilities. We have a broader range of services provided by the rural generalist. We have a better cost effectiveness from the rural generalist. For example in medicine, if you have someone who is anaesthetically trained, they will do an anaesthetic, they will do an anaesthetic clinic and they can anaesthetise for the surgeon. And the time when they are not doing that, they will be working and taking their anaesthetic skills into the emergency department or into the ICU or special care wards within the hospital. You are not only increasing the services, you are maximising the availability of those skills within your hospitals without paying additional funds. In Kingaroy, Atherton, and the twenty odd rural hospitals that are now rural general hospitals in Queensland have been seen to be running more efficiently and more effectively. The health dollar goes further within those environments.

It also applies, for example, to our remote area nurses. When you bring them into the hospitals, they are effective in the wards. If they have midwifery, they can work in midwifery; they can work in the wards; they can work in the emergency department and bring those core basic skills, plus their community knowledge into that environment. It makes the flow-through of hospitals much more efficient and effective.

CHAIR - There seems to be a real focus on driving to a specialisation, whether you are a doctor, a nurse or whatever. Obviously, there are areas where you need specialists - I am not saying you don't but how do you make it easier for that pathway to be taken by people to a more generalist approach and the rural generalist doctor or nurse?

Dr PASHEN- The thing that turned the corner for rural generalism in Queensland was the development of the legislative and industrial framework around the model. Dr Denis Lennox, who was the medical advisor to the rural medical section within Queensland Health, was aware of a paper that had been written a number of years before about the career structure for rural medical superintendents who who were often what are now the rural generalists before that concept was developed. He develops with the help of the industrial people within Queensland Health that framework and that was also facilitated through the legislation so these people had a structure. They had an educational framework provided for them that was remunerated and was enhanced within the legislative framework of Queensland Health. It came into credentialling within the areas and role delineation of the hospitals. This was essentially the turning point which made it work.

When I went to Kingaroy we had two procedural Australian GPs in the hospital. By the time I left three years later we had eight of them with two international graduates who also had advanced procedural skills. The Rural Generalist Program allowed those skills to be delivered on site within those hospitals. To do that you needed, one, the remuneration which involved the industrial framework, and two, you needed that legislated framework around clinical privileging and the role delineation within that facility that allowed them to actually be delivered on site within those facilities.

CHAIR - In terms of the remuneration piece, what sort of equivalent level are the rural generalists paid? Who could you compare them to?

Dr PASHEN - Once they have completed their advanced skill which is usually year three of four, they are then senior medical officer level. They come into the system at about $250 000 a year.

CHAIR - That compares with any other senior medical, like a surgeon or physician?

Dr PASHEN - No, often by the time they have been out 10 years they are at that level. By then they have their fellowship with their professional college and they are regarded as the specialist within the system and they are on a similar level to the (inaudible) and to the others within the system.

CHAIR - Is there a college called Rural Generalists?

Dr PASHEN - No, ACRRM was the Australian College of Rural Remote Medicine, which was the developer of the model with Queensland Health. The College of GPs through their Diploma of Rural General Practice has got the recognition from their members once they have completed their advanced skills of the Rural Generalist title.

CHAIR - They would be fellows of the College of GPs then essentially?

Dr PASHEN - Yes, and they have their advanced diploma or fellowship of Rural General Practice within their college.

CHAIR - Is there anything else you want to talk about in terms of the workforce issue?

Dr PASHEN - There is enough information, I can certainly supply more information on any of these if you let me know what you want. Some of those documents I wrote in the early days with other early rural generalists and academics. There is a broad range, I am not sure whether you want to read it all. They are pretty dry old papers sometimes.

I think the missing innovations in rural workforce is certainly the mid-level practitioner. These are the nurse practitioners, the Advanced College of Paramedic Practice and the practitioners or the Australian College of Paramedic Practitioners, physician assistance some of which are our advanced paramedics. Those are the things that are missing in Australia.

We trialled it in Queensland, it was a very successful trial. We trialled eight of them in Queensland. The AMA got its back up because of the registrars in Princess Alexandra Hospital thought the PAs were going to take some of their clinical exposure away from them. So they and the AMA essentially opposed it.

The experience overseas is where physician assistants (PAs) and nurse practitioners have been brought into the major facilities and specialties. That in fact hasn't been the case. It has increased teaching time available to the senior clinicians to teach their registrars. Where they operated in Queensland were Mt Isa, Normanton, Cooktown, Hopevale, they were very successful. They were primary care essentially, primary care position assistants imported from the US. They worked really well with the nurse practitioners up there. I tend to think of our remote area nurses in Queensland who graduate with their RIPRN, the remote isolated practice and enhanced and enhanced rural nursing, which is Queensland government recognition. They worked with those girls very well; some of them were gentlemen, I must confess.

We educated through another program, the Rural and Remote Paramedics. It was a program that we put 40 graduates through, the Paramedic Practitioner Pathway, which wasn't the PA one. It preceded that by a number of years. That was shown to be successful, but none

of those were advanced because of a change in government, because of opposition in the PAs case, from the AMA and from nursing bodies. The minister at the time, not a very courageous man, but certainly taking on board the issues from *Yes Minister*, said, 'I'm not going to take on the AMA and the nursing bodies in one hit, that's too hard, see you later'.

I understand the politics of it, I've been involved in it for many years. But the PA model is successful in more and more countries, particularly in rural areas, because it's seen to answer a lot of the workforce problems. They're not a replacement problem. They're a retention and sustainability solution to a difficult rural, diminishing workforce, and ageing, I might add.

Mr GAFFNEY - Dennis thanks, just further to that, there have been things trialled in Tasmania that have had some success and then they seem, as you said, to run out of steam, whether it's from a political part of it or whether it's angst from other medical groups.

Who has to be the driving force behind something like the physician assistants, that sort of thing. Does it have to come from the university? Does it come from the health department, or the minister? Who has to be the one who has to start this debate back up and follow it through? We are meeting with the university this afternoon, about their role and provision within the system. Who do you think has to have the handle on this, or the responsibility for it?

Dr PASHEN - The answer is all of the above. You need the minister to be on side. You need usually a couple of the ministers to be on side. You need the Premier to be on side. You need the directors general of each department or the CEOs of each department to be on side and you need the relative professional colleges to be on side.

CHAIR - Not many then.

Dr PASHEN - Pardon?

CHAIR - I said not many then. My tongue was in my cheek, so sorry.

Dr PASHEN - Having been there, done that a number of times I'm amazed we got the rural generalist up. It was only at a period of extreme desperation and a moment in time that we managed to take advantage that we got the Rural Generalist Program up.

Mr GAFFNEY - Do you think the current situation with COVID-19 there's another door opening there where groups are able to do their full scope of practice so people are being more receptive to the 'not normal' approach, whether it be through the pharmacies or whatever? Do you think there's a window of hope here?

From a committee point of view, we'll be looking at recommendations that we can push forward or promote. Do you think there is any opportunity for some change? We've always been told we need 140 more or 110 more GPs and they are just not there.

Dr PASHEN - It is often desperation leads to innovation. In Queensland it was the 'Doctor Death' incident in Bundaberg Hospital followed by Peter Forster's inquiry into the health services in Queensland that was the enabler. It enabled the minister to loosen the purses of Treasury and implement the changes that needed to be made. That is when the clinical senate and its relative subcommittees were able to be set up. It is when the infrastructures

could be set up and the industrial legislative framework around new things were able to allow them to happen. Sometimes you need an outright disaster to loosen the purses of Treasury because they are very hard to loosen, as you probably know.

Mr GAFFNEY - True. The last question, there are a couple of groups here in Tasmania that are quite strong and relatively conservative, protecting their patch as I have found, but there seem to be a few more voices within like the AMA and the nurses who are willing to say, hang on, there is a different point of view now. You have been associated with that group over a number of years. Do you see that there is, I am not going to say a changing of the guard, but is there some flexibility in what is happening now? Or more openness perhaps?

Dr PASHEN - When people get desperate enough they start to think in a more open and reasonable pattern. Alternatives that are non-threatening to the bottom line of a lot of professions certainly can be considered by them. They have to be brought along. Someone in a senior position within the state has to take a leadership role and bring the relative parties together. A lot of the funding systems in Australia make it difficult to happen. It is not as if within Australia there aren't good examples of this stuff happening that can be taken on board without going through all the grief and the politics and the partisanship within the various disciplines.

Mr GAFFNEY - Thank you, Dennis.

CHAIR - Dennis, if you were the health minister and you had the authority to make policy decisions, where would you start with this if you were to try to implement the Rural Generalist Program and also look at paramedic practitioners, more nurse practitioners, pharmacy practitioners and physician assistants? Where would you start?

Dr PASHEN - The guy I would probably bring in is Professor Andrew Wilson who was the deputy DG and then the DG in Queensland who enabled these things to happen. He was the man who opportunistically encouraged the relevant people to develop the strategy. You need someone within the system who understands the point they would need to reach and how they are going to reach it and bring the parties together. You need the senior clinicians to embrace it, so you have to pick your leaders there certainly, where some of the emergency medicine physicians in the state see the advantage of this. You need the senior bureaucrats and policy makers to come in, and you need someone who knows what to do to come in as well.

CHAIR - Professor Andrew Wilson who you mention, is he still practising or working in Queensland?

Dr PASHEN - He is in New South Wales now. His wife is an anaesthetist and he went back to Sydney because his wife was from Sydney. Google him. Andrew came to Queensland. We tried to poach him for JCU but he took up a position as professor of public health with the University of Queensland and then went into Queensland health as the deputy director general. He was fairly instrumental in supporting and guiding the process through Queensland Health, with all of the problems that can occur. Denis Lennox was the other one; he's now retired, but he created a lot of the infrastructure and framework. I am not sure whether they are in a position to shift states, but a number of people are available who could facilitate it. But you do need leadership with strong support from the Premier, the health minister, and for example, emergency services. With luck, in Tasmania it could be the same person.

Mr DUIGAN - In terms of shaking open the purse strings of Treasury, what sort of quantum of funding are you talking about to implement something like this? On the face of it, it does not seem it would be massive.

Dr PASHEN - No - in Tasmania it's not massively expensive. You've now got a Commonwealth funded hub in Burnie that does all the student and rural generalist training; that's already funded. You need positions to be funded; training positions in anaesthetics, emergency medicine and obstetrics are the three major ones. You need other programs like palliative care, pain management, and other advanced skills placements to be funded within the system. A lot of these already exist and the additional funding is not the issue.

The problem in Tasmania with a lot of these things is that people get to that stage of getting their advanced skills, and there is no end point for them. They can't, for example, stay as the senior rural generalist within the hospital, and do rural generalist work within, say, north-west or Launceston, or Royal Hobart, without treading on some subspecialist's toes. Certainly, the opportunity to turn Mersey and Burnie into rural generalist hospitals was there. Mersey still exists there, and I think that was the intention for which Ruth Kearon was given the brief.

It didn't live up to its expectations because they took obstetrics out of it. If you take obstetrics out of your hospitals, you do not need your anaesthetist anymore, although they still have day-surgery there. You remove your rural generalist anaesthetist out of it. If you take your rural anaesthetist out of it, you reduce the skills base for your emergency department. It's that downward spirals of skills and services that you initiate when you remove obstetric from a largish rural hospital like the Mersey.

It's interesting to note that at least eight new birthing centres have been opened in rural Queensland in the last decade since the rural generalist model came in. The distances there are significantly more and it takes about $5 million to open a birthing unit in a hospital safely. It's not cheap.

CHAIR - But our patient outcomes are important, surely?

Dr PASHEN - I mean, the whole of the rural generalist program, and particularly the birthing services, because that is a political hot potato, is the delivery of quality, safe services for rural communities. There is no point putting in a service that is going to kill your local people or your babies; that is a pointless situation, and would be political dynamite. No-one wants to see that.

CHAIR - The rural birth centres that are opening up in Queensland - are they in centres where they have a high dependency or an intensive care unit? Bearing in mind that there is a small percentage of women who require that, or babies who need a NICU, for example. Do they do retrievals? Or do they provide that level of care?

Dr PASHEN - No, they provide surgical obstetrics. They usually have a fully operating clinic with operating theatres. They often have, not necessarily an intensive care unit, but a high intensity unit. That is usually all you need. Certainly, the high risk, like type-one diabetic mothers with significant morbidity within their pregnancy, no one wants to keep them in a remote area because they turn to very sad moments very quickly. The majority of them actually are treatable and can be maintained in rural communities. I was surprised by the number of

deliveries that Mersey did, but they closed it. I think that was more due to the level of staffing that they couldn't maintain in both hospitals rather than the necessity to have a birthing centre in a place like Mersey. But I could be wrong on that.

CHAIR - In terms of the level of paediatric and neo-natal services in those areas, too, what level do they require to be safe and sustainable?

Dr PASHEN - Rural generalists are perfectly capable of resuscitating neo-natal, even premature babies. I've done it myself. All of my rural generalists regularly do neo-natal resuscitation courses. The midwives are trained in neo-natal resuscitation to a pretty high level in rural communities. I've been stuck with 28-weekers we've had to intubate and access IV pathways prior to being retrieved. You get the odd rude surprise and that's usually one of them. The best way to shift babies, obviously, is within mums. But you need to have people trained to manage in that circumstance. Again, if you've got the telehealth there, you're being observed by the neo-natal intensivists back in the major tertiary NICU unit while you're looking after the babies until they can be retrieved.

CHAIR - Okay, we are a bit over time, so unless you've got anything you want to share with us before we wrap up, Dennis?

Dr PASHEN - No, I will just offer you, if you require any particular literature about any particular thing, I can track it down for you. My filing system is pretty crappy, I should say, but I do have access to quite a number of those, including my old department's library. Some of that information is around.

CHAIR - We'll certainly come back to you on that. Anything you think that could help us understand, or give us more clarity about the actual establishment of a more rural generalist approach that's fairly instructive, I guess, would be helpful. I might get Jenny, our secretary, to get back in touch with you to see if we can get the contacts of Professor Andrew Wilson or Dennis Lennox to see if they might be able to talk to us as well.

Dr PASHEN - That would be great. Dennis would be a very good one for you to chat with, as would Andrew.

CHAIR - Sure. Jenny will be in touch with you to see if you can assist us in contacting them.

Dr PASHEN - No worries, thank you very much.

CHAIR - Thanks Dennis, very much.

THE WITNESS WITHDREW

Ms SABRINA RAVAIL CHIEF COMMERCIAL OFFICER, SWOOP AERO, WAS CALLED AND EXAMINED VIA WEBEX.

CHAIR - Hello Sabrina, can you hear us?

Ms RAVAIL - Yes, I can hear you now, thanks.

CHAIR - Thank you, Sabrina, and welcome back. Hopefully we won't have the same troubles as we did last time. We did start receiving your evidence and I assume nothing has changed in terms of my instructions to you and advice to you. So, if you're happy to basically recommence, because I don't think we got very much of your input at all before we had the technical trouble. If you would like to speak again to your submission and tell us anything since then that you would like to share with us, that would be really helpful.

Ms RAVAIL - I believe it is the same round as last time so I won't go through the full introduction, is that right?

CHAIR - We have the introduction on the record but there was very little after that.

Ms RAVAIL - With regards to the submission, I think it will make sense to provide a bit of background on what we have been doing to date in Australia then after that jump into the submission that we have made and answer any questions that you may have.

In Australia we have essentially launched a network in Goondiwindi late last year, in December, and have started delivering routine and emergency medical supplies to surrounding regional communities in Queensland, based from Goondiwindi. The operations have been developed in partnership with Terry White Chemmart to reduce critical journey times and overcome tyranny of distance in some of the communities around Goondiwindi, so basically cover that last mile.

These operations are in the pilot phase but are, as well, the first medical drone logistics operations of that kind in Australia which means that we really took the different parties on the journey, be it departments we work with - so that's Terrry White and EBOS - the customers we deliver to and the regulatory agencies we deal with. On the regulatory side, there are several entities, given that we work in the health space. From an aviation perspective it was CASA (Civil Aviation Safety Authority). It was about working closely with CASA to ensure that from an aviation perspective the way that we were interacting with the communities remained safe at any given point in time and from the health authorities, Queensland Health.

It was about understanding what regulations and how regulations in terms of deliveries were affecting medical supplies and how they are classified in terms of dangerous goods and basically different tiers of how to deliver medical supplies.

Had we received approvals, Aero would have been able to circumvent ongoing border closures, the aircraft simply flying over the border. I hope closed borders are something firmly in the past; nevertheless, that service still applies for flooded areas et cetera. That is what we have done so far in Australia in terms of first operations.

Going forward, it will be much easier to start new operations because, essentially, we will submit new areas for approval to CASA then simply work out the gap between the previous

application and the new application, which means we won't have to have that in-depth work with CASA, or not to the same extent.

In terms of what we've put forward, our submission is basically looking at some of the health disparities in Tasmania. Please stop me as you go if there are areas that you would like me to delve into straight away. Essentially, we have identified some areas where we think that our service could provide great value to the Tasmanian population, such as the greater proportion of over 65s in Tasmania than in other areas of Australia, and rural areas as well that don't necessarily have the same access to health.

Some of the points that we have, the photo is basically looking at how we could implement solutions to curb and reduce the impact of persistent and chronic diseases in the Tasmanian population. One of the areas we looked at is the Scottsdale hospital, which we identified as a good area to start operations and start a pilot in Tasmania. It would help reduce those critical journey times to oncologists, for example, and increase capacity in more rural communities.

Segregating our logistics in that one area, we don't foresee that as being a replacement of traditional transport commodities. That is something that is often misunderstood. People fear that drones may be completely replacing existing transport modality but it is more an addition and serves very different purposes.

Different ways we will and can build resilience is the health supply chain. Basically, we have the ability to transport pathology samples and we are able to do that under cold chain conditions and basically work towards IATA requirements.

We also have the possibility to distribute pharmaceutical vaccine distributions. Those vaccines again are distributed under cold chain conditions. We have that experience across a number of countries, more so in the middle income countries but we are growing that experience as well with partners and ourselves in countries such as the UK with the NHS, in Singapore, Scotland and Malawi and we will soon start operations in New Zealand.

One of the big advantages of having drone air logistics is that it reduces human interaction in the supply chain which in the event of pandemics as sadly we have all lived through in the last few years, it is obviously of great importance. So reducing that amount of human interaction, human movement by replacing some of the modalities with air transport.

The last element in how we build resilience in the supply chain is the speed and safety. At times drones can be faster so that in the event of mountainous regions, of waterways, of more remote areas, of traffic congestions we are able to fly over those as the crow flies. That is one element. The other element was being able to do that on demand with a lower reliance on human interaction.

Another element is looking at why the supply chain can benefit from aero logistics. There are a couple of elements, one that we already touched on before. Resilience and robustness have been clearly developed and has proven to be of need in the face of disruption such as COVID-19. That resilience comes from a number of reasons as the resilience that builds within the supply chain. All our aircraft are built and developed in Australia. I think we all again, sadly, have been heavily relying on imported goods, which can create further disruptions, so it is an additional [inaudible] where that value stems from. The other element, which I think is

something that will become more and more prevalent and more and more required is that the drones, the aircraft, are environmentally sustainable. The drones represent more environmentally friendly transport solution than alternatives such as cars and helicopters. Essentially, the aircraft is electric and therefore has a low carbon footprint and so goes into a minimal impact on public spaces as well.

The last point around the supply chain needs is the opportunity. We will touch base on that as well to integrate drone logistics along more traditional transport modes, and looking at operating that as a single network to provide futureproofing for those networks.

I think the next point that is relevant to Tasmania is looking at the regions in which Swoop Areo operates and contributes to a positoning Australia on the global innovation map. In the communities in which we operate we do avail these skills that are required in the economies of tomorrow. We always operate with a local team, so be that in Goondiwindi or in the Congo or Malawi or Scotland, we always have a local team.

We train up local teams. This industry is forecast to grow exponentially. The other element of how we contribute to creating value is by contributing to smart city infrastructure. We are looking at inclusive technologies; looking at how drone infrastructure optimises the health outcomes in isolated communities such as the elderly and helps them out with fast responses, which are required these days. The other element in smart regions infrastructure is looking at technology that is human-centric so that it interacts in a friendly way.

The last element is how we can create value here in Tasmania by improving access to health. There is still a big disparity in access to health, be it whether someone lives in a rural or urban area. The other element is in how we improve lives with faster response times by air. By having a heavier reliance on drones we can improve that access - make it faster and more accessible.

I think those are the main elements we have covered with the Australian operations. We have looked at a very high-level implementation plan in Tasmania at the Scottsdale Hospital and surrounding health facilities. The way that we operate is we have the aircraft at the centre of everything we do. Those are our autonomous aircraft which sit within our operating model. They are able to ship between mission and roles in under 30 seconds. We are able to deliver medical supplies serving an area simply by changing the pod. There are multiple levels of redundancy across flight systems. Essentially, with those aircraft we have the ability to build very large networks, which is what we have done, for example, in the Congo. We have a network that covers over 22,000 square kilometres. We are about to launch another one in the Congo that will be five times the size of the ACT. On one single flight the aircraft flies 160 kilometres. That is our new aircraft, the *Kite*, which we launched last year.

CHAIR - Is that just one way? It's 160 kilometres to deliver something. Would it need to be recharged to fly back?

Ms RAVAIL - That is precisely how it works.

The way it works is the pod on the top of the aircraft. The pod can be taken off the aircraft and put on a charging station. The way that we built the networks that I just mentioned, is that we have charging stations in different areas. Rather than wait until the pod is completely

recharged, there will be another charged pod sitting at that location. That is how we connect those pod-swapping stations to create larger networks.

In our time line for the end of the year we will be launching the Aviary, which is an autonomous intelligent infrastructure that will allow the aircraft to land on its own. The Aviary is an intelligent infrastructure on which the aircraft can land and then the pod can be automatically charged. The medical supplies can be delivered and safeguarded and the aircraft can fly to the next aero zone, and reduce the need for human interation.

CHAIR - So how resilient are they in rough weather, like windy weather and that sort of thing?

Ms RAVAIL - We fly in the same weather conditions as commercial airliners. For example, if you couldn't see a long way, we wouldn't fly. The aircraft are entirely autonomous. We have one to five at the moment, and we are going towards one to 30. So, one pilot piloting five aircraft, and in the future, one pilot piloting 30 aircraft.

We do have fly checks. We look at the weather and there will be weather conditions in which we will decide not to fly, fo example those same weather conditions when it is extremely windy in which a helicopter wouldn't take off.

CHAIR - In terms of introduction into Tasmania, where are you at? Obviously, you have got to deal with the Civil Aviation Safety Authority (CASA) as you have already stated. Also, you need to have some discussions with the state government about their willingness to use such a service.

Ms RAVAIL - There'll be two aspects to that. We will have the CASA side which is the regulatory side ensuring that we can operate in a certain area. The way we would look at that is identifying a network and looking at a network and building the routes in a way that allow us to fly in a safe manner. That is one aspect.

The other aspect is to engage with health services. So those can be hospitals, pathology companies. One of those that we have identified was one hospital would be a good starting area, but then we would have to engage with those factors.

The third aspect is once we have granted the right landing location, the right use case and the right approval to supply we would then look at potential funding opportunities and funding for that service.

Mr DUIGAN - The aircraft, do they take off and land vertically or do they require something else?

Ms RAVAIL - Essentially the aircraft is VTOL (vertical take-off and landing). The aircraft takes off just like a helicopter and then hovers into forward flight until its preplanned destination, and then lands again at the destination.

Mr DUIGAN - And your maximum weather conditions are what?

Ms RAVAIL - Let me just grab those ones.

Mr DUIGAN - Just because where you have your current route, the Scottsdale to Launceston route flies up over a mountain range and is rough.

Ms RAVAIL - We have had a look. The person looking at the route could have a look at that area, and those are areas in which we can fly. The weather limitations, in terms of when we can withstand velocity of 50 kilometres per hour or 31 miles per hour, or 35 knots, while maintaining the forward flight speed at a time of 15 kilometres per hour.

In terms of light rain, that is defined by international civil aviation organisation as up to 2.5 millimetres per hour indefinitely and we can operate in moderate rain of up to 10 millimetres per hour for up to 30 minutes.

Other than that, the temperature. We can operate in temperatures that go from - 5 to +45 degrees, -10 to +55, sorry.

Mr DUIGAN - That's okay, I get that it has a reasonable weather window. An indicative sort of cost to travel from Scottsdale to Launceston, what's the likely cost of a flight and what's the pay load?

Ms RAVAIL - The pay load is up to six kilos. We can trade range for weight and vice versa. In terms of how we look at the cost, we have different services we offer. One is the flagship model, which is a fully-managed service. That service establishes the operations, so we operate the full (inaudible) network on behalf of the organisation we work with. We manage the regulatory engagement and we provide the full technologies there, we manage the regulatory, the workforce is extra.

Then we've got - on the outside of the platform model, where the customer is provided with the complete infrastructure and it's provided as a managed service, so it's inclusive of technology and spans insurance and has a monthly fee on a fixed term contract. That also includes training and as part of that it also provides opportunities to extend their platform service, for example it could include aviation regulatory engagement or high-density flight operations or specialised equipment. Essentially those are priced differently.

We never sell the aircraft, we lease the aircraft. The cost of leasing the aircraft and we'd probably look at - not probably, we would always look at minimal opportunity of the aircraft, which also includes making sure we deal with redundancies in the network. We do not push the assets beyond what they should be pushed. Those ones, for the operational costs, we look at providing the full quote and then break it out from there. I would have to look (inaudible) to give you an insight, is basically $3000 US - I will look at the exchange rate per month for the aircraft.

Mr DUIGAN - Right, okay, thank you.

CHAIR - Any other questions members? Thank you Sabrina for that. We have run out of time, but thankfully we've had a successful session without losing connection, but an interesting presentation proposal, so thank you.

Ms RAVAIL - Fantastic, thank you very much for your time today.

THE WITNESS WITHDREW.

Professor DENISE FASSETT, EXECUTIVE DEAN, COLLEGE OF HEALTH AND MEDICINE; **Professor TIM STRONG**, HEAD OF SCHOOL, MEDICINE (INCORPORATING PARAMEDICINE AND MEDICAL SCIENCES); **Professor NUALA BYRNE**, HEAD OF SCHOOL, HEALTH SCIENCES; **Professor LIS FOA**, HEAD OF SCHOOL, PSYCHOLOGICAL SCIENCES AND PSYCHOLOGY; **Associate Professor LIZZI SHIRES**, DIRECTOR, RURAL CLINICAL SCHOOL (MEDICINE); **Professor SONJ HALL**, HEAD OF SCHOOL, NURSING; **Professor GLENN JACOBSON**, HEAD OF SCHOOL, PHARMACY AND PHARMACOLOGY; **Associate Professor ANNETTE MARLOW**, ASSOCIATE DEAN, PROFESSIONAL EXPERIENCE PLACEMENT; **Professor JIM CAVAYE**, PRO VICE-CHANCELLOR, CRADLE COAST; **Professor TRACEY DICKSON**, ASSOCIATE DEAN, RESEARCH PERFORMANCE, COLLEGE OF HEALTH AND MEDICINE; **Mr BEN JONES**, EXECUTIVE DIRECTOR OPERATIONS, COLLEGE OF HEALTH AND MEDICINE; **Professor LUKE BEREZNICKI**; **Associate Professor BELINDA FLANAGAN**, UNIVERSITY OF TASMANIA (VIA WEBEX), WERE CALLED, MADE THE STATUTORY DECLARATION, AND WERE EXAMINED

CHAIR - Welcome to this hearing of the rural health inquiry. We do appreciate so many of you coming along, because I know you cover a whole range of areas we've been looking at. It is a public hearing, and everything you say before the committee will be transcribed and form part of our public record. Everything you say is covered by parliamentary privilege while you are before the committee. If you have any concerns about anything that may be confidential you can make that request to the committee that we hear it in camera, otherwise it is public. We are streaming as well. In order to expedite proceedings, I might ask if you all agree with this statement, if you could all indicate your affirmation if that is the case. Do you all solemnly and sincerely declare that the evidence you are about to give to the committee is the truth, the whole truth and nothing but the truth?

WITNESSES - Yes.

CHAIR - Thank you for coming. Members of the committee are Mike Gaffney, Nick Duigan, myself and Sarah Lovell. We also have our secretariat; and our President has joined us, at the back of the room as another observer. If anyone would like to make an opening statement - otherwise we might go straight to questions. Whatever best suits you. If Belinda is participating, we might get her to start as you are online, then we will start from this end of the table and keep going. Are you there Belinda? We have had a bit of trouble with the IT today. We will come back to Belinda and try to sort out the IT issues.

Mr GAFFNEY - As they speak, they can just say their first name.

Prof. FASSETT - I will say a few words as the Executive Dean of the College of Health and Medicine. We are really pleased to be here today to participate in this inquiry. As a collective, we all come together with the aim of transforming health outcomes for the Tasmanian community and we do that through health professional education and research. We also are closely aligned and part of the university's strategy, which has a very strong place-based mission. We see that as critically important when you are thinking about rural and regional communities in Tasmania. That has given us some wonderful opportunities which we can speak about today, including in Burnie with our new campus.

We aim to bring about an intergenerational change in workforce capability. The way we are doing that is thinking about systems and system improvement and understandings of systems. We are open for questions and you have a broad cross section of disciplines.

CHAIR - Thanks. Feel free to come into some of these questions, any of you, because a lot of the things that have been raised with the committee, particularly with the availability of doctors, nurses and allied health professionals in our regions is that they haven't really been encouraged to undertake pracs or other rural experiences. That maybe in the past; I think it is a little different now but I will be keen to hear your views on that. Can you tell us what the university is doing across the range of disciplines to encourage people to take on that rural practice? I would be interested also to hear what the views are on the rural generalist program and whether UTAS has an interest in that, and what they are doing in that space. I think it is an issue right across all our health disciplines.

Sarah?

Ms LOVELL - I wanted to go back almost a step before that. Workforce is something that is continually raised with us in rural and remote areas. We know that the data shows that if you come from a rural or regional area, you are more likely to work in a rural or regional area.

Linked to what our Chair was saying, what provisions are there around acceptance for medical courses or courses in other health profession fields to increase the number of people we are accepting from rural and regional areas? And how does that work in Tasmania specifically? Flowing on from that is around what experiences are there for them in placements and pracs?

Prof FASSETT - Perhaps if I can start with a broad statement that as part of the College of Health and Medicine we are funded through the Commonwealth for our rural health multi-disciplinary training program. That comprises the Centre for Rural Health, we have the Rural Clinical School and we have our expansion in rural placements, which Annette heads up, and the Regional Training Hub.

We can speak to what we are doing and how we are building workforce capacity through those programs, in particular, because really the whole program is founded on the theory of immersion and growing your own philosophy, which is part of our strategy as well. If we wanted to have some opening remarks from Annette then you heard the key interest in other areas.

Dr MARLOW - From a placement perspective, placements are offered in rural areas, in particular, based on an agreement. Much work goes into spending time with our colleagues in healthcare practice to really understand the capability and capacity to host a particular discipline or a number of students at one time. While we have many conversations and meetings and work together, it is ultimately up to the organisation as to how many students they may host at one time; at what particular times of the year, and indeed, how many disciplines they may host at one time because, as you know, it is almost around not only bed capacity within an organisation but how many beds are available in the community to host X number of students at one time.

CHAIR - Students to live, you mean?

Dr MARLOW - Absolutely. It is a very carefully crafted and titrated activity across the calendar year but based on the ebbs and flows of what goes on within the health environment. Typically, in a health care environment you would note that there may be a trough in the number of admissions or the number of people you may be providing care to. You wouldn't necessarily be able to invite a whole host of students who may not be able to fulfil the requirements of their curriculum. So, very carefully managed and titrated but based on the needs of the healthcare organisation and community.

CHAIR - I will follow up on that before we move on to other comments. It has been brought to my attention from my electorate, particularly the west coast area, that it appears that meeting the rural experience requirements, if you like, say, 'Yes, we've done some rural experience, if we go to Launceston or Burnie, then we can tick that off', which means that students aren't going down the west coast. They are not potentially going to Circular Head. I know that some do but I am just trying to get your thoughts on this and how, and at the east coast and down the Huon, perhaps.

Can you give us some information or evidence about how you do encourage people into the communities that are broader than just getting a rural experience in Burnie, Devonport or perhaps even Launceston, if you consider that rural?

Prof HALL - We will start with medicine because it is disciplinary-based.

Dr STRONG - We have in the placement space in general practice some opportunities that we routinely use in a number of locations. They do range from metropolitan settings in Launceston but right through to areas such as Oatlands, Swansea, Longford, George Town and Scottsdale. The practice experience offers opportunities for students to be in places outside the centres of Launceston and Hobart. Professor Shires, running the Rural Clinical School, also has opportunities that includes the west coast. Lizzi might like to comment on those.

CHAIR - I want to talk about the Rural Clinical School into the west coast because it's an area that it seems hard to get student medical practitioners but allied health and other health professions seems to be more difficult. Lizzi, are you going to speak to that?

Prof SHIRES - I will talk about the Rural Clinical School and answer some of those questions. I think it was probably building on the long-term pathway. We do need to get more people in from the west coast and we do quite a lot of outreach and community engagement. We have done that for quite a few years. We get students from the west coast who particularly want to go back to the west coast.

I think it starts in schools and starts around our admissions policy, then also having local opportunities for people to study as well. We've done it with nursing. We have a pilot project now, based in Burnie, so we've got kids who can study medicine in Burnie from the west coast. They can choose which clinical school they go to then they can choose which placements they want. A long time ago, people didn’t want to go far away but now we would have medical students forever on the west coast.

On top of that, we also have a link in with rural generalists. We run programs with both the hub, the THS and now the DHS - I'm jointly funded for that - to have early-years placements

based on the west coast. So, we've got interns and RMOs there then we have rural generalist registrars.

It is really that whole pipeline. It takes a very long time. A lot of those initiatives are newer initiatives and it takes a decade to change things.

CHAIR - So, the registrars and RMOs are at the hospital down there in Queenstown, for example?

Prof SHIRES - No, they are in the general practice.

CHAIR - They work with Ochre as well?

Prof SHIRES - Yes, they work with Ochre and there's different funding models for all these things. The interns are released from the THS to spend 13 weeks on the west coast or on King Island, we actually have them across the whole of the state. They are employed by the THS but work for Ochre and they will work in hospitals and general practice. The registrars are employed directly by Ochre.

CHAIR - Would anyone else like to comment?

Dr STRONG - May I make one additional comment around your original question? I think it is probably important for the committee to be aware that in the medicine program we don't mandate the rural experience. The rural experience the students have in the places that I have mentioned, and in the places that Lizzi has mentioned, do arise from choice. There is an element of choice in which clinical school they elect to do their final two years of studying. If they select Launceston or select the Rural Clinical School then a range of experiences will be available to them. But it is not a mandated experience.

CHAIR - I know that the Rural Clinical School in Burnie has been very popular with students over the years. I assume that is still the case. Are we finding that the majority of students who choose to come to Burnie are from the region or is it a real mix? Going back to Sarah's comment, if you train locals they come back to local areas.

Dr STRONG - It excludes the international student cohort but Lizzi would be best placed to talk about that.

Prof SHIRES - With regards to the fourth-year cohort, because we had a really big rural intake then, I think more than half of them are from the north west coast and probably a third of fifth years.

CHAIR - Do you have any vision of where those people actually end up, how many of them end up in general practice in our regions? Do we know that or is it that once they have finished their degrees and moved on, done their intern years and residency, then what? Do we know where they go?

Prof SHIRES - Yes, we track them. Basically, all of us have to be registered. So we have all the data on everybody who graduates from the university, and then we pull data each year, and then we look at where people go, whether they go rural, whether they stay here, or where they go.

That is why I am saying it is 10 to 15 years before we see people coming back. So GPs that you now have on the north-west coast, who came through the rural clinical school and are back on the coast, and there aren't that many of them because of the trajectory, but there are a lot more now than they were before. So, I think it is just watching them come. It is also our post-graduate training and things like that. It is not just about GPs, it is about everybody else. But yes, we do know. And most of the locally-trained doctors have come through a clinical school or through UTAS.

CHAIR - Does anyone else wants to speak about the other disciplines, like nursing?

Prof HALL - Last year we opened up our new Burnie campus, the north-west campus, and that has just been fabulous. We are bringing about 84 students a year into that campus in nursing, and 84 per cent of those typically live locally. The others who do not will tend to live in rural areas between Burnie and Launceston. I did a quick cull of the postcodes and I think we have every postcode covered, within the area.

CHAIR - The whole north-west area?

Prof HALL - Yes, right though to Flinders Island. So we really do collect a big diverse group of nursing students all the way through. Many of them are enrolled nurses. They have already started their nursing career in the rural areas. So for them, a registered nurse is then building on. We can then encourage them to stay in nursing and to build their postgraduate careers, because we offer such a diverse range of postgraduate courses as well. But we really are looking at how we can work with the local communities, the local schools, in building the future of nursing, particularly in those areas. Many of our students are starting to come to us now because they have had tasters in schools. They have done enrolled nurse programs and now they coming into the registered nurse program.

CHAIR - So, of the current court cohort how many would be a mature age?

Prof HALL - About 50 per cent at least. We do not find that we get the attrition on the coast that we get in the other ones. We are running at about 13 per cent. Most of that attrition is actually through pregnancy so we can encourage them, hopefully, to come back in later. These are real things that real nurses living across that whole west coast experience.

We also did a little bit of a look around today at where the nurses are this week for their clinical placements. We have facilities covered all the way from Strahan and Queenstown, right across the coast, right across the island and down to the Huon Valley. We have very strongly built that rural focus into our program.

CHAIR - I assume the Launceston campus also sends their students everywhere?

Prof HALL - They do, and so does Hobart as well. We do get a lot of cross-fertilisation of students from Hobart up into those areas and vice versa. It is good that students experience the whole diversity of different clinical pathways, different ways of different acuities of patient care, different ways of working within a team, different leadership models. It helps build very rounded students at graduation who can then move much more freely into that work space.

CHAIR - Does someone else want to talk about their discipline?

Prof BYRNE - I'm Nuala Byrne. I will kick off, Chair, with allied health. Allied health is a broad mix of professions. Pharmacy is at times identified. Glenn Jacobson can talk to pharmacy, and Lisa Foa can talk to psychology, but the Rural Health Multidisciplinary Training (RHMT) program doesn't mean it's just our students. It means that we're also supporting students from the mainland. In allied health to this point in time, thinking of courses like physiotherapy, speech pathology, occupational therapy, through the RHMT we support students coming to do placement in rural places from other universities; but over the next couple of years we will be offering those courses. Physiotherapy and speech pathology will be commending this year and occupational therapy next year; clinical exercise physiology next year; and then potentially courses like dietetics into the future.

We have quite a strong plan in place, supporting place-based education, supporting our students in a whole variety of locations. We see one of the great advantages of Tasmania's rural multi-disciplinary training is to support students from those regions, to undertake their training right across the state.

CHAIR - All those physios, OTs, speech therapy, will they be provided in three campuses?

Prof BYRNE - That's right. We'll have a cross-the-state support. The real opportunity that we have is that we're building these courses as a suite to be built at the same time. It means we're getting that inter-disciplinary learning in place. That cross-the-state is really important for us. We want these courses to have a real Tasmanian DNA. We're working very closely with our practitioner partners to build really authentic experiences for the students. It's quite a flexible program that we're building. It is at the masters level, which also then gives us the opportunity to support students from an undergraduate pathway, which means they don't necessarily always need to make that decision early, as to exactly what allied health career they might want to take. That really gives us the opportunity through our bachelor courses right across the university, to give students experiences through a work-integrated learning approach, where the students can experience what it might be like to be in one of these allied health careers. Then they can make that choice as they transition through their bachelor degree. Lisa or Glen might want to talk to pharmacy and psychology.

Prof FOA - I'm Lisa Foa, I'm from psychology, Head of School, Psychology. Psychology at the university has been very Hobart-centric for a long time and turning out very small numbers of students. We've worked over the last 18 months to two years to revamp that program and move training for that profession. If you want to be a psychologist, it's a masters-based program. They've always been in Sandy Bay. We have a generalist professional psychology pathway in the clinical pathway and each of those courses typically took in about 10 students. Very small numbers, very Hobart-centric.

This year we've taken 20 students into each of those courses and for the first time 11 of them are up in Launceston. The plan is that we will now have course work available at Launceston, for the first time, and they can do placements anywhere on the coast, or Queenstown, Swansea, wherever. We're reaching out to practices all around to try to get that breadth of rural exposure. Unlike physio and so on, if you want to be a psychologist you have to do an undergraduate degree that has specified psychology units in it and again that's only been available in Hobart and Launceston. We're now opening that up at Burnie as well.

We had first year students last year and this year second year students at Burnie. Next year we'll have third year and then honours, so we'll have the full pathway available for the undergraduate honours year, in Burnie, as of 2024. As I said, we've started the post-graduate training in Launceston to broaden the coverage of psychology students across the state. We're rapidly expanding and growing our program.

CHAIR - How long is the course now?

Prof FOA - If you want to be a generalist psychologist you have got to do three years undergrad, and this is specified by the accrediting body. This is specified by the National Psychology Board Australia. You have to do a three year undergraduate with accredited sequence of units in that. Then you have to do your fourth-year honours. The psychologists set a lot of bars for themselves. Then you have to do one year of course work and one year of intern and at that level you then are eligible to be registered as a generalist psychologist.

If you want to be a clinical psychologist you have to do two years at that master's level and then two years of intern and then you are a clinical psychologist. It's quite a long program and so we recognise we need that place-based education. We desperately need more psychology workforce in the regions and so that's why we have now have the undergraduate program at Burnie and we have begun the expansion out of Hobart. We have started in Launceston and the aim is to broaden that out to other satellite areas around the state as well, including Burnie.

CHAIR - Could a student in Burnie hook in electronically to at least commence the psychology degree?

Prof FOA - Yes, so that's the other thing we have introduced. With that rollout on the Burnie campus we are doing a simultaneous rollout online. Our undergraduate degree first and second year are fully online as of this year and again third year will be next year and then fourth year 2024 so by 2024 we will have the full undergraduate and honours program on three campuses in the state and online.

CHAIR - Okay. Pharmacy?

Prof JACOBSON - Pharmacy as a discipline, we are much smaller than the other disciplines but not without the potential for really significant positive health impacts. I think, from our perspective, placement capacity is certainly not an issue. We have great engagement with the profession on the north-west coast and in the north. The Cradle Coast open day recently last year was a great example where we had hospital pharmacists, alumni, community pharmacists engage with the local community.

The other aspect, as well as engagement, is that the practice of pharmacy in a rural setting is actively promoted in the course. We have placement preparation lectures for those who are going to rural pharmacy locations, interdisciplinary experiences with GP and district nursing, nursing homes, et cetera. We have guest lectures in the third year of the program so currently we have got a four-year program. In third year where the students are starting to ready themselves for clinical practice, we have guest lectures from pharmacists who own rural pharmacies, we have a lecture from the Pharmacy Guild of Australia about rural pharmacy practice as well. Pleasingly, some of our rural sites, especially those sites that offer rather extensive clinical services, those are highly sought after by our students we find.

In addition to the workforce in, I suppose, a greater holistic context, we are not getting enough students from the north-west particularly and in the north. Anecdotally we hear this through our partners, so the Pharmacy Guild, Pharmaceutical Society, Statewide Hospital Pharmacy and we are following in psychology's footsteps. We really want to look at expanding offerings into the north and north-west so hopefully we can start to do that from next year. That is our plan. We recognise that we need greater accessibility for students in the north and north-west. We hear anecdotally about living costs in Hobart et cetera which is a real barrier.

CHAIR - It's not the cost, it's actually getting somewhere to live.

Prof JACOBSON - And I just reiterate the point that has been made previously that students who come from a particular area, we generally find they will go back to those areas. Certainly I can think of several examples where we have fantastic early career pharmacists working in practice are making significant impacts in community pharmacy settings and hospital pharmacy settings by returning to their roots essentially. I would like to highlight those initiatives. We recognise the problem and we are doing everything we can to address the accessibility, particularly in the north and north west. Following the model that has been deployed by psychology, we would be looking at various mixed mode deliveries, asynchronous online et cetera, that work is underway as we speak.

CHAIR - Do you have any plans to look at broadening the scope? Law and regulation prescribe the scope of a pharmacist or a nurse or any other allied health professional. We have had a lot of evidence to the committee and there will be other areas where I will ask the same question around paramedicine, around nursing like pharmacy practitioners more prescribing rights. We have seen some of this happen in other parts of the world. We have seen the important role of pharmacists in the rollout of the COVID-19 vaccines and other vaccines as well. Is that something that UTAS would be actively lobbying for, looking for, trying to broaden the scope?

Prof. JACOBSON - Currently our graduates are trained in the full scope of practice according to the Pharmaceutical Society of Australia and certainly, to competency standards. Our graduates will leave and potentially be able to work in these expanding areas of practice. A lot of our pharmacy practice research is focused on those expanding areas of practice at UTAS. We have a lot of expertise; it is not my area but we do have that.

From a graduate and a professional satisfaction perspective - and that is what we see with our placements - the sites that are offering more extensive clinical services are the ones that are very desirable to our undergrads in terms of rural placement. By association, you would think that would enhance pharmacy as a career for students who want to come into the program.

Prof. DICKSON - My role is the Associate Dean Research. I guess the comment that is relevant to this conversation is that we have had a real refresh of our research strategy to more explicitly focus on rural and regional. Although we still have our eye to discovery research and we always will, we really have in mind research translation to make sure our research is having real impact and change particularly in the regions. That has been an explicit driver behind our college's research strategy but also the university more broadly to make sure the research does not stop with the publication but it causes practice change and improvement.

Prof BEREZNICKI - To add to that, and following on from Glenn and Tracey's comments, one of our aims is to try to make our courses distinctive to attract students both from and outside of Tasmania to our courses. One of the areas of distinctiveness that we have identified is using research to infuse our curriculum, and to make sure that we are truly training students at the cutting edge. We are taking them to current scope of practice and hopefully beyond and then using our researchers to try to create new roles for health professionals.

As Glenn suggested, we have a strong record in doing that in certain disciplines and then partnering with stakeholders to trial some of those initiatives. Pharmacist vaccination is a good example. We were involved in one of the early pilots of that in Tasmania, in partnership with the Pharmaceutical Society of Australia. That then led to the development of practice standards and the ability for pharmacists to vaccinate. That is a nice example of what we have tried to do over the years in making our curricula distinctive and infused with the best research.

In relation to where programs are located, we have a range of pathway programs available. These are relevant for people who might not have a year 11-12 education and need to prepare for university study and cannot meet the prerequisites for courses like pharmacy and nursing. The university has a diploma of pharmacy studies that offers a range of specialisations which offer pathways into undergraduate programs. Some examples of that are pharmacy studies and it leads into the Bachelor of Pharmacy program; psychology, nursing, health science as well. Some of those courses - I'll use pharmacy as an example - might be Hobart-centric at the moment, but the diploma pathway is available in both Hobart and Launceston and via distance. We can hopefully encourage students to think about university study, gain the prerequisites close to home and then consider entering the course. I guess that's happening in the background, while we try to broaden our offerings throughout the state.

CHAIR - Jim, do you want to add anything in terms of the Cradle Coast Campus?

Prof CAVAYE - Yes, it's Jim Cavaye from Cradle Coast and I did want to add something, Ruth. It's timely to talk a little bit about our original campuses. As you know, the university is going through a transformation of all its campuses, but the key one in the last 12-18 months has been the establishment of the Cradle Coast Campus at Burnie.

The whole point of establishing those campuses, and the Inveresk transformation as well, is really about overcoming the barriers that regional students have to access. We know about the logistic and financial barriers that they face and it's not just cost and transport and so on. It's poor internet connection that they face at home. It's also the fact that many of our students have children, they have businesses, they're working, and it's hard for them to relocate to access higher education. The whole point is to offer start-to-finish courses locally. There is no point in just offering first year. That's often been the experience of our regional students. They do first year and then they have to move. The whole point is start-to-finish. Nursing is a classic example at the Cradle Coast Campus and psychology and others.

CHAIR - It is a magnificent lab.

Prof CAVAYE - We consider it to be one of the best. That's the principle behind a lot of our offerings that will be coming in the future in regions. We've now got the accelerated Bachelor of Business at the Cradle Coast Campus, for example. We've got an MBA there now. It's all about offering things start-to-finish. There's a couple of benefits - it's not just students overcoming the barriers to access that they face, it's what the committee has spoken to before,

which is, if we train students in regions they're almost certainly going to stay in regions. If we're looking for health services to be improved in regions it's about attracting and retaining health professionals. One key way of doing that is to train locals, if you like.

The other impact here is that we're modifying, we're tailoring the learning experience to the learning preferences of our students. Many of our students in regions are adults, they're adult learners. We do have school leavers, but a large proportion of our students in regions are adults and they have busy lives. They're studying on top of running a farm, running a business, looking after children and often many of them having caring responsibilities as well. We have a blended mode of delivery. It's online, in conjunction with face-to-face practical learning, plus placements. It's trying to provide a way of learning that fits into their life. Also, part of our campuses is about improving the quality of the university experience for them. As you know, many of them are first in family. They're unfamiliar with university. It's often a challenging experience for them and it takes a fair bit of confidence to step up and enrol and be part of it. However, when they walk into the campus at Cradle Coast we've had many comments from students saying, 'Now I feel like I'm at a university.' It's a high-quality facility and it really enriches the experience that students have.

The final thing I would say is about the outreach aspect of what we do, for example, the West Coast Study Hub and the Circular Head Study Centre. While we don't run them - they're run by the community through West Coast Heritage - we have a community learning officer there and we are engaging with our colleges to deliver short courses and other learning experiences, not just for our current students in those locations, but for prospective students and for the existing workforce. We're looking at things at Circular Head, for example, around agriculture, education and nursing that engage with local farmers and local people in the community. It's all about trying to be responsive to the needs of regional people and their learning needs.

CHAIR - Does someone want to talk about paramedicine, like paramedics? Belinda, if you introduce yourself first and then if you could speak to the paramedic training and education.

Dr FLANAGAN - My name is Belinda Flanagan, I am the Director of Paramedicine. I am new to the position. I have only been here a month but I am also based in Rozelle in Sydney. I have not quite got down to Hobart yet but will do shortly.

The paramedic program is offered out of Hobart campus. We only have quite small enrolments. A Bachelor of Paramedicine is our undergrad degree and we only take on about 44 per year. The reason for that is the capacity for clinical placement at Ambulance Tasmania being our placement provider. They are limited in the placement they can offer so we tend to negotiate. We have an agreement for 44 placements a year.

We offer postgraduate courses as well and there is a nested series, postgrad units that work up to a masters and have a specialisation in either extended care paramedicine or intensive care paramedicine. We also do other programs such as a conversion pathway for paramedics who have come through a vocational pathway and we have a navy medic course as well. That is also specialised.

CHAIR - There has been evidence provided to the committee about paramedic practitioners and advanced scope of practice. One of the previous presenters to the committee said that effectively paramedics are the only profession, in their view, that are specifically

trained to provide care in the community, in a person's home or on the sporting field, wherever they may require the services of a paramedic.

Do you have a view about the scope that you are currently educating to and should that change?

Dr FLANAGAN - It is a bit interesting. Across Australia I suppose there is a little bit of a push for an evolving scope for paramedics. We are not working within a paramedic practitioner model in any state at the moment. Most paramedics are employed by a state ambulance service and there are varied roles within those services such as extended care, intensive care and other service such as where I have come from in Queensland they have a low acuity response unit as well. Other than the industrial sector, the resources sector, they are probably the only existing opportunities for employment for paramedics.

At this stage we do not offer a specific qualification for a paramedic practitioner as such. There are only two universities in Australia that have recently commenced those degrees, Edith Cowan and Deakin universities and it is not something that we offer at the moment.

CHAIR - Is it something that might be considered, bearing in mind that it seems that there is a greater awareness of the perhaps constrained scope of some of the health professions? I am not saying you suddenly become a paramedic practitioner when you haven't done any additional education or training, the same as with a nurse practitioner. Nurse practitioners have masters level of process as well. Do you think that is something that UTAS would consider or look at in terms of the workforce challenges?

Dr FLANAGAN - There has been some concern from the Council of Deans about specific paramedic practitioner courses offered at universities purely because there isn't necessarily an employment pathway and they are very heavily resourced. They are quite expensive to run. I suppose we need to look at what is the actual market for something like that because it is not actually recognised within the health service at the moment.

It is my understanding that we have a suite of postgraduate courses that we have just undertaken as a review. I am new at the university and it has probably occurred within the last six months and because of the results of that review, we have determined that there are certainly areas that we probably need to progress in areas such as public health, leadership, preceptorship. Those were the gaps that actually came out of that review, not so much an extension into other clinical skills. Now we have got the recent results from that review we are undertaking over the next 12 months, a redevelopment of that postgraduate suite of courses. Looking at the needs for an extended scope is an area that we are looking at.

Mr GAFFNEY - To follow on from that, can you explain to me a little bit, because the postgraduate courses you are talking about are non-clinical, so therefore they are not recognised for MPs and PPs, if they are of that nature for a masters? Is that correct?

When you said there were other graduate courses that paramedics can take but they are not recognised as part of the MP and PP. Is that correct?

Dr FLANAGAN - The existing postgraduate courses we have at the moment would give you an extended care scope of practice or an intensive care scope of practice. But, it still needs to be recognised by the ambulance service. It depends on the ambulance service, but they

would have to, and I am unsure specifically about Ambulance Tasmania, but they normally put that through their own series of training that they recognise.

They would often come in with a postgraduate qualification and then the ambulance service itself would put them through that training to get that extended scope.

CHAIR - I could perhaps suggest to you that it is a bit of a chicken and egg situation. If there is no defined career pathway for a paramedic practitioner and because of various constraints - some are legal, obviously, but the law can change. That is parliament's job.

Do you think it is unlikely to see a paramedic practitioner course developed until there is a more defined and clear employment pathway which will require legislative change to give effect to it?

Dr FLANAGAN - That is right and then if all of that occurs then certainly it is something that we would look at. I think we are very early in that as a profession across Australia.

Mr GAFFNEY - I am asking these questions because there are so many different faculties and areas here, so it is not easy.

Is UTAS planning to run a short prescribing course for extended care paramedics? Is that on the radar?

Dr FLANAGAN - We already do run a postgraduate course for extended care paramedics. It has been requested by Ambulance Tasmania. We are in the middle of conversations at the moment, if we could run some other short courses.

We have got back to them to say, well you need to give us more information on what those short course requirements are and then we can continue the discussion, but there haven't been any further conversation there yet.

Mr GAFFNEY - Because I am aware that in New Zealand they have a 12-month long graduating certificate which is part of a nesting course which counts as part of their clinical masters.

It has been put to me that Tasmania is offering these little short courses where if they went out and offered a longer one it could have more benefits. I have to say, I am not sure about the veracity of some of the comments or questions I am asking. I am just putting it out there.

Dr FLANAGAN - I suppose at the moment we have to look at where they are being employed. I mean Ambulance Tasmania, I suppose, they need to be able to recognise the qualification that we are providing. They have their own set of in-service courses that they run.

I suppose that is the point of the review that we have undertaken, and Ambulance Tasmania has a lot to do with that. We could actually identify some of those gaps, and hopefully fix them with what we are about to undertake in the next 12 months.

CHAIR - When was that review completed?

Dr STRONG - Just being mindful that Belinda started in January, that review was completed at the very end in December of 2021.

CHAIR - So, was the new CEO, Joe Acker, was he engaged in all in that? He has a few different ideas about things.

Dr STRONG - We have engaged quite closely with Joe. I know Belinda is engaging quite closely with him now.

CHAIR - But he was not that involved in that review?

Dr STRONG - But not so involved in that review, no.

CHAIR - He is only new too.

Dr STRONG -Yes, but the engagement with Ambulance Tasmania through Joe Acker is very active. I think they may like to talk about some of the potential placement opportunities there, although that is a slightly different question to the one you just made.

CHAIR - It is. I have Joe across this table a number of times in different committees. He seems to bring a fresh set of eyes to a lot of the way things have been done around here, if I can use that terminology. So, if Belinda wanted to add anything about your discussions with Mr Acker, that would be good.

Dr FLANAGAN - Sure. I have had probably three meetings with him. I have another one coming up. He has some new staff members who will be coming on board who also just started last week. I am giving them the chance to settle in before I meet with them. But the conversations have been around mainly, which has been amazing, research collaborations, which is a source of frustration for him. There is so much data that we can access to be more collaborative in that space. Also around student placement; not just the number of students that we put on placements to potentially increase our enrolment, but also the quality of the placement that they do.

At the moment, a student would go on placement and they are put in an emergency vehicle, and that is their placement experience. I am a big believer that that does not necessarily need to be all that occurs on placement. Paramedics within ambulance services also have quite a large - there are other opportunities - not just driving an ambulance in an emergency situation. I think it is important, particularly for the development of students' communication skills to look at some of other avenues for placement; it might be secondary triage or patient transport. So, they are the conversations that are happening at the moment with Ambulance Tasmania.

Prof BEREZNICKI - I would like to clarify that the course review that is being undertaken - these are standard course reviews that are undertaken on a five-year cycle as part of our [TBC] requirements. They are certainly not the only port of feedback that we have, or consultation with industry. That is always ongoing through our course advisory committees, feeding into quality action plans, et cetera, through the school. So, that is part of our routine business.

CHAIR - Does anyone like yourself or others involved have meetings with the Minister for Health to discuss the needs of our health services or is that a bit of a separation?

Prof. FASSET - We do have discussions at all levels and also where we, our vice chancellor and our provost are also involved. When you look across the table, you can see that we are a large college. There are a number of disciplines. We have a number of portfolios. We straddle accreditation requirements, as you be aware, but also, I think that there is a point in time here when our strategy, which is absolutely committed to improving the health of Tasmanians, is flexible enough, for us to be able to partner where there is that need.

Questions about what we might do. For many years we discussed allied health, people would often talk to us about how great it would be. Physiotherapy was always discussed, but what it actually takes is a really transformative partnership. That is what Nuala has been leading to get this allied health program off the ground. It is the commitment of our partners. Lots of things are possible, but for us to see that in the vision of the services and the workforce requirements that this state has also means that we need to vision the model of care.

Sometimes, when I listen to practitioners talking about extending their scope, I need to situate that in - but in what service and what is that model of care? What else do we need to be changing and working together so that we are not continually talking about if there was a career pathway? I think the needs of the community need to drive how we collaborate to forge new -

CHAIR -I appreciate those comments.

What we are seeing in some parts, particularly where services fall over or almost fall over, like general practice - we could look at Ouse as one example of this. The Morton Group has stepped in. They have also engaged a paramedic practitioner who trained in another jurisdiction. That assisted that community; it assisted the range of services. That paramedic practitioner can do a range of things that complement the doctor and the other nursing staff there. There are pathways if we want to create them in some places. Some GPs and their practices are getting much better at this. It used to be just the practice with the practice nurse and often an EN, not an RN. This then limited the scope of that person, because they are an EN not an RN. There are opportunities here, if we are willing to think a bit differently.

What this committee is trying to figure out is how do we think differently, how do we get the chicken or the egg, whichever has to come first - and I don't know which one it is - but how do we make sure that these can become possible pathways when we feed into them? We were talking to the Clinical Chief Advisor of Nursing in New Zealand this morning. She was talking about some of the changes they've made. We talked to Dennis Pashen who is a GP at Queenstown who has done a lot of work and changes made in Queenstown - legislative change as well.

I know UTAS's job is not to drive legislative change but to meet the needs of our community but I think we need to have a broad discussion about how that could look. If there is not a career pathway is there a place for it and how do we create it? I don't know if anyone wants to add further to that.

Prof. BEREZNICKI - You are right. It needs to happen in partnership. We know from our experience that if we go out on a limb by ourselves with a postgraduate program because

we think that this particular aspect of care might be really useful but there are no employment outcomes, it doesn't work.

CHAIR - You would be criticised if you did, I can assure you.

Prof. BEREZNICKI - This has to happen in really close partnership. We absolutely don't see things like competency standards and accreditation requirements as the optimum standard. They are the baseline standard and, as I said before, we meet those and we demonstrate how we meet those but obviously we are always trying to push the envelope and work with our partners to produce the best quality graduates, not just for now but for what we think the future will be.

CHAIR- So the best quality graduate comes out and feel constrained. 'I am a registered nurse, I know what the patient should be having. Surely I could just prescribe that if only I had the power to do that.' I remember having those feelings.

Prof. BEREZNICKI - I hear what you are saying; I'm a pharmacist.

CHAIR - That's right. Sunday afternoon and they rock up to the pharmacy wanting a bit of advice but you can't give them what they need. I think you create this almost through the level of attainment you seek to achieve for your graduates, then they are sitting up here and they are allowed to practice here. I think it would be really good for the university to be more engaged in that public debate, if that is what it is.

Prof. BEREZNICKI - I think in a lot of places we are. When we present our staff profiles to the accrediting bodies, for example, we often map which professional societies they are members of or active in.

You will find our academic staff are often very much in that advocacy framework, working within professional societies, guilds and so on to try to do exactly that: to work with government and to push the envelope.

CHAIR - They're commonly called turf wars, but where are the barriers?

Prof. BEREZNICKI - I think we can all probably speak from our own discipline contexts but certainly from a pharmacy context, I have a lot of experience at a national level in various organisations that are outside my university appointment. Within the profession there's often disagreement around exactly what is the best way forward. Then, with government, it often comes down to remuneration for various services. That is broadly the picture in pharmacy but I'm sure we have all different ideas from various professional groups.

Dr STRONG - I'll make a couple of comments that might then lead into comments from some on nurse practitioners. Behind scopes of practice lie quite a broad range of other activities across clinical reasoning and continuity of care, diagnostic processes. I think a scope of practice appearance needs to be interrogated a bit beyond -

CHAIR - What it actually means?

Dr STRONG - Yes, the actual scope, to what is required to underpin that scope. I think the professional colleges, particularly the College of General Practitioners and the College of

Rural and Remote Medicine (ACRRM) would be well placed to comment on the integration of practitioners into general practice and health service delivery models and really from her perspective of the rural generalist program, I am sure could also comment.

In thinking about some of the impediments beyond the underpinnings of a scope of practice, there are also the health service models that we have got. You've talked about registration, the Poisons Act that underlies prescribing rights. There is also the whole legislative issue of Medicare item numbers and the funding in practices. So, one of the issues with practitioners is not that they wouldn't necessarily be welcome in practice settings; the additional skills and the workforce and the support I think is almost always going to be very welcome. A practitioner, a person, a body in the bush is incredibly valuable. But for practices in our setting, which are essentially run as small businesses, to sustain the engagement of practitioners does require some business thinking. With a very limited set of item numbers particularly for nurse practitioners, there isn't the financial sustainability for practitioners to run without additional support, which then becomes state government support because the federal government support is run through the item numbers which are constrained.

Those are some of the impediments. Others are around credentialing. We do have a very new, in the case of paramedicine, the College of Paramedicine Practitioners, but it's not the body that is recognised as an overarching and an overseeing body which is the Australian College of Paramedicine and Belinda might talk to that. But the development of that professional pathway from training opportunities through governance and oversight right through to employment is very nascent, it's young.

I guess questions around bolstering general practice in particular communities are inevitable. In a community that has lost a general practitioner, the question would have to be do we replace that service and the depth of the service? Can we replace it through a practitioner model? I think there would be no doubt there can be enormous value in the presence of a skilled and trained practitioner; but whether we are talking about the same thing, in terms of a community need, I think is a more difficult question.

CHAIR - But it would open up pathways if that was a more common practice; not just to lose your GP, for example, but to find that the demand has grown in that area, the population has increased or whatever.

Dr STRONG - And there a collaborative model of different skills I think would be optimal but Lizzi, from the rural generalist program, would you take that forward?

Dr SHIRES - It's probably just echoing what Jim was saying. I think we train our doctors, our medical students, to work in teams, but essentially a general practice is actually a private business and therefore there's no mechanism to employ those people.

CHAIR - No, it is up to the individual practice.

Dr SHIRES - Not just the practice but also how do we - and there are different ways. I mean we have practice nurses and different people who work with us, but you have to look for funding opportunities to get them. At various times we've had people with extended scope of practice coming in and working with us, but then that funding goes and then we haven't got our extended skills nurses, or psychologists, or whatever. It is thinking about how we pay for

primary care services differently. That's probably the most important thing around that whole scope.

Mr DUIGAN - How do we do it?

Prof SHIRES - There are different models -

CHAIR - Is there models we should look at, Lizzi, in that?

Prof SHIRES - Different countries do things in different ways, and certainly there are different models even within Australia around rural practice. Like Dennis was saying, up in Queensland where you've got much more state investment in rural areas, or you've got your Aboriginal corporations that can also employ people as well as their doctors and they have quite diverse sets of skills. There are different models even within this country and then there are different models outside this country around how you employ people rurally, but I think essentially that is quite an important aspect of the things. It's probably beyond UTAS, but if you're looking at career pathways and opportunities for people they need to have jobs to go to.

CHAIR - Coming back to nurse practitioners - can we initially talk about what nursing education opportunities there are at UTAS at the moment, and midwifery, and then the more extension part of it, the nurse practitioner?

Prof HALL - I might talk about nurse practitioners first, Chair, if you don't mind. A nurse practitioner has a two-year masters, plus 5000 hours of clinical practice. We only have 41 at the moment in Tasmania. When you look at the diversity of where they practice, it's cancer care, cardiac care, mental health, emergency care. It's very diverse. Running a two-year masters program and providing that amount of clinical placements and that diversity, you'd probably have a cohort of one in each specialty, by the time you went through it. I'd also very much echo what Tim and Lizzi have said about the way financial pathways limit it. I think there's another aspect that limits nurse practitioners and I think that's actually understanding what a nurse practitioner is. Not just their scope, but what they do. There's generally a lack of clarity around the difference between a nurse practitioner, and a clinical nurse consultant, or a nurse with advanced skills. That's going to take some education, some cultural change to actually see the value of nurse practitioners so that they are employable, there's a career pathway for them through to that longer term.

CHAIR - As distinct from a nurse with advanced skills?

Prof HALL - Absolutely, and they are different because it's about the level of autonomy. It's about prescribing sometimes. It's just about how they behave in practice and most of them, at the moment, are actually being supervised by GPs, which is not necessarily what many of them were trained to do. They were trained to be independent, private practitioners. I think we have some real work to do about unpacking some of that before we go too far with that whole nurse practitioner model and thinking about where we are going.

Mr DUIGAN - The nurse practitioner - in a general practice sense - presumably needs to be revenue stream rather than a cost centre?

Prof HALL - I would suggest that would be one way for -

Mr DUIGAN - Sorry, you mean more item numbers?-

CHAIR - He or she should be able to charge their own patients.

Mr GAFFNEY - Chair, just on that, a thinking out-of-the-box suggestion, given GPs are such a rare commodity, is there any way the UTAS medicine faculty could offer Tasmanian nurse practitioners an agreed level of competence and training, a fast-track program that would be purely an associate GP stream with full prescribing billing rights, where there are no other options available within medicine, and locked to Tasmania on scholarship, not unlike rural bonded scholarships, to circumvent some of the issues that you've raised. Is that the only way we can become then a potential billing possibility? I'm not expecting an answer now, but this is what is put to us. Is there some way around it?

Prof HALL - I am certainly a big believer in multi-disciplinary care and teamwork but I do also think that each profession brings a unique characteristic with it. I am not sure that the nurse practitioner's accreditation model would allow it to be taught by GPs and I am not sure that that would be attractive either. It would take some serious thinking and working through what that might look like. They are different skill sets, different ways of operating, different undergraduate learnings. It really would be bringing two very different groups, complementary groups, together.

Mr GAFFNEY - What we were hearing from New Zealand this morning, they also recognise that their country has a shortage of GPs and has had for a long time, as do we. They have put into practice a nurse practitioner model which is filling some of the void that they have had over many years, and putting in significant funding and have changed legislation quite a lot. They said it has taken some time, they recognise that. I think there are eight pieces of legislation that would need to be changed in Tasmania for nurse practitioners. We don't want to be sitting here in 10 years time having this same discussion, because we are going to be in the same position.

Prof FASSETT - Previously, when you were asking the question, we were answering around 'have we got a course?', 'could we have a course?', which is an entirely different question to 'do we need nurse practitioners?' or 'what would be the models of care?' and so on. I think I heard, in listening, that conflate somewhat.

A nurse practitioner course would be, just as we heard from Belinda in paramedicine, these courses really need to be thought about in partnership with the state. If the state and the university can identify the need, there is nothing to stop us having these courses. In fact, we developed one previously but we didn't get to the point of offering that. The possibility for the university to do these things is there.

One example would be Belinda, here she is, talking from New South Wales. Sometimes when we have struggled in Tasmania to absolutely have the course or the workforce that is required - sometimes a crisis in Tasmania is six people missing and that is big and it is a crisis, so they need six more emergency nurses or whatever it might be. For us to get post-graduate nursing programs into our university, we have done a partnership where we can offer courses into another state. That way we are able to get those economies of scale, if you like, but it has allowed us to really grow in that post-graduate sphere.

There are many ways the university can bring to the table various models, in partnership, to meet what this state needs. But the vision needs to be clear. What is the vision? What do we need for the future? Because we are talking about the health of our people and turning that around, and we need to understand how we would do that.

I think Tasmania has an incredible advantage in terms of being able to get everyone together to model the care that might be required into the future. But I think what happens is that the conversation splinters off into professions. The health professions are really good at siloing and being very active in their silos. They are interprofessional and they do collaborate but, instinctively, it is hard when you are managing all the other professional requirements that you need to consider.

Certainly, with our RHMT (Rural Health Multidisciplinary Training) program, with the review that is being conducted there, there is more of an emphasis needed in interprofessional, and the way that all of my colleagues that sit around the table here are really working hard together to think about what is it the community requires in terms of care and how can we work together. Because it's actually at the edges of each discipline, I believe, where the innovation - and that is probably what you are hearing in New Zealand because they have very innovative, I think.

It is that innovation, the blurring of the boundaries, where you really find the inspiration to create different models of care and a different way of thinking. I think we have been stifled for a long time by thinking about things in the same way.

So, when we talk about -Tracey mentioned with our research and she talked about impact - we are really saying there that sometimes we don't really capitalise on what we have already got, and come together. Just someone else creates something else in a different region in Tasmania but you already have that model. We are not very clever for a small island with a reasonably small population, one university, one health system. We should be able to serve our population better than we do.

Ms LOVELL - Denise, following on from that, in terms of course delivery and planning of the course delivery, is there any consultation or collaboration with TAFE, for example, or other service providers that takes place to try to address that, so we are maximising those opportunities for people.

Prof FASSETT - Yes, there is deep engagement with TAFE and, of course, Sonj has been working with thinking about enrolled nursing, that separation where you have enrolled nursing, which is entirely different to doing a Bachelor of Nursing. However, one does get credit into a Bachelor of Nursing. So Sonj has been forging relationships there.

Certainly - you might want to say something about that, Jim - through our university sort of college model, and our associate degrees, diplomas and so on, we have been able to articulate through. Because that is what you require - education across that spectrum. Yes, there is deep engagement with TAFE.

CHAIR - Jim and Lizzi both want to say something, I think.

Prof CAVAYE - The university has a strong focus on pathways for students. We recognise that, particularly in regions, we have students who don't necessarily have a traditional year 12 pathway into university. Some obviously do but we have a lot of adult learners.

We are looking at people who often will have year 10 as the highest qualification. They'll go into the workforce and might be there for 10 to 15 years then they look to reskill at a university. It's a big leap for them to go from employment straight into university necessarily. So as a university we are very conscious of the need to develop pathways. This is not just in health and medicine; it's across the board. That's why we look at taster short courses, short courses that articulate into diplomas and then into the possibility for students to go on to Bachelor degrees. That principle is a very important part of the UTAS model.

CHAIR - Lizzi, did you want to add anything?

Mr GAFFNEY - I saw you went to respond when I jumped in over there. Sorry, Lizzi. Yours would have been better after my question anyway.

Prof SHIRES - I think you were talking about nurse practitioners but then you went on to describe physician assistance as well, which is another health profession that was introduced, which is what I think they did in New Zealand and is very popular in America. There is a little bit of it in the United Kingdom and James Cook University have introduced one of those courses up there.

It goes back to the fact that if you introduce a course, people have got to be employed, and that has been one of the issues around somebody saying 'we need somebody to help the doctors', and the physician associates were those particular health professionals that they started training in there but then there weren't the jobs for them. So, it has to be done in collaboration with the state or with somebody else.

CHAIR - I have a former colleague who worked as a physician assistant in the US years ago but when he came back he couldn't get a job in Tasmania - only as a nurse. He could not practice as a physician assistant because the position just did not exist. That's the old chicken and egg again.

Ms LOVELL - To go back also to a question we asked at the beginning that I am still unclear on. In terms of entry requirements for students to be accepted into medicine, and particularly in terms of students from regional and remote areas, is it correct that there is a quota, perhaps? How does that work and particularly how does that work in Tasmania? Can you elaborate on that for us?

Dr STRONG - Different universities apply different selection procedures and work on different quotas. Here in Tasmania the way that it works is that we have a Commonwealth allocation of places which is 96 places. We have a very small attrition rate so we try to fill 100 places per year and then on top of that we have approximately 20 international places.

Mr DUIGAN - On top of the 96?

Dr STRONG - On top of the 100, yes, so that is our intake. We allocate 50 per cent of those places to rural students and we have a rural health multidisciplinary training fund stretched galore of achieving 75 per cent.

CHAIR - How do you define rural? That is what we are talking about.

Dr STRONG - So using the geographical area model we talk about rural as being RA2 to RA5. All of Tasmania is at least RA2 so we split that quote into a half. So we allocate at least half of those places to RA3 to RA5 students, and the other half to RA2.

Mr DUIGAN - So it's outside Hobart? So it's a 75:25 split?

Dr STRONG - Having said that, if we look at the whole RA2 to RA5 spectrum and for the last few years we have achieved approximately 75 per cent so we have exceeded that quota. In addition to that rural quote we have a Tasmanian quota of at least 75 per cent of the overall places going to Tasmanians.

Mr DUIGAN - Of the overall home group of 100?

Dr STRONG - Overall 100, yes.

Mr DUIGAN - That's interesting. What are Tasmania's needs on an annual basis for doctors?

CHAIR - What is it generally?

Mr DUIGAN - Well, if we are saying 75 Tasmanians graduate into various streams of medicine each year -

Dr STRONG - That requirement is set by the intern places so our graduates go into a junior doctor pipeline and that question would have to be answered by the THS but it approximately matches. So Tasmanian graduates do find places. They are not guaranteed places and there is a hierarchy that the selection process moves through but it is virtually unheard of for a Tasmanian graduate not to find a place and that accounts for some loss to the mainland and some inflow from the mainland.

Mr DUIGAN - And of those 75 each year, what percentage of those do you reckon would end up as GPs?

CHAIR - That's Lizzi's job.

Dr STRONG - Yes, I don't know the answer to that question. It's falling.

Prof SHIRES - It is falling.

Mr DUIGAN - Why?

Prof SHIRES - Why?

Mr DUIGAN - Because they don't make enough money?

Prof SHIRES - I think it is a bit more complicated than that but there are very different terms and conditions in general practice than there were in the past and the disparity between

hospital-based doctors and community-based doctors is much greater than it was a few years ago. I think that is one reason. It is a little bit more complex than that but we still have very high rates of people going into general practice compared with other universities. We still do well with that but it still takes a long time to train.

Mr DUIGAN - Is it correct to say nearly 50 per cent of the doctors recruited into Tasmania are internationally trained?

Dr STRONG - You are talking there about the total recruitment into all roles at all levels?

Mr DUIGAN - I believe I have heard that number stated.

Dr STRONG - I am afraid I can't confirm exactly that number, no.

CHAIR - Probably not a question that UTAS can answer.

Mr DUIGAN - No.

CHAIR - I just want to go back to the question about the nursing training courses that you provide at the moment. You've talked about the nurse practitioner ones, what about the undergraduate -

Prof HALL - The undergraduate programs?

CHAIR - The degree programs. Do you still do enrolled nursing?

Prof HALL - No.

CHAIR - All with TAFE?

Prof HALL - All with TAFE. We offer two programs. They're almost brand new undergraduate programs, rolled out last year for the first time. One is a two-year accelerated program and the other one is a three-year program. A certain proportion of both of those groups, but particularly the three-year program, would do part-time. Those students who come in who are enrolled nurses may apply for waivers and they would get the equivalent of one of the three years waived so they would only do two of the three-year program.

CHAIR - Can they do the accelerated program?

Prof HALL - Yes they can. It's completely open and we offer both programs across all three of our Tasmanian campuses. The programs that we have now were completely redesigned from the old program and built from the bottom up using a primary health care model, which has a very strong rural healthcare influence across it.

What we're finding with this program is that the students this year are starting to engage a lot more with it. Essentially, some of the theory is provided through online learning, which is where we've heard some of those comments about online learning, but we still provide intensives and those intensives come up on a regular basis, two or three times in each unit and

students would study four units at a time, whether they're in the two-year model, or the three-year model.

During the intensives they will do a mixture of classroom learning and what we call simulation laboratories. They're the fun ones where they get to play with the mannequins and they're set up like wards. What we find is that the students really start to engage when they're doing those practical-type things and then when they go out into the community and to the clinical spaces there's another layer of engagement.

Tasmanian graduates generally stay in Tasmania. One of the things that we have been working on is transition from being an undergraduate, through to being a full registered nurse and we've been having some very nice conversations with Tasmanian health services about what those transition pathways might look like into the future. Nothing is decided yet. Again, it's that, how do we collaborate to create something that is required? I think it's fair to say that nationally, as well as internationally, graduate nurses do struggle. They have to do shifts. They have to do five days a week. They have accountabilities that they're not used to. As I say, that is a national phenomenon. We've been working really hard at how we can help graduate nurses to transition.

CHAIR - There was a cohort that graduated at the beginning of 2020 and we know what happened then. It was hell for them.

Prof HALL - Very conscious of that.

CHAIR - Particularly up in the north-west when we had the outbreak. It was just hell.

Prof HALL - It was and we never want to see that again.

CHAIR - A lot of them did feel very unsupported and everyone was frightened and they got COVID-19 and the whole bit.

Ms LOVELL - Can I just ask, on top of what you've just outlined, is there a training pathway through the university for mental health nursing specifically?

Prof HALL - There's not specifically, but what we find is that those who are really interested in mental health would often ask to do more of their clinical placements in that area. We have toyed with the idea of whether we offer a mental health stream. It's probably one of the more difficult things to actually do because of the accreditation standards and registration requirements that require you to have such a broad physical, mental health input. I think it's something which we probably need to again think about if we do a transition to practice program, and we could have a transition to mental health practice, or something like that. That has been voiced by some of the mental health practitioners.

Ms LOVELL - Is that offered by UTAS?

Prof HALL - No, it is not. It was offered.

Ms LOVELL - I thought it was.

Prof HALL - I have only been in this role for 16 months, so I am not responsible. It was not my call. What we do offer are three specialisations at postgraduate level which registered midwives whether they are undergraduate, or postgraduate registration midwives can take. Those three are family and child health - that is an online postgraduate qualification, but it is the only one of our postgraduate suite in 20 specialties, that actually has a clinical placement. We also offer special care of the [Inaudible] ward and the neonatal ICU. The University of Southern Queensland offer an undergraduate program, and that is a two-year program, and they've worked with THS for some five or six years now.

Ms LOVELL - I think it can be tricky for people if they are not employed by THS to complete that study and be able to complete their placement here in Tasmania. I've had some people come to me with that. That's obviously outside your scope, but the agreement between the University and the THS means that only THS employed students can do their placement. This is a separate conversation for another day, maybe.

CHAIR - Is there any plan to introduce a bachelor of midwifery?

Prof FASSET - Can I just say that, in the same way that we were talking about nurse practitioner, or these courses, when we did have midwifery and we really welcomed being able to have that postgraduate course, that it was run in partnership with the state, and other providers. That is the only way that you had the viability of the program. Also, the breadth of the staff that you need to employ is the same, whether you had a couple of hundred or whether you had 15. Sometimes we only had 15. So, if the state would ever want to put that back on the table with the university, as we've said with other things, we would absolutely have a look at that again.

Mr GAFFNEY - Luke, you talked before about attracting mainland students to Tasmania because of the quality of the courses. What are the numbers? Say, in the first year intake this year across the disciplines, how many did we get from the mainland to Tasmania?

Prof BEREZNICKI - It is a fair question. I do not have the numbers in front of me, but we will take that on notice.

Mr GAFFNEY - Is that alright? I would like to know and understand the numbers that how many students we have from Tasmania. The reason I am asking is do we do any tracking of some of our students who go to the mainland?

Prof BEREZNICKI - We can provide those numbers. Again, I do not have them in front of me, but you would have heard in the media, the last couple of days, that near 20 per cent is being quoted and that is actually quoted in our own strategic plan, in terms of leaving the state. Often that is not due to the quality of the courses, but it is wanting to seek that year of adventure or several years of adventure. But we can provide you with those numbers and we will note that.

Mr GAFFNEY - I think that would be helpful, so that we have an understanding of the numbers that come through and what disciplines and which areas they might work on. I take my hat off to psychology. That is a long time for people to graduate, isn't it? That is a like nightmare. Why would you do it?

Prof BEREZNICKI - I can say, without talking in specific numbers, the distinctive in this agenda that I referred to before, is clearly working. It is attracting more and more students to the state. That is something that we will be continuing to pursue really strongly, and certainly drives our marketing effort.

Mr GAFFNEY - If you could also include the number of international students. I know that have been impacted in recent times, but it will be handy for us to know what numbers are attracted into which disciplines as well.

Prof HALL - Can I just add that for nursing, when I looked at the postcodes of where people were coming from, we have very few from interstate who are coming to do nursing within Tasmania. We are protected from that because we have quite a large Sydney campus as well. They would be more likely to go there. We do not take a huge number of international students and never have done. I don't think nursing would be one where the international component is large at all, so it is not detracting from Tasmanians being able to get into nursing.

Mr GAFFNEY - The other thing that might be helpful is I would be interested to know the types and ranges of scholarships that you have to attract students. I know that some of the local Tasmanian kids are going Canberra and places because they have been able to attract funding and that obviously helps them with their course. Anything to do with funding and whether there is different way of looking at that, or how can we entice more people to put some money up to keep the kids here.

Prof BEREZNICKI - I can give you some numbers on that if you like. We do have a range of scholarships available to students in Tasmania. I had a quick look this morning; we have 55 different scholarships that students can apply to.

CHAIR - That UTAS provide?

Prof BEREZNICKI - Yes. Funded by the institution itself and various benefactors to commencing students into our College of Health and Medicine. It is quite extensive. Often there is relocation assistance available, and that is in the order of $3000 to $5000 for students who need to relocate to a campus to study. There is quite a lot available; it can't support every student but there's a range of options and all of that information is available on the UTAS scholarships page.

Prof HALL - In nursing we do advertise that there is a $3000 grant available for those who live more than 50 kilometres from the campus. Partly that is because the Hobart campus fills very quickly and completely, and so Hobartians may have to go up to Launceston or Burnie. This year we put a real push on making sure that kids from Strahan and some of those smaller places also were aware of these. That has made a big difference to students who have been able to come onboard and stay onboard. Although they do not have to come up for the theory, when they happen to travel for those intensives for two or three days the dollars add up and it is a barrier that they do not need.

Mr DUIGAN - Across all the disciplines, is the university full? Are there full classes or are you struggling?

Prof BEREZNICKI - I will make a general comment. Most of our core undergraduate courses are quota based. We have a set number and we meet those quotas, in courses like

paramedicine, medicine, nursing et cetera. There are a couple of examples where we could take more; Glenn alluded to extra pharmacy programs and we are certainly doing our utmost to try to attract more students to the pharmacy degree. Psychology is growing rapidly through Lis's work.

Prof FOA - Five hundred in first year from across the country.

CHAIR - There is such a shortage of psychologists, the wait is enormous.

Prof FOA - That is online as well as locally.

Mr DUIGAN - What is broken in pharmacy?

Prof JACOBSON - There's a range of factors, the desirability of the degree.

Mr DUIGAN - It was strong.

Prof JACOBSON -We have excellent graduate outcomes in terms of employment opportunities. We have a course that is recognised as one of the best in the country. We have long been known as a leader in clinical pharmacy. It is a question we really do not know the answer to; I think it is multifactorial. There's a number of things, desirability, change in how potential students understand what a pharmacy career involves. A lot of the work, in terms of our engagement and marketing, revolves around explaining what a career as a modern pharmacist does actually involve. It is multifactorial; it could be in traditional community pharmacy settings with extended range to clinical services. It could be in hospital settings and it could be in emerging areas of practice, GP centres, aged care, consultant pharmacies. A whole range of things.

And kids don't necessarily see the scope. They don't see the opportunity. It gets back to my point earlier that where we have really good placement experiences that the pharmacies that the students like going to, particularly in rural settings, are the ones where they have those extended clinical services that they can experience, and say, 'Oh this is what it is about'. I think that is really important.

If I could just come back to the issue of the question about international students as well. On average we would probably around a third to a quarter of our intake in any year, would be international students.

A lot of those students will stay in Tasmania. They will work in Tasmania. But one of the anomalies that we find at the moment is that international students aren't eligible for federal funding, as I understand, to have placements in rural centres. So, they are missing out on what could be really a vibrant placement experience through the under graduate program.

We know from experience that some of our graduates who are international students coming from their large metropolitan centres in South East Asia will come here and end up working and embedding themselves in rural communities. We are missing out on that opportunity, I think it is fair to say.

Mr DUIGAN - That downward trend in pharmacy here. Is that something you see across the country?

Prof JACOBSON - Yes. I think it is fair to say it is soft across the country. It is interesting I suppose that, whether its attrition from the workforce, or whatever is driving it, whether its students coming into pharmacy programs, but it is recognised nationally. I think, for example, in the Northern Territory, a pharmacy school there closed. Well, it is now reopening with a new program because of workforce demands.

Everyone knows we need pharmacists but we are just not getting students into these pharmacy undergraduate and masters programs across the country. It is a general trend.

CHAIR - I think Nick's comments are well made. You say the potential students in choosing which of the health disciplines they might participate in if they have a desire, don't see pharmacists as anything more than someone who works in the pharmacy.

We heard in another committee I sit on about the benefit, and we heard about this in parliament just before Christmas, about the benefit of the hospital pharmacy in the department of emergency management that is working there now. They have actually reduced the medication and IV fluid areas significantly as a result of having that pharmacy department there.

Prof BEREZNICKI - We collaborated on that project.

CHAIR - Yes. It makes so much sense.

Prof BEREZNICKI - It is a classic example of what we were talking about before. We are training pharmacists to a higher level than they can go into the community and practise at.

It is often issues about things like business rules, low remuneration, dissatisfaction with what they are doing. As Glenn was saying, the attrition in those about 5 to 10 years registration is very high.

CHAIR - Actual evidence of reducing patient harm is pretty powerful.

Prof BEREZNICKI - It is overwhelming.

CHAIR - I know it is.

Prof JACOBSON - I think there is some recent data from the AMA about return on investment with pharmacists placed in general practice. Every dollar saved is roughly $1.60 in medication loaded harms.

I don't know if you have anything to add?

Prof BEREZNICKI - That was your research area. That was work we did here at UTAS.

CHAIR - I was going to come to the research facility. We touched on it earlier but do you get tasked with doing particular research into aspects of workforce recruitment into the rural sector and that sort of thing? Who approaches you, or is it some of the students who decide? How do you decide what you research?

Prof DICKSON - One of the key parameters of the RHMT contract is very much that explicit research about workforce need in the rural regions and how we can respond to it. That is an ongoing stream of research that we prioritise and perform and very much across the whole college, all of our research sits around I guess key questions regarding state need. Where are our biggest pockets of preventative health research? Chronic disease are areas that we focus on. Clearly, ageing based on what our state demographics are so that workforce and looking at innovation in the health system is very much a focus of the research that we do, across a multidisciplinary way but also explicitly through the RHM teams.

CHAIR - So what collaboration connection or other connections do you have with Menzies Research Centre?

Prof DICKSON - Menzies is part of the college.

CHAIR - So it sits within the college? Okay.

Prof DICKSON - So the College of Health and Medicine are the schools and then the Menzies Institute is just one of the academic units within the College of Health and Medicine. There is collaborative research across all of the schools and in and out of Menzies asking those questions about health system reform and efficiencies particularly in the rural and regional areas. Many of our large studies are embedded in the region, and already part of a large study called Capital which is about healthy choices, obesity, life trajectories and preventative health. We have a lot of really large studies - you might have heard of the ISLAND Study which about dementia so many of our large cohort-based studies -

Prof BEREZNICKI - If I could just add in there it also includes the Wicking Centre as well.

Prof DICKSON - Yes, the Wicking Centre is a part of our college so all of our research is underpinned by key questions of state need and very much in partnership with and co-creation of the research questions with the community.

Prof BYRNE - Another good example of that is the new programs that we are bringing online have been co-designed with our practitioner partners and a very important partner being the THS, Department of Health, Department of Education. This is the perfect time coming to your scopes of practice where we are building courses to be completely interdisciplinary so the courses are being built with students learning each other's scopes of practice - physio, OT, speech. In the state we don't have clinical exercise physiology as part of our public service which is, if we are talking about helping people not get to that point -

CHAIR - Yes, right. We have had representations from them.

Prof BYRNE - But the research that we will have the opportunity to partner with the state now is, what happens when we put these new graduates out and put them into positions where they have been trained together to be able to work in a whole range of communities across the state. That is a great opportunity per se. Did home grown students change the health landscape? We are right at that point where we can start to look at different scopes of practice and we are working with THS to imagine how will it be when we can.

CHAIR - So let's just use the Cradle Coast campus, is there ever times that you would put nursing students in the lab at the same time as paramedic students or others because then you would be exposed to others. Is that what you are talking about?

Prof BYRNE - That's exactly what we are doing. So they share case studies.

CHAIR - Yes, right. So pharmacy students could be in that as well?

Prof HALL - We have talked about them remoting in just as they would in real life.

Prof BYRNE - The college is very committed to an interdisciplinary program of work where we can share learning resources across courses. That way the opportunities become more tangible because the students are sharing the material and being able to talk about the same case but through their different scopes of practice.

CHAIR - Yes.

Prof HALL - Following on from that, Nuala, I think there is also an argument for making sure that things are not done from Hobart to the regions when it comes to these things. That they are actually regionally-led and certainly in nursing we have four academics on the Cradle Coast campus who all reside there and two were born. It's really about growing our own in place so that they are part of the fabric of that community and I think when we are looking at these multidisciplinary options that we are doing wherever we can, it is about having those disciplines actually living there, being part of those communities and getting the students to work together.

CHAIR - Any other questions from members?

Mr GAFFNEY - Just, have we not asked a question that would be really difficult that you could help us out with? Have we missed something that would be good?

Mr DUIGAN - There's a great deal of expertise around the table. If anyone has got any brilliant ideas about -

CHAIR - If you were the health minister, what would you do?

Mr DUIGAN - how we go about impacting the outcomes for people in rural areas in terms of their health. Give it to us now if you've got any great pearls of wisdom.

Dr STRONG - Could I perhaps lead into that by adding a little bit to the answer around entry pathways to medicine then maybe ask Lizzi Shires to take that forward a little bit? There are a couple of things that we didn't mention and that also comes to the scholarships. One was that we do have an Aboriginal entry pathway to the medical degree and, secondly, we do recognise the difficulty and disadvantage of pathways to medicine for prospective students in those RA3-5, or the more rural and remote areas. There are accommodations in the entry requirements in both the ATAR and the UCAT scores that are used for eligibility for those students and, in addition to that, a capacity to adjust the entry requirements according to the need to fill quotas for under-represented groups, which includes those remote students. I think it's important to recognise that within that broad structure that I talked about initially. There are those accommodations, particularly for rural and Aboriginal students.

Mr DUIGAN - That's a great thing.

CHAIR - Makes it accessible to them.

Dr STRONG - It helps. We could do better in terms of how we really provide accessible entry routes for those -

Mr DUIGAN - Are you happy with ATAR and UCAT as the two things you get to look at, because it would seem that they're reasonably narrow in focus?

Dr STRONG - We don't interview at UTAS. There are some institutions that do not use UCAT but they do interview. It's difficult to identify data that tells you that almost any discriminator is ultimately a good discriminator of an end outcome. But given the pressure on entry requirements, we do need some form of eligibility. The UCAT and the ATAR test somewhat different things. The ATAR for a school-leaving student lasts for five years, which is reasonable because students don't get a chance to repeat their ATAR, whereas a student that, for example, finishes school then takes a gap year, we will require them to re-do the UCAT because it gives a snapshot performance indicator for eligibility, no matter how long they've been away.

There was one other thing I should have mentioned as well, in terms of broadening eligibility requirements, which is that from the 2023 intake, we'll have a diversified graduate entry pathway. We do have a graduate entry pathway currently but it's quite narrow. It's restricted to graduates from one of our degrees, which is the Bachelor of Medical Research. From 2023 onwards, we will be diversifying that. There'll be a broader -

CHAIR - Do you know which other pathways they'll be?

Dr STRONG - It will be a general graduate entry pathway.

CHAIR - So I might have a Bachelor of Business -

Dr STRONG - Any bachelor degree. They will have to sit the GAMSAT which is another medical admissions test, but it will be significantly broader than it is now.

In terms of doing better, there are some simple adjustment that we do aim to make, such as getting offers out more quickly to try to capture the Tasmanian applicants that we want before they go somewhere else. Lizzi, you've been closely involved in that work.

Prof SHIRES - Yes. I think one of the issues that you were saying is that our undergraduates are very attractive to the mainland universities because they also have to fill out quotas, and Hobart and everybody counts as rural. So there are issues about getting out early offers and support because some of the other universities can offer quite generous scholarships to get our students. That's one of the things.

I think on a broad thing about what can we do as well, it's our schools as well. We need to offer science subjects in schools and make that exciting as well. We do lots of outreach, particularly into those schools that don't attract people. We look at which schools do get into medicine. There are some schools that are chronically under served if you look at. So I think

from a state point of view it is also about how we support our schools and our science so that people do want to do pharmacy or they do want to do medicine and believe that they can. That is something that is something that I think is a really important partnership among universities, schools, government.

Ms LOVELL - Especially some of those smaller schools in remote regional areas.

Prof BYRNE - We are talking about care when there is a health challenge. It is not having the health challenge to begin with, so starting with schools we don't have enough opportunity for movement. We need to make sure that we have work places that people can travel easily to in a non-automobiled way. We need to make sure that we have healthy food available at everyone's opportunity. 'Lifestyle' is such an easy thing to say but we need to make it easy to have healthy lifestyle. And yes, we need exercise physiologists and we need dieticians to be recognised more obviously within the health care system but also within schools, being able to operate at a level where it isn't hard to eat well.

CHAIR - Are exercise physiologists, are they one of the registered professions under Ahpra?

Prof BYRNE - Not under Ahpra. They are self-regulated but they are Medicare rebateable. Currently Tasmania is the only state to not have exercise physiologists within the profile. I will put that in because it is important. An incredibly underutilised way in which we can improve health is to not get unhealthy in the first place.

CHAIR - Even strength building, preventing falls in older people and that sort of stuff as well.

Prof BYRNE - We have an incredible opportunity to improve people's health at all stages of life by being more physically active.

Prof. JACOBSON - If I could throw something in there from a pharmacy perspective; I think in terms of medication safety particularly. You may be familiar with the Pharmaceutical Society of Australia Medicine Safety: Rural and Remote Care document where there were some staggering statistics, I think. An evidence-based approach to implementing those expanded clinical services that pharmacists can offer is paramount. It is a no-brainer effectively in terms of reducing some of those really significant costs to the health care system.

CHAIR - The amount of dollars spent on prescribing errors and that sort of thing is pretty significant. I have the document but I can't remember what the figures are.

Prof. JACOBSON - Around $2.03 billion of annual costs is medicine non-adherence; so medical-related hospital admissions around $400 million. Huge numbers.

Prof. BEREZNICKI - In the over 65s, you are looking at about one in five admissions are medication-related at our own public hospitals. That's staggering.

Mr DUIGAN - Sorry? One in five?

Prof. BEREZNICKI - Our own UTAS research.

Mr DUIGAN - That's quite high, isn't it?

CHAIR - You have to go right back to the root of that, which is often poor literacy.

Prof. DICKSON - Health literacy and normal literacy and with some really creative research projects with colleagues in CALE, the College of Arts, Law and Education. Bringing our people with a passion for health together with those people with a passion for education, it is a great way to overcome of those barriers.

CHAIR - It is not easy for people who cannot even read what is on their box of pills, let alone the instructions to understand them.

Prof. DICKSON - They are just trying to get through the day.

CHAIR - Yes, and they were blue last time, why are they red this time?

Prof. DICKSON - That's right.

CHAIR - Thank you very much all of you, and Belinda in Sydney. I hope you get to come to Tassie soon, now that we allow people from your area in.

Dr FLANAGAN - Yes, thank you, I look forward to it.

CHAIR - I know it has taken a fair bit of time out of your day to come and do this. We do appreciate it to help fill a few of the gaps and answer a few of the questions that all of our witnesses have put to us about how we boost that rural health workforce across all disciplines so thank you very much.

THE WITNESSES WITHDREW