Aeromedical Services WA Inquiry – Formal Hearing Transcription
Inquirer: Dr Marcus Kennedy
Organisation: Neonatal Emergency Transport Service WA – Dr J Davis, Dr M Sharp
Date: 11 February 2022, Time: 0800 – 0902

KENNEDY, DR Good morning. I'd like to thank you for your interest in the inquiry and for your appearance at today's hearing and for making the time. The purpose of the hearing is to assist me in gathering evidence to the inquiry into Aeromedical Services in Western Australia. I'll begin by introducing myself, my name's Marcus Kennedy and I've been appointed by the Chief Health Officer to undertake the inquiry. Beside me is Mr Jonathan Clayson who's the Inquiry's Project Director.

We'd ask you to please be aware that the use of mobile phones and other recording devices is not permitted in this room and if you could please make sure that your phone is either on silent or switched off we'd appreciate that. The hearing is a formal procedure convened under part 15 of the Public Health Act 2016 and although you will not asked to give your evidence under oath or affirmation it is important that you understand that you must answer all questions and that there are penalties under the Act for knowingly providing a response or information that is false or misleading.

This is a public hearing and the transcript of your evidence will be made for the record. If you wish to make a confidential statement during today's proceedings, you should request that that part of your evidence be taken in private. I believe that you've previously been provided with the inquiry's terms of reference, the inquiry's current State considerations paper, a focus list of relevant considerations and information on giving evidence to the inquiry. So before we begin do you have any questions about today's hearing or the process?

DAVIS, DR: No.

KENNEDY, DR: Thank you. For the transcript could I ask each of you to state your name and the capacity that you are here in today?

DAVIS, DR: My name's Jonathan Davis and I'm the Medical Director for NETS Western Australia.

KENNEDY, DR: Thank you.

SHARP, DR: My name's Mary Sharp, I'm the Medical Co-director for Neonatology, which NETSWA reports to.

KENNEDY, DR Thank you. You'll now evidence invited you to address the focus considerations list that's been provided to you or other aspects of the considerations paper that you've seen. The intention is that you speak to these matters for up 30 to 40 minutes potentially depending on the amount that you have to say and then after that address I may ask you some specific questions within the remaining time we may then just more generally discuss things. So, at this stage it's over to you. I will try to listen more than interrupt.

DAVIS, DR: Sure.

KENNEDY, DR: And but I may have questions as you go along to clarify things or ask you to explain things that I don't understand.

DAVIS, DR: Okay.

KENNEDY, DR: Thank you.

DAVIS, DR: Okay, thank you very much and thank you for this opportunity to present our evidence to the inquiry. In our submission I'd like to describe the unique service that NETSWA provides. I will outline some of the current challenges in aeromedical retrieval of neonates in Western Australia and respond to the considerations for discussion.

I believe there is some misunderstanding of the principles of neonatal retrieval and not uncommonly newborn infants are often considered as small adults or children. The need for specialist medical attention is often underestimated. A neonate is a child from birth to four weeks after the expected due date. NETSWA is the only dedicated neonatal retrieval service in Western Australia and is part of the neonatology division in the Child and Adolescent Health Service.

NETSWA is currently based in Perth Children's Hospital, however, it also draws on resources from King Edward Memorial Hospital, however, it also draws on resources from King Edward Memorial Hospital. In 2021 NETS transported approximately 1,280 babies.

KENNEDY, DR: Excuse me, can I just suggest that you remove your mask.

DAVIS, DR: Is that okay?

KENNEDY, DR: It's okay for about - if you're comfortable to.

DAVIS, DR: Yes, yes, that's fine.

KENNEDY, DR: Just in terms of the transcription and recording.

DAVIS, DR: Making sure I didn't transgress. In 2021 NETS transported approximately 1,280 babies. The NETS retrieval criteria are for transport and retrieval from birth to 44 weeks correct at gestation. NETS moved a similar number of neonatal patients at the last national comparison as the NETS team in New South Wales. This equates to the largest number of babies per 1,000 births in Australia.

NETS also transport patient's interstate for cardiac and specialist services not available in WA. These transports occur mainly to Brisbane and Melbourne. Approximately 25 per cent of our yearly transfers require air transfer. Approximately 300 babies per year require aeromedical transfer from outside to Perth. Most babies requiring aeromedical transfer come from the southwest and Great Southern, approximately one hundred each year. The Kimberley and the Pilbara transfer approximately 40 to 60 babies per year. Babies are mainly transferred for respiratory distress and prematurity.

The number of transfers from the Kimberley and Pilbara has increased over the last five years. There may be interregional transfers of patients in this region. These interregional transports use NETS equipment and resources but utilise paediatric not specialists' neonatal staff and maybe undertaken without NETSWA being clinically involved.

NETSWA have two teams each made up of a neonatal senior registrar and a neonatal trained nurse and an ambulance transport officer under the supervision of a NETS consultant who is a neonatologist based in Perth Children's Hospital and/or King Edward Memorial Hospital.

NETS have a transport platform which includes a thermal controlled isolette or incubator, neonatal transport ventilator, fusion pumps, phototherapy and nitric oxide. The NETS team may travel with other equipment for other eventualities or pathologies. NETS is contacted on

a free phone number by any healthcare professional for anywhere in WA or beyond to arrange a transport of a patient. The NETS number is connected to a call-conference and a consultant is always available for advice. Patient details are collected, and a plan made with the referring doctor.

Following the phone call if a flight is required the Royal Flying Doctor Service is contacted and the case discussed with them. The priority of the patient is initially assigned by NETS based on clinical need, severity of the illness and capacity of the referring hospital. The priority is discussed with RFDS and usually agreed upon. And when I say "Priority" I mean urgency.

It's usually recognised that NETS and RFDS our priority systems don't align. NETS has been working as part of a national group, the Australia and New Zealand Neonatal Network, to create priority categories for neonatal retrievals and these are national standards that all neonatal teams around the country will voluntarily work towards. And to give an example of the comparison different between NETS and the Royal Flying Doctor Service a priority 2 transfer for NETS, which is considered urgent but not time critical, is 30 minutes. A priority 2 transfer for the Royal Flying Doctor Service is up to four hours.

RFDS usually take the information and call back to arrange a flight, if one is available, requesting the names and weights of the team. Our team will dispatch for the airport to meet at the time requested by RFDS using one of the NETS ambulances. RFDS will organise with the local St John's Ambulance crew to pick the team up from the airport to take them to the referring hospital.

Neonatal inpatient care is highly centralised in Western Australia. It has been established that high-volume care at the hospital of birth may protect against in-hospital mortality in very preterm infants. And this has been published by Watts et al in 2019 in BJM Open.

It has been reported nationally and internationally that the morbidity and mortality of outborn preterm infants is significantly greater than those inborn. For instance, babies who are outborn are nearly four-and-a-half times more likely to die than those inborn after extreme premature birth. Babies outborn are also nearly twice as likely to have intracranial haemorrhage and twice as likely to have a combined brain injury, that's a haemorrhage or oxygen deprivation damage.

The earlier presence of a specialised neonatal team is almost certainly likely to reduce the morbidity and mortality of transported patients. Data from Canada suggests the presence of a dedicated neonatal retrieval team improves delivery room resuscitation. That's a neonatal retrieval team at the time of delivery.

Our own data from WA, as yet unpublished, has shown the presence of a neonatal specialist team improves the safety of neonatal retrievals when compared to no neonatal specialists. This equates to a system that would strive to centralise expectant mothers before birth but when this is not possible the timely arrival of a neonatal specialist team should be prioritised.

Neonatal retrievals have longer scene times than paediatric or adult retrievals and they are often time critical in Western Australia either because of the nature of the illness or the level of care they receive in the referring unit. Neonates can often deteriorate quite quickly and require extensive intervention prior to or during retrieval making expedited transfer with the specialist team a priority.

We do not believe that common adult retrieval practices of tarmac transfers or sharing an aircraft space to be appropriate for a neonatal patient. Often well appearing babies require intensive care. And even though all neonatal transfers are interhospital transfers they should not alter the urgency to transfer of the baby. The baby's illness and the facilities locally available should dictate that urgency, not impact on the urgency.

In the next sections I will outline the current challenges and align these with the considerations for discussion. The current challenges in aeromedical retrieval in Western Australia. The median time for NETS to arrive to any patient requiring aeromedical transport is approximately four hours. It is just under 90 minutes in the metro area. The median time for a NETS to arrive to a patient in the Kimberley or Pilbara is 10 hours compared to two hours and 20 minutes for the rest of aeromedical transfers in Western Australia.

We recognise that retrieval sites and the geography of WA impacts on flight times, however, these times are much longer than the flight times and we believe are limited by the availability of resources.

Of all logistical delays that occur with NETS 25 per cent are due to a delay in obtaining a flight or unexpected delay in the flight taking off. In the most recent submission to the Child and Adolescent Health Service safety and quality data for the third quarter of 2001 the time to dispatch for a road retrieval was 30 minutes, for air retrieval the wheels up time was two hours and 30 minutes. Perth Children's Hospital is approximately 40 minutes by road from the airport.

At times flights are unavailable or significantly delayed until a crew is available often overnight or the beginning of an evening shift. These delays often have significant impact for local teams and direct impact on clinical care.

The provision of neonatal treatment in the Kimberley and the Pilbara traditionally the retrieval of babies in these regions has been the responsibility of local paediatricians with NETS equipment in an RFDS aircraft with NETS telephone support. These retrievals have a higher risk of clinical compromise especially hypothermia and accidental extubation from comparative data that we have collected over the past three years. There are often difficulties with credentialing of staff and maintenance of skills in this retrieval setting. There are also staffing implications for the local service. We believe a dedicated neonatal team is required for each neonatal transport in Western Australia.

Now, the considerations (*sent to us by the Inquiry*). The system for aeromedical retrievals in WA is a collection of independent organisations working relatively closely with each other. There is a general uniformity of purpose. The system, however, is fragmented with organisations within and outside the Department of Health. This creates difficulty in several areas, namely logistics, change management, governance, and a common language for system performance and data.

Logistics is a concern and with the CAHS organisation is an extreme risk. The number of interfaces for the NETS transport costs and the process which has been set in motion to accommodate fixed and rotary solutions has ultimately led to unnecessary complexity and selection of equipment for transfer.

The changing of specification requirements within stakeholder organisations has ultimately impacted the capacity to provide modern, high quality intensive care to neonates who need to be retrieved. The introduction of 'new' cots into this service in 2018 has yet to see them used

in the air. This is due to differing interagency requirements and necessity for input and individual communication and testing.

Governance, risk and clinical incidence reporting. Safety and quality improvement procedures robustly exist within each organisation, however, the communication between these for the purposes of improving safety are extremely challenging. Raising interagency concerns leads often to ad hoc, unstandardised processes where ultimately responsibility is unable to be enforced and accountability is often voluntary. The organisations involved in aeromedical retrieval lack a common set of performance indicators, agreed data points, collection or common language around urgency of tasking of neonatal patients.

Solutions. NETS are of the view that the aeromedical landscape in WA would benefit from a strategic plan, including overarching organisation structure, partial centralisation, common goal setting with respect to performance indicators, and data driven change. By centralisation we mean unification and consolidation of governance, structures and reporting, common agreed data collection for performance management and equipment usage for neonatal retrieval cot fixation and interfaces throughout WA.

A single system to report clinical incidents and risk with similar input from a department of clinical risk and governance to which all stakeholders are accountable. There should be a common data set and entry system to allow national and international comparison. For instance, the GAMUT (*www.gamutqi.org*) retrieval data sent. This will allow agreement of urgency and tasking.

Retrieval options, coordination, timeliness and specialist availability. Each organisation appears to believe that their contribution to coordination is robust. There are significant problems in delays, agreement on prioritisation, clinical oversight, and availability of specialists and subspecialist services in a timely manner. Even within newborn care in WA there are a number of pathways that organise the transport of the baby and emergency telehealth, the Royal Flying Doctor Service, the Western Australian Country Health Service, the local hospital, and NETS can all be involved in the movement of a neonatal patient with various beliefs of responsibility of each party.

Solutions. In NETS we aspire for the appropriate neonatal specialist team to be present at the transport of each baby being moved between healthcare facilities in Western Australia. We believe adequate dedicated and NETS only resources are needed specifically for neonates based in Perth recognising the centralised nature of care in WA, which is ultimately for the benefit of the patient and is based in evidence-based practice.

We would see the solution overcoming the problems of availability of timeliness, specialist skill availability, and current inadequacy of credentialing and skill maintenance with the provision neonatal specialists [for each neonatal retrieval]. The solution needs to be backed up with greater understanding of the uniqueness of neonatal retrievals, availability of dedicated assets from Perth, outreach education to maintain stabilisation skills for local teams, and the development of NETS as part of the aeromedical community and a state-wide service.

Centralised coordination of clinical referral and response should be employed to allow fair and adequate tasking of assets if dedicated assets are not available. Specific agreed and state-wide guidance as to the necessary prioritisation of neonatal patients are required to underpin and streamline clinical decision making. Centralised coordination will require short- and longer-range options and expansion of rotary assets, as necessary, to service the growing

communities in the southwest corridor by which I mean Bunbury, Busselton and surrounding and feeder healthcare facilities.

NETS retrieve the greater number of patients (outside of Perth) from these regions and with the greater limitation on fixed wing capacity and a risk of long-distance road retrieval, rotary aircraft provide the best option for retrievals in these areas. In the consideration it doesn't appear that NETS were considered in the expected rotary data. NETS would retrieve 100 babies *(per year)* from this region by rotary alone given the opportunity.

Single patient strategy, patient flow and bed availability. We would support the development of a single patient transport strategy, however, in our broader domain of practice there is a lack of focus and responsibility on perinatal patients, expectant mothers, and paediatrics. There is currently no dedicated paediatric retrieval operation in Western Australia. We would like to reinforce the absence of dedicated paediatric and obstetric patient retrieval services in WA and advocate the need for these.

It is conceivable as exists in Victoria the alignment of these services may consolidate expertise and share resources. Specialist paediatric and obstetric expertise are required to support the development of such services and these concepts although requiring aeromedical support is partially beyond the scope of this inquiry.

In most other jurisdictions in Australia the nearest neonatal retrieval team is often the one who is contacted to retrieve the patient to that particular tertiary unit. It has been suggested that a solution to long distance retrievals to the Kimberley that patients could be retrieved to the Royal Darwin Hospital. From a neonatal perspective this solution has potential but also several difficulties.

The Royal Darwin unlike other similar destination hospitals does not have all the services available for preterm infants, especially paediatric surgery.

Careful consideration of patient flow is required as patients may need a second retrieval for review and intervention. Patients from the Northern Territory traditionally are retrieved to Adelaide for such services. NETSWA has retrieved a patient transfer from the Kimberley to Darwin and then for specialist services to Perth in the past.

Other considerations are the bed capacity for neonatal services in Darwin for all appropriate patients. 40 to 60 patients are currently retrieved from the Kimberley to Perth every year. The capacity in the Royal Darwin will need to be considered. In addition, the NETSNT team, the NETS Northern Territory team, is a relatively new service commencing its practice in January 2022 and is estimated [as I understand it] to retrieve 150 patients per year. In my opinion an additional 60 patients may be beyond the current projections and operational capacity.

We believe adequate resourcing from Perth for retrievals in the Kimberley based on current infrastructure is the best way to support patient movement in this area with additional support from NETSNT for the east Kimberley.

Centralisation of patient referral and the implication on bed management may have lesser impact on neonatal services given the high degree of centralisation in this discipline. The development of NETSWA as a state-wide service with the potential for patient movement to appropriate centres, not only to PCH or King Edward, would require a centralised model of bed management as exists in other States.

We've presented our evidence to the inquiry, including consideration for centralisation and dedicated neonatal assets and I'm happy to answer any questions.

KENNEDY, DR: Thank you. Did you have anything to add at this stage?

SHARP, DR: I would just reiterate Jonathan's point that the absence of obstetric and paediatric retrieval services are a critical gap. Sorry, critical gap in the provision of retrievals in WA.

KENNEDY, DR: I guess just prior to asking any questions I'd just like to say that I think that that's probably one of the most valuable 20 minutes that the inquiry has experienced in terms of the organisation, logic, intelligence and presentation of the material that you've spoken to and I think it makes a very powerful case for improvement.

DAVIS, DR: Thank you.

KENNEDY, DR: I think you also covered the vast majority of material that I would have subsequently asked questions about, so you've kind of left me hanging.

DAVIS, DR: Sorry about that.

KENNEDY, DR: So, for that I also thank you. I'm concerned with the - and maybe you can elaborate on this, the disparity in prioritisation between organisations, which is clearly a risk. Just from a basic human level in terms of understanding - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - the conversation, you say tomatoes and I say tomatoes. And it's not the space where you want to have misunderstanding.

DAVIS, DR: No, there's not.

KENNEDY, DR: So, if you say priority 1 do you say priority 1 or do you say with critical response - - -

DAVIS, DR: We have been - - -

KENNEDY, DR: - - - or time critical?

DAVIS, DR: We have been changing our language certainly within the last 18 months or so. We had been using priority 1 and it became apparent that that wasn't being understood or what we meant. So, we have now a more narrative description about what's happening with the patient and why we need to pick it up.

KENNEDY, DR: So, if you just talk in terms of your highest level of classification of - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - urgency and what that means in terms of your expected mobilisation.

DAVIS, DR: Yes.

KENNEDY, DR: So, for road that would be within - - -

DAVIS, DR: We'd be expected to leave the building within 15 minutes.

KENNEDY, DR: And for air your expected departure?

DAVIS, DR: We would be expected to depart I think 90 minutes is the time.

KENNEDY, DR: From your perspective is - I mean 15 minutes by road versus 90 minutes by air there's 75 minutes in there.

DAVIS, DR: Yes.

KENNEDY, DR: Some of that's preparation of aircraft and flight planning and - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - all those sorts of things, some of it's you getting to the airport. But there's a fundamental difference in there of let's say 30, 40, 45 minutes.

DAVIS, DR: Yes. I think the degree of urgency is often different between the teams. We understand our patient group, we understand that we need to be there quickly, and we mean quickly, we mean as quickly as we possibly can.

If we are asked to arrive at the airport for a specific time the pilot and crew will also be arriving, will also be given that time to arrive. So the checks will begin from when they arrive, so that often we often find ourselves waiting at the airport for the additional - so I think the wheels up time delay is that everybody's told to get there for 2 pm but actually we won't be able to take off until the pilot's done the checks, he's done his walk around, and those safety sort of measures. So, it's an additional 45 minutes - - -

KENNEDY, DR: Okay.

DAVIS, DR: - - - until we can take off. So, I think there is some streamlining of how the timing of those things are. And we appreciate and we understand that, you know, aviation is not something that safety should be compromised on, but we believe that there are some ways that we can speed that process up.

KENNEDY, DR: Yes. So, I mean it sounds at one level as though you are speaking in different classification systems and almost different languages.

DAVIS, DR: Yes.

KENNEDY, DR: No doubt there's a - you know, there's an attempt to understand what all that means at an operational practical level on a day to day basis. But I guess I sense in some of what you've presented a degree of frustration about that kind of issue and other issues that you spoke about in terms of things like compatibility, platform - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - compatibility for your costs and equipment et cetera.

And I understand that frustration but from the inquiry's perspective it would be helpful to understand why those issues haven't been resolved, you know, they're not things that have happened in the last couple of months, these are things that are longstanding. What is it about the system or lack of system or its structure or whatever that, from your perspective and both your perspectives, has not led to solutions for these things?

DAVIS, DR: I think it comes down simply to one of availability and resources in that the vast majority of time where we're unable to get there is because a flight is not available, the plane, it has to be waited on to return. A crew isn't available. A pilot has just run out of hours, a new team's just about to come along. And those little incremental delays eventually add up.

And we've certainly been advocating, and that's why we've embraced and appreciated that this inquiry has come along when it has, because we've been advocating and trying to change that. But we're so far limited in that, we don't own our own aircraft. I don't own my own helicopter. I wish I did because I could - I think we could make the system a lot easier with that. And we have been advocating for a NETS dedicated solution over the last number of years and have submitted to Treasury in that regard for which it was very firmly rejected.

And we have been trying for the last three years to increase the number of resources and availability of assets for us to use without much success. Streamlining the current process is really rearranging the deckchairs. We're still not able to get a flight in a timely way and I think it's because of the lack of resources that the current aeromedical provider has to provide us with a dedication solution.

SHARP, DR: If I might add a few points onto that is there certainly has been better interagency communication over the past couple of years and restarting, you know, regular dialogue that Jonathan and his team have with RFDS going over some - been part of the monitoring group that meets each fortnight has improved the language and the communication between the two organisations. Because I think it's not just the availability of assets, it is a misunderstanding I think in some part about a patient's illness.

And we do get sort of feedback similar to what I had read other groups reported, that, you know, they're in a hospital, they're getting the care, so there's a sense that they can - with the competing demands of RFDS the patients are viewed to be safe. But we'll have patients in the Pilbara who are intensive care level of patients who will be sitting in the Pilbara for 10 hours or more waiting for a flight to come to retrieve them in a setup where they're definitely not in an intensive care environment.

KENNEDY, DR: Do you have a view on - it's not the first time I've heard a discussion about the mis concept that people who are in hospitals are necessarily and fundamentally safer or better than people who are not in hospitals, big hospitals, little hospitals. What do you think - where do you think that mindset comes from and why is it a feature of systems or your system at least?

SHARP, DR: Well, I think they are fundamentally safer at a hospital than they would be in a home environment with their parents looking after them. But they're not as - they're not in the right location and they're not in a safe location. They're in a sort of just in time sort of a location.

KENNEDY, DR: I guess if I can ask you to think if you had the same patient in both locations your statement is correct.

SHARP, DR: Yes.

KENNEDY, DR: The one that's in a hospital is safer. But if you had a patient who in a hospital is sicker and has a more urgent and higher acuity need than a patient who may be very sick but in a less structured environment. The one that's in the hospital to me appears to have the higher need. Why do you think that that gets - I mean am I wrong? And you can say yes, that's okay.

SHARP, DR: Yes.

KENNEDY, DR: You know, am I partly wrong, partly right? Or why does the system think in the way that you've described?

SHARP, DR: I think it's because the care is being partially given and so I think that gives people reassurance that they're getting something, they're not getting nothing, and so that's okay.

But if you were that patient or you were that patient's parents the care is not the same as they could expect if they had delivered with a 6008 postcode and be at King Edward or - - -

KENNEDY, DR: Yes.

SHARP, DR: - -- 6009 and be at the Children's Hospital. So, I think there's a fundamental gap in the capability of particularly some of the more distant hospitals from Perth.

KENNEDY, DR: So, to me that sounds like you're explaining a misunderstanding of the - or a mis appreciation of the relative risks that exist for those patients, which may be a factor of organisations or cultures or particular coordination systems.

SHARP, DR: Yes. And I think and a misunderstanding - - -

KENNEDY, DR: Performance (indistinct 8.31.44).

SHARP, DR: - - - of the capability and the capacity of the teams.

KENNEDY, DR: So how do you solve that? At a system level is there a way to reduce, if you've got multiple players like that who have different perceptions about how the system's working, how - do you see a solution mechanism to that?

SHARP, DR: I would think the language when you're talking about the retrievals for that would be to highlight what the person is not receiving at the peripheral hospital and highlight that gap in the conversations and structure the conversations around about what care is there being - - -

DAVIS, DR: I think it's - - -

KENNEDY, DR: So that's a discussion about better communication and collaborative understanding that could be achieved through changing the way things are done or having a different system for - - -

SHARP, DR: Yes, and - - -

KENNEDY, DR: - - - communication.

SHARP, DR: Yes, and putting that upfront in the communication dialogue that the two - that is part of the dialogue about prioritising the retrievals is an understanding of the gap that the patient is exposed to where they are.

KENNEDY, DR: Yes, yes. Aviation Services are particularly good at understanding the risk of Aviation Services and they are very good at understanding risk in general. But sometimes I think the subtleties around clinical risk in different settings is, you know, there's a lot in that that needs to be discussed and it's often - it often benefits from different perspectives during a case which can be achieved through collaborative coordination centres and things like that, which helps quite a lot.

I did just want to go back to the question that you raised about - you made a statement in regard to the availability of resources when it comes to flight platforms.

DAVIS, DR: Yes.

KENNEDY, DR: And that there needed to be more platforms to resolve that issue. Would you agree with the position that it's the availability of the platform that is the measure as opposed to the number of platforms? So, you are as a clinician interested in the availability of the platform - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - to do your next job.

DAVIS, DR: Yes, yes.

KENNEDY, DR: From my perspective you don't care about how many are in the hangar.

DAVIS, DR: No, that's absolutely right.

KENNEDY, DR: You care about which one's going to be available in the time frame that you need it.

DAVIS, DR: Absolutely. It's the availability of the platform and being able to make a phone call and one being available in - - -

KENNEDY, DR: Yes.

DAVIS, DR: - - - the time that we need it to be available, yes.

KENNEDY, DR: So, I think the risk that you always end up in this kind of scenario is we just need more.

DAVIS, DR: We just need more, yes.

KENNEDY, DR: We need more trucks.

DAVIS, DR: Yes.

KENNEDY, DR: Yes. We know we may not and over time we certainly will but it's important to understand the way the trucks are used as well and the approach to task allocation.

DAVIS, DR: Yes, yes.

KENNEDY, DR: And you went to the question of having dedicated platforms for neonates and you acknowledged that had been discounted as a strategy that people were going to embark on. In terms of your workloads, if I'm - so I'm just checking that my understanding's correct, you're talking around about 300 aeromedical cases a year.

DAVIS, DR: Yes.

KENNEDY, DR: Theoretically a hundred of those may be able to divest to rotary, which would make a lot more sense than - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - short hop - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - fixed wing transfers - - -

DAVIS, DR: That's correct.

KENNEDY, DR: - - - in the southwest I agree from every perspective.

DAVIS, DR: Yes.

KENNEDY, DR: So that still leaves a relatively small and even if it were in that 250 to 300 - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - per annum it's one flight a day.

DAVIS, DR: Sure. I think what perhaps I didn't allude to was the number of flights that we have been doing discounts the fact that we are increasingly going to Bunbury by road rather than by air. So those aren't counted - those would count in the number of flights we're doing. And also, there are a number of patients that are moved within regions, within the Pilbara and within the Kimberley, that we are just simply unable to get to. So, I would anticipate with the availability of a more dedicated platform that we have more work to do than we currently count.

SHARP, DR: Part of the interest in a dedicated platform it's not just the availability of an aircraft, it's the interface of the aircraft with our cots and the change and the upgrade of the aircraft happening at a different time to our new cots coming in, it's part of the explanation why our "New cots" are still to be implemented four years later. So, it's not simply that there's an aircraft available with a flight crew, it's an aircraft that our cots can interface in a secure and approved CASA manner. And that kind of needs to be sort of thought about with the number in the hangar question as well.

KENNEDY, DR: Yes.

SHARP, DR: Yes.

KENNEDY, DR: And also, in terms of the geography of the State, the type and number in the hangar.

DAVIS, DR: Yes, absolutely.

KENNEDY, DR: Because the solution for different parts of the State is not one aircraft.

DAVIS, DR: Yes.

KENNEDY, DR: Which further complicates that whole question. One of the things which has been raised as a consideration by a number of people during our consultation period was the potential to look beyond the - I'll phrase this correctly. RFDS has a contract with WACHS, which includes the ability to subcontract for additional platforms with different providers. That's not a feature that's regularly used and there has been some criticism up until now that it could have been used more.

One of the other suggestions that has been raised is that there be a different type of contracting for highly specialised transport and that may be different providers, or it may be a different component of RFDS provision. However, it would be some different system, which understands and responds to the needs of NETS, mental health, repatriation perhaps interstate but areas where there is a highly specialised need. Did you have any thoughts or comments about that as a potential solution?

DAVIS, DR: We have actively *(sought other assets)* when a flight doesn't become readily available to us and we believe that we need to be getting there beyond the timescale that we've been given by the Royal Flying Doctor Service we have sought an additional asset from outside of that contract and have funded that from within our own organisation. So, we will regularly call another operator and try and get another flight. It's not always available because they're not always on standby for those type of services but we have - we would regularly contact another operator.

(During difficulty of obtaining a flight) we will raise that with RFDS. previously we (NETS and RFDS) have discussed the utilisation of another carrier at various times. we would do that at least six to 12 times a year. Having that availability would be good.

In our experience of doing that in Western Australia, in terms of its aeromedical provision primarily based on one organisation, the capacity within the service, as we see it currently, is quite limited. Additional organisations are not currently very numerous and they're not currently on standby for acute medical retrieval, so we - yes, we think that's a good idea. I do wonder whether the State has a capacity to do that instantly.

SHARP, DR: And we do have a different contract for our interstate retrievals, so that - outside of the - so a separate contract for the interstate retrievals with a different organisation - - -

DAVIS, DR: We do, yes.

SHARP, DR: - - - to RFDS.

KENNEDY, DR: One of the, you know, emerging considerations that a large number of people have raised and there seems to be universal acceptance of the concept of a more

robust form of centralised coordination, which is interagency collaborative - some form of governance around it, has some form of structure around it.

How do you see NETS interacting with something like that, which by its nature will be a thing in a place, so it'll have a geography? Much of the work that it will do I would imagine will be able to be done virtually and communication and connections may occur by telephony and telehealth video conferencing et cetera with you would imagine common IT systems et cetera. How do you see NETS potentially being a part of such a system?

DAVIS, DR: I think NETS can fit into such a system very readily and easily.

KENNEDY, DR: Does it need to?

DAVIS, DR: I think certainly having worked in Queensland and seeing the model of the retrieval service in Queensland when the neonatal have - a phone call comes to the neonatal unit of the NETS service and then we make the call for a flight and then that's organised in its entirety in a package seems to me one that can work for a neonatal service. I know that, and we have done some work with the WACHS command centre, and certainly it is an exciting sort of centralised service that we could work with that has used telemedicine and telehealth and that we have been engaging with them to see how our combined patient flows could work together.

I think what would be desirable for us is that we make one phone call and then the solution is presented to us rather than a phone call, waiting for a phone call that we returned, discussion, negotiation. Having that one phone call with a command centre is likely to speed up our operation. I think it would be very good for us to do that and I think we've actually started the embryologically, forget the neonatology pun, working with the WACHS command centre to do that.

KENNEDY, DR: Okay.

SHARP, DR: Could I just clarify were you looking at how NETS would interact with such an agency, you were not thinking that NETS would be in that agency? I'm just talking - that, you know - - -

KENNEDY, DR: Yes.

SHARP, DR: - - - the clinical looking at - - -

KENNEDY, DR: Do you mean physically or - - -

SHARP, DR: I'm just conscious to make a distinction that the clinical operations of the service in terms of the service should stay within the neonatology service because there's a lot of cross-work between the two, between NETS and the children's and King Edward and a lot of important sharing that would happen in that space. I wouldn't like to see the retrieval service leave a neonatology service.

KENNEDY, DR: No, I understand what you're saying and there's - I don't think there is a model in Australia where that - - -

SHARP, DR: Yes.

KENNEDY, DR: - - - is the case for the reasons that you've described.

What I'm talking about is in particular, you know, common systems of communication, understanding one system. And, yes, it's got different sized and shaped components whether they're adults or sick babies or a standard ICU patient or an interhospital transfer. There's a lot to consider in there, which an aeromedical system needs to do.

But, no, I mean I wouldn't fundamentally be talking about the service being gobbled up, if that's where you're heading. However, the value of the relationship is - - -

SHARP, DR: Definitely.

KENNEDY, DR: - - - in the tie into the systems and the clinical governance and the compatibility of platforms and the understanding of system change and evolution and not being left out of the equation or the conversations. So, to hit that sweet point is really what you're talking about.

SHARP, DR: Yes, and - - -

KENNEDY, DR: The same with obstetrics and paediatrics, if that does develop. You know, I think because there is no dedicated paediatric or obstetric retrieval capability for the foreseeable future those things are going to be provided by the generalist aeromedical and retrieval system. However, for it to operate in the safest way it needs to have I suspect better systems of communication and support and outreach with the, you know - organised with the obstetric and paediatric community. It may be that it evolves into a more dedicated service in the future. I mean I don't know obviously but - and that's beyond aeromedicine.

But the problem is that the aeromedical inquiry bit of this is a percentage of the same work, it's about the platform. But unless - there's no point in just talking about platforms if you haven't got the systems right.

SHARP, DR: Yes.

KENNEDY, DR: And so, where that may appear to be a stretch of scope in terms of the inquiry it's also fundamental to having a good aeromedical system is the system bit, not just the - - -

SHARP, DR: Yes.

KENNEDY, DR: - - - trucks. Speaking of trucks, you mentioned rotary transfer as a potential change to your current ways of practice, particularly in the higher reproductive population areas in the southwest.

DAVIS, DR: I don't think those are my words but yes.

KENNEDY, DR: Maybe it's a higher clinical load for your particular subset of patients. But it does have to do with reproduction I'm told.

DAVIS, DR: Yes, I'm not disagreeing, I'm just saying they're not my words, yes.

KENNEDY, DR: Yes. But there is a really big jump between where you are now in terms of rotary capability and I suspect where you would like to be in the future.

DAVIS, DR: Yes.

KENNEDY, DR: Now, if you can imagine in a year or so you've got access to a pile of shiny new helicopters, which are highly capable of dealing with compatible NETS equipment.

DAVIS, DR: Yes.

KENNEDY, DR: However heavy it may be.

DAVIS, DR: Yes.

KENNEDY, DR: And that platform, however, is very much oriented towards primary response - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - and, you know, emergency systems, you know, out of its thousand cases a year at the moment probably around a hundred are interhospital transfers. And on the other hand, we see the development of let's say a parallel system where two additional helicopters are coming into the system for a trial with RFDS, which are fundamentally probably not the best platform in terms of dealing with your needs.

I mean have you thought through any possibilities or solutions or have any views on how that works? Because to preface for other people in here and for the inquiry, it is clear to me that the - one of the most important things that you do is to respond - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - quickly. And that rapid response actually means a lot in the neonatal environment.

DAVIS, DR: Absolutely.

KENNEDY, DR: You know, there are very few clinicians out there who can even get close to the type of skills that are required to resuscitate a sick baby, a sick premature baby more so. And I think there's an under appreciation of the impact of half an hour, 15 minutes, an hour - - -

DAVIS, DR: Absolutely.

KENNEDY, DR: - - - here and there in that environment. And so, therefore, I actually think that rotary because of its - the rapidity of its response, if you can get door to door - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - is - and you're not injecting additional legs et cetera is really important. Can you tell us where you're sitting in terms of your thinking about how that could be developed further?

DAVIS, DR: We have been working with the various organisations that are providing the helicopter over the past few years in discussing the type of retrievals that would be appropriate, how would we start that. Within that time frame we have moved from a Children's

Hospital that didn't have a helipad to a Children's Hospital that did have a helipad. So we were working on our patient flows and how we would go and come.

We have had discussions with DFES and CHC about what type of retrievals we would do and we have - we are limited currently by the infrastructure the same we were limited getting those cots into a fixed wing aircraft where that solution is coming within the next few months.

Our view on helicopter retrievals would be that our current vulnerability in getting the right distance and the right patient is in that southwest corridor is into Bunbury and Busselton and possibly to Margaret River and to some areas in the wheat belt, like Northam. And we believe that a helicopter would allow us to get there faster. Now, we do acknowledge that there isn't a helipad in Bunbury, and it would be lovely if there was somewhere for us to land but it would still speed up our transit to Bunbury that we're currently doing on a fixed wing. Or by road, which were last year two thirds of our retrievals to Bunbury were by road, and that's a long trip, it's a six hour round trip for an ambulance and fatigue and welfare management on the team and the ambulance officers.

So, we have been working to an end point for using the helicopter, a helicopter as it stands for the RAC helicopter. RFDS's helicopter is coming online. We've just started the process of practically fitting the cot onto the aircraft, which doesn't look like it's going to be possible at the minute. But we have solutions in terms of logistics, in terms of patient planning, in terms of referral to the service and to the types of patients that we are looking to retrieve. So, we think we've got a good plan for when we can get the helicopter into the air and we're just waiting for that last logistical step to put that in action.

How NETS will then sit or compete with primary retrievals or the - so the helicopter emergency service remains to be seen because we haven't tested it and it hasn't been tested in WA yet. We would argue that the view of a primary and secondary is perhaps not useful with our types of patients because our patients can be as urgent as a roadside trauma and perhaps the survival around a 24-weeker can be greater than a roadside trauma in the right circumstances *(Additional notation: this comment was not meant suggest patients in road side trauma should not receive assistance but I was trying to equate the risk of mortality and morbidity for a 24 week patient to a similar adult paradigm).*

And so we think we've got some space to continue to work towards what we've been doing and we've been very glad that CHC and DFES have been so accommodating in what we've needed and we think there is a particularly bright future for helicopter retrievals in WA for neonates.

SHARP, DR: If I might add from like an oversight perspective, if people ask me what keeps me up at night about NETS retrievals, it's actually that Bunbury corridor, you know, the six-hour road trip to Bunbury at all hours of the night I find deeply - you know, it's not a satisfactory solution.

Just the risk for my team alone I think is under appreciated in a lot of the discussions let alone the risk for the patients.

KENNEDY, DR: Yes, I think if whichever way you look at it the risks posed by that kind of case is almost unacceptable. You know, you're potentially talking about people who are well into a shift when they're tasked.

SHARP, DR: Yes.

KENNEDY, DR: Who then have a, you know, coordination and preparation phase or a response phase. They are then in an intense clinical interaction all while trying to maintain situational awareness and be sharp enough to stay alert for what they need to for the trip back without missing anything. So, at a human factor level it's a recipe for disaster. And you could without too much imagination turn that six hours of travel into, you know, a relatively short period of time even if, you know, the logistics of loading and all those sorts of things are a stretch.

Would you agree that perhaps an underappreciated aspect of neonatal transfers retrievals is the high-risk environment of the out of hospital phase? And I guess I have - and maybe I'm testing this for you because from my perspective, which is largely adult, the highest risk period is not when you're in a relatively contained environment even if it's a foreign environment of another hospital as you're preparing a patient for transfer but the place where the highest risk where things go wrong is - or the highest consequence of things to go wrong also is in transit.

DAVIS, DR: Yes.

SHARP, DR: Absolutely.

DAVIS, DR: Yes.

SHARP, DR: Yes, that's - - -

KENNEDY, DR: So, the concept of minimising transport time by using - - -

DAVIS, DR: Yes.

KENNEDY, DR: - - - sensible rapid transport platforms makes - - -

DAVIS, DR: Absolutely.

KENNEDY, DR: - - - basic sense.

DAVIS, DR: It's the bit where we are most vulnerable is the confined back of the ambulance situation where lots of things can happen especially - and if something does happen in an extremely preterm neonate it happens quickly and it takes a high degree of skill to resolve, so reducing the transport times certainly are likely to have an impact on patient outcome.

KENNEDY, DR: Thank you.

Just as a final question, particularly given the distances and travel times, which are inherent in the State's geography do you see the potential for some expansion of hub and spoke approaches to interim emergency neonatal care? And I understand obviously that you have systems in place to a degree, particularly in the north. But is there more that you think that could be done in that outreach and education space that would assist the system? And I'm thinking about aeromedical responses obviously but - - -

DAVIS, DR: I think there is - we have been limited in the past with staffing and the number of people that are available to do - we do have a very active outreach program and we travel throughout the State over the course of the year. Pre-COVID times where travel was much freer and easier. We can do more and we tend to try and target areas that have had and

maybe an uptake in the number of retrievals type of patients to target our education to make sure that people are, you know, skilled in terms of their stabilisation. And we are trying to focus now our education on those particular stabilisation skills, preparing the patient for transport, recognising the patient will be transported and preparing people to prepare the patient for transport.

There is more that we can do, and we have an increase in staffing coming in the next six months and we certainly hope that with additional people will be able to assist in expanding that outreach program.

KENNEDY, DR: Okay, thank you.

SHARP, DR: I think it's fair to say that the demand for education from the peripheral sites in the country is considerable. And, you know, I'm aware that there's unmet demand. But we would be - or we have always been open to conversations about improving our service. As Jonathan said, we've got some more staff, so we should be able to provide more teaching throughout the regions in WA. But I think focusing on some of the high-risk areas and frequent centres in the southwest are important.

KENNEDY, DR: Okay, thank you. Is there anything else that you want to - would like to raise finally before we wrap up?

DAVIS, DR: I don't think so.

SHARP, DR: I would advocate in that the data collection needs to be robust across the system because I think currently, you know, certainly from the perspective of some of the aeromedical retrievals, you know, the gap that exists in Bunbury is probably they're not detecting because we're providing the service via road. So, I think the gap in service that the southwest corridor faces for neonatal retrievals is underestimated and underappreciated because if you just look at the flights that they do now currently that's just the tip of the iceberg of the demand.

KENNEDY, DR: It would be very useful for the inquiry to receive further information on that, if you can turn your mind to it, and to perhaps look at entirely your unmet need. In other words, situations where you are, you know, necessitated that you travel by road when aeromedical response may be better or preferred.

SHARP, DR: Yes.

KENNEDY, DR: And if that can be teased out, so that it's not simply related to weather because there will always be occasions where you can't fly. But where the situation is no resource available as opposed to unable to use, that would be really helpful in terms of our analysis of potential - particularly potential additional rotary workload requirement or a platform requirement in this region. And type of rotary platform in terms of appropriateness to the tasking required. If you could send that through, that would be good.

Thank you for your attendance at today's meeting. A transcript of the hearing will be made available to you, it will be sent to you. And you'll be able to correct any minor factual errors in that before it's placed on the public record. You need to return the transcript within 10 working days of the date of the covering letter or email otherwise we will be deemed to be correct.

While you cannot amend your evidence, if you would like to explain particular points in more detail or present further information, you can provide this as an addition to your submission to the inquiry when you return the transcript. So once again, thank you very much for the thought and preparation and delivery of your evidence today, it's been greatly appreciated. Thank you.

DAVIS, DR: Thank you very much.

SHARP, DR: Thank you.

DAVIS, DR: Thank you.

KENNEDY, DR: Thank you for your time.