

**EDUCATION AND HEALTH
STANDING COMMITTEE**

**AN INQUIRY INTO IMPROVING EDUCATIONAL OUTCOMES
FOR WESTERN AUSTRALIANS OF ALL AGES**

**TRANSCRIPT OF EVIDENCE
TAKEN AT PERTH
MONDAY, 9 JULY 2012**

SESSION THREE

Members

**Dr J.M. Woollard (Chairman)
Mr P.B. Watson (Deputy Chairman)
Dr G.G. Jacobs
Ms L.L. Baker
Mr P. Abetz**

Hearing commenced at 11.48 am**RAJAN, PROFESSOR GUNESH****Professor of Otolaryngology, Head and Neck Surgery; Consultant, Ear and Skull Base Surgery, examined:**

The CHAIR: On behalf of the Education and Health Standing Committee, I would like to thank you for your interest and your appearance before us today. The purpose of this hearing is to assist us in gathering evidence for our inquiry into improving educational outcomes for Western Australians for all ages. At this stage I would like to introduce myself, Janet Woollard; next to me are Peter Abetz and Lisa Baker; our secretariat, Brian Gordon; Loraine Abernethie; and then from Hansard we have Melissa Pilkington with us.

The Education and Health Standing Committee is a committee of the Assembly. This hearing is a formal procedure of Parliament. As a public hearing Hansard will be making a transcript of the proceedings for the public record. If you refer to any document during your evidence, it would assist Hansard if you could provide the full title for the record. Before we proceed to the questions we have for you today, I need to ask you a series of questions. Have you completed the “Details of Witness” form?

Professor Rajan: Yes.

The CHAIR: Do you understand the notes at the bottom of form about giving evidence to a parliamentary committee?

Professor Rajan: Yes, I do.

The CHAIR: Did you receive and read the information for witnesses briefing sheet provided with the “Details of Witness” form today?

Professor Rajan: Yes.

The CHAIR: Do you have any questions in relation to being a witness at today’s hearing?

Professor Rajan: Not so far.

The CHAIR: Would you like us to call you professor?

Professor Rajan: No. Whatever you want to call me, that is fine.

The CHAIR: In that case Gunesh, yes?

Professor Rajan: That is fine.

The CHAIR: We are on first names here. I might then start with saying to you that as a committee we became aware several months ago of the problems with hearing loss for children when we went to the north west and met with principals and healthcare workers. It was very severe in some ears. Then we were very fortunate to meet you at the breakfast that was put on at Parliament and to hear some of your work in the ear. Before we move into any specific questions for you, maybe you might like to tell us about the hearing problems. We are focusing on children—so zero throughout their schooling—and if you could discuss hearing problems and then for all of those ages, what could be done for those ages. As I mentioned previously, before you leave I will give you a copy of the report that we made on that visit.

Professor Rajan: First of all, thank you for the opportunity to give evidence. I think it is very important to try to support and contribute.

First of all, to have a sort of baseline that we all understand what we are talking about, having strong hearing means having a strong start, because if a child cannot hear, it cannot learn, go to school or be educated. That is a fundamental principle. What we also know is that the earlier the intervention, the better. If you can get a child with hearing loss within the first two years, it is good; if you can get a child within the first year after birth, that is even better; if you can get a child within the first six months, fantastic; and if you get it at newborn level, that is outstanding. That is the scenario. I think a lot of evidence and research is clearly pointing in that direction.

With our work in the north west, we have come across the severity of the ear health burden. You know all the stats; Access Economics did a nice assessment of the impact and extent of hearing loss. We know that especially in the Indigenous communities it is very high because of their chronic ear disease problems. Basically, one in two children has some hearing loss plus chronic ear disease. That shows you the handicap with regards to learning. Health and education should go hand in hand; it is pretty obvious. A gold-standard education is only possible with proper ear health. What we have found up north which is striking is the access to health care. Just a simple example, in Karratha there are 14 GPs, but none of them bulk bill. So, the average Australian, the Indigenous, where do they go? The AMS? They do not have the staff. How did we come across —

The CHAIR: Did you say the EMS —

Professor Rajan: The AMS is the Aboriginal Medical Service.

How did we encounter this? Because we started the screening program with the idea to get the kids early, screening them with our ear bus, for example. Then suddenly there was this group of hundreds of children we screened who needed some sort of treatment and then we realised that the local AMS could not cope at all. Then we asked: what about the GPs? Then we realised they all bill privately. Clearly, the access is a problem for the average person and the Indigenous population. The extent is quite high. So, as I said, one out of two children has some sort of problem with their ears, which has an impact on hearing. So, that was the access problem.

The other problem we face is the fragmentation of services. There are so many players in the game that there is no institution that actually knows what is happening and the consequence of that is—I appreciate everyone who wants to help up there, but it has to be in a sequence; it has to have consequences. What happens is a lot of institutions, be they private or semiprivate or charitable or whatever, do not have the vessel to feed in. What if we have identified the child and it needs treatment, it needs hearing aids and surgery or whatever? That is where it stops. So, we have encountered children who were identified by colleagues of mine five years ago requiring surgery, put on a wait list. The thing is the child at that time was two years old when the surgery would have been crucial, but now it is seven. For speech and language development, we have missed the boat. This is just one example. You can find it again and again.

The CHAIR: Would that surgery then maybe have been grommets, or what type of surgery?

Professor Rajan: It could have been, yes; mostly it is grommets, which is a very simple procedure to do. Again, it is the access. The fragmentation—some otologic group goes up there, screens and says that this child needs that and then that is it. It does not move on. What we were trying to institute was to create this pathway—a diagnostic and management pathway—trying to be comprehensive.

The CHAIR: Gunesh, when you said that child of two then waited until they were seven, where would we get those statistics from? If we wanted to look at those statistics over the past few years, who holds those statistics?

Professor Rajan: You could probably go to the Department of Health if they have been wait listed properly and they are in the system. They would have been documented.

The CHAIR: If we were to contact the Department of Health, would we ask for the number of children under the age of seven —

Professor Rajan: Five.

The CHAIR: — five that had been identified over the past five years with hearing problems and then the minimum, the average and the maximum wait time for those children to be —

Professor Rajan: The wait time until they have surgery or if they had surgery at all.

The CHAIR: We would need to have three questions then, would we not? Were they identified? If they were identified, the percentage requiring medical treatment or surgical treatment. Then the third question would be for those requiring surgical treatment how long they had to wait for that treatment.

Professor Rajan: You could simply the third question to say: was the treatment implemented or not, be it medical or surgical? Because medical is the same thing. That goes back to the access to GPs. Sometimes they just need drops, but if the AMS is flooded, there is a delay. They are three good questions. The other challenge is also what we are seeing and that makes it quite—how should I say?—ethically challenging for us, is our patients, the kids we are supposed to see, have been wait listed in the north west and we then get the wait list authorities, clerks or whoever, who come to us and say, “Listen, there is a pile and these are all category 2; can you re-categorise them?”

[12.00 noon]

The CHAIR: In which case you need to go back to those questions again because we need to ask: how many children, under the age of five, were identified as having hearing problems? Question two is: when they were first identified, what category were they identified as? That goes from one to three, did you say?

Professor Rajan: Yes, three categories.

The CHAIR: How many were identified as level 1, how many as level 2 and how many as level 3? Following that identification: (a) if they required medical treatment, how long before was that treatment given; and, if so, what was the time frame for that treatment; or (b), if they are identified as requiring surgical treatment, how long did they have to wait for that surgical treatment? Maybe the last question is: at any point since the child was first identified as level 1, 2 or 3, were they ever reclassified; and, if so, why? Would that get to it?

Professor Rajan: Yes.

Ms L.L. BAKER: Perhaps, “Was a request made?”

The CHAIR: If a request was made, they would not have because they would have to go back —

Professor Rajan: That is verbal.

The CHAIR: If they have on their records in 2009 that they were a level 2, then suddenly in 2010 they have gone to a level 3, then we know there is something fishy.

Professor Rajan: The thing is the national waitlist targets. If one side does not fulfil the requirement, I do not know how many million—50 or 60 million—WA misses out.

The CHAIR: That is why they asked to have them classified from two to three so they do not miss. What was that funding?

Professor Rajan: The national waitlist scheme. That is the challenge. With the fragmentation —

The CHAIR: Is that funding from the national waitlist scheme with the health department or Country Health Services for the north west and the health department?

Professor Rajan: No, that is for WA Health, from the commonwealth.

The challenge is the fragmentation, so no-one has an overview. Because only a small percentage of organisations are individuals who have access to the public health care system, there is no future; there is no consequence if someone gets identified.

The CHAIR: Can we come back to that national waitlisting. If we are asking over the last five years, we should also ask: what was the formula for funding for WA for the national waitlisting over, we go year, year, year. “Did WA meet these criteria?” Is it a case of a sum of money or no money? Is it category A funding, category B funding and category C funding?

Professor Rajan: To be honest, I was of the opinion that it was all or nothing. That is why everyone is very keen.

The CHAIR: Maybe we should ask for the formula for that funding, whether it is all or nothing.

Professor Rajan: That goes hand in hand. For us in public health, we have identified children. Where do we treat them if they need surgical treatment or complex medical treatment, such as IV antibiotics or surgery? There are only two teaching hospitals in WA that do kids—that is Freo or PMH. This is not only kids, it is for adults from the north west or from any rural region—where do they go in? We try to feed them in, because we are employed as well in the health department. We can feed and try to put them into the system. We need a more unified, stratified and straightforward solution. I think we discussed last time a spoke and hub model would be useful. The spokes in the peripheral sites and then refer it to one hub, maybe based in Perth or something, where all the patients, without any delay, can be treated. We have models like this in Australia, but also overseas where you have that—the ear health sort of concept. That is that thing. The other thing of course we came across is the disparity between regions.

The CHAIR: Before you move off the spoke and hub: the spoke and hub model is one model we discussed previously, but the other model that we discussed was having a mobile surgical team.

Professor Rajan: Yes. I would consider that a spoke. You can do that for a simple procedure like grommets—perfect. I do not know whether you read about our new technique for fixing ear drums—the smart ear fix. Hundreds of thousands of Australian kids and adults have ear holes which cause hearing loss. We developed a technique, together with overseas collaborators, where we can fix this. It is minimally invasive, within a few minutes. It brings it down to cataract surgery. The idea is that you can do these low complexity things with surgical ear buses, which are mobile. I use the analogy of cataracts—it has already been done there. Drive out to the community, screen them in the morning, treat them in the afternoon, for example. Or you go overseas.

The CHAIR: I mentioned that in Parliament, but the only literature I could find said that it took 15 minutes for the grommets, and I thought you said only a few minutes. I could not find that anywhere in any of the papers. It only takes less than five minutes?

Professor Rajan: An experienced, trained surgeon takes between two to five minutes to put in grommets. The new technique to fix the holes is probably a bit longer—maybe four to eight minutes.

The CHAIR: Is this under a local?

Professor Rajan: Children need to be asleep.

The CHAIR: If it is under a general with a mobile surgical unit, how many children could you do and where would you see the children being housed whilst they recover from the anaesthetic?

Professor Rajan: It can be a school hall or something like that. When I was working in South America we had a tent dedicated for that. You put them in there. Someone is responsible—a recovery nurse is there and looks after them. It is a very short GA. They would be up and about within two hours. That is all you need. If you have a village or community, you can find some hall close by. Also, you can use a school site as a treatment site.

The CHAIR: If you use the school, if you could do a child, say one child every 10 minutes—six children in an hour; 12 children in two hours—you could maybe do up to 36 children in a morning if you had a large hall for a recovery area. What are the practicalities?

Professor Rajan: Yes, you can do 20 to 40 kids. If you have a really skilled team, you could do that. In cataracts, they do even more, in a morning. Yes, certainly to that magnitude.

The CHAIR: I will get you back. I did not appreciate that was part of the spoke and hub. You were then moving on to?

Professor Rajan: Disparity between regions.

The CHAIR: Thank you.

Professor Rajan: We are active in a lot of areas—Kimberley, Pilbara, goldfields and the south west. There is a big disparity between the Kimberley and the Pilbara, which is striking. Set-up wise, the Pilbara and the Kimberley—if you go to Fitzroy Crossing, somewhere they have a brand-new microscope and everything set up. No-one knows how to handle it, though! That is the other problem. There is money there. Someone has decided this goes there. I do not know who was consulted on that, but that is a bit chaotic. Then you go to the Pilbara, there is basically no set-up comparable; the same in the goldfields. That needs to be addressed. The spoke and hub would only work if every site has a standardised set-up. As a medical professional, you go there and you find the same set-up everywhere, so you can do the same work everywhere, without hoping that that equipment is all there. It has to have a uniform, standardised, basic set-up at every treatment site to simplify it.

The CHAIR: In order for there to be a standard set-up, do we have a centre now for rural and Indigenous ENT services? Do we have one now, or should we have one in WA, and where should it be?

Professor Rajan: You are speaking of the hub—we do not have a hub. That is what we are trying to juggle —

The CHAIR: The hub is your centre? We do not have that centre.

Professor Rajan: We do not have that; yes.

The CHAIR: If we were going to have it, it would either be at Fremantle or at PMH because that is where the operations are being done, or would it be with child development services?

Professor Rajan: It depends what you want to do in the hub. If we go overseas, we go to the States, we go to Europe, we go to South America, what they have is a one-stop shop hub. You go in and everything is under one roof—diagnostics, imaging, surgery. It is like a little ear hospital, basically. A lot of patients do not need surgery, they might benefit from a hearing aid but they can get that fitted as well at the same time. Ideally you would have everything in one place co-located. It is also good for audit and research purposes because you have all the specialists in one spot.

The CHAIR: The new Fiona Stanley Hospital would be an excellent site as a hub. There is room on the grounds to develop a new centre.

Professor Rajan: Yes, I think so. It does not take a lot. There are probably various sites, but Fiona Stanley would be good because there are all the medical facilities there. The only drawback will be more for the complex stuff. I do not want to get into all the things about Fiona Stanley, but for us, for some hearing restoration procedures, we need neurosurgical support. At the moment it is all at Charlie's.

The CHAIR: And it is staying at Charlie's.

Professor Rajan: Yes. That would make Fiona Stanley —

Mr P. ABETZ: Not the best place.

Professor Rajan: Yes.

The CHAIR: So Charlie's might be a better place with the new children's hospital.

Professor Rajan: Perhaps.

The CHAIR: Like you, we would like to see such a centre. It is good that you are advising. If we were to make a recommendation, it would be a shame to make a recommendation for the wrong position.

Professor Rajan: Looking at the population, we looked at Fiona Stanley. There is so much work. Perth is the only metropolitan city in Australia that does not have two neurosurgical sites. It has just one. Adelaide has three; Melbourne has even more. South and north of the river makes sense. We have problems. My other part of work is dealing with skull-base tumours. I need regular neurosurgical support. Everything is south and north. It is quite difficult to get people from south of the river. It would be good to —

The CHAIR: To actually push for neurosurgery as well as a centre at Fiona Stanley?

Professor Rajan: Yes, because from our perspective that has been very limiting. Anyway, I think it needs a hub, and a comprehensive hub, which can coordinate the efforts of the spokes. Talking about new technology, implementing the remote technology—you can do a lot with that if you empower the local communities. We have developed a system where a school nurse or a health community worker, community nurse, can do the examinations and put it into a web-based platform. We, in Perth, look at it and triage and say what is required or we can even generate electronic scripts which they can print out. That is it.

[12.15 pm]

All these things are possible with this kind of model.

The CHAIR: With that child you mentioned that was maybe two and waited until they were seven to have treatment, were the delays because of financial resources or were they because we do not have enough ENT specialists to send the children down to be treated by them? Is it patient assisted transfer and where is the money going to come from to get them down south or to the metropolitan area or is there just a long waiting list? What are the waiting lists like at Fremantle and at PMH for children to come down and be seen and have treatment?

Professor Rajan: Probably Fremantle is a bit exceptional because we have ingrained that early intervention is crucial. In our case at Freo, a child does not wait longer than two months for intervention, whereas at PMH, it can be up to 12 months.

The CHAIR: But you said a child waited five years.

Professor Rajan: Yes; that is up there. It was thought he could be treated in Nickol Bay Hospital. He was on some wait list in some folder.

The CHAIR: So he just got lost in the system.

Professor Rajan: But it is not just a one-off thing.

The CHAIR: So there are lots of children getting lost in the system up there.

Professor Rajan: They have lots of things. The set-up is not appropriate. To be a spoke, you need a certain standard set-up, and that is not there.

The CHAIR: So you need that identification to be going to the hub so that someone is following up to make sure that that child gets treated.

Professor Rajan: You could also do it up there. If it is just a grommet, you can do it in Nickol Bay Hospital.

The CHAIR: No. I am saying that when you are saying children are getting lost, why are they getting lost?

Professor Rajan: Because they have to deal with the workload. There are people issues. There are not enough ENT surgeons clearly, and the large proportion that go up there go as individuals.

The CHAIR: Rather than as a team.

Professor Rajan: Rather than as a team, which is affiliated and has this pathway strategy.

The CHAIR: That is why a mobile surgical unit would probably be more appropriate to go around the Kimberley with the team. You could have the school nurses identifying the children with ear problems, treating them with antibiotics and, after a couple of infections, referring them to the ENT specialist so that when the team came, you had the pictures or whatever if you needed them, but you were able then, based on their diagnosis, to bring them in, check them and treat them with surgical treatment.

Professor Rajan: Exactly. It just cuts down the steps and streamlines things.

Coming back to early intervention, this is the other spectrum. With the hearing rehabilitation and education, if you look at the overall Australian situation, WA is quite behind. One is the catchment rate of newborn hearing screening. Even though it is the state that introduced it, it was the last one to make it universal. There is a gap of 10-odd years to do that. The other thing is that deaf babies born can lead a normal life provided they get bilateral cochlear implants, for example. You can restore hearing and they can go through a normal school. WA clearly by a significant difference lags in providing cochlear implants for these children compared with the other states. WA has the lowest rate of bilateral cochlear implants.

The CHAIR: So when you say we have the lowest rate for that newborn hearing test that is now throughout WA, I have three questions. First, when is that test done and when should it be done by? Secondly, following that test when a child is identified maybe as needing a cochlear implant, who is notified of that so that we could say what percentage of children were done, how many were identified as needing implants maybe over the last five years, how many were done in each of those years and for those children who were not done, why they were not done. Maybe you could tell us, first, for that neonatal, what are the recommended guidelines that it should be done between birth and this age —

Professor Rajan: It should be done at birth. That is why it is called neonatal hearing.

The CHAIR: It is meant to be done as the child is born.

Professor Rajan: After birth, yes. In the first few days, yes.

The CHAIR: If it is meant to be done in the first few days, do you know what the percentage is for children having them in the metropolitan area and the regional areas?

Professor Rajan: Because it is so new, I think there are no figures at the moment. That is something very interesting. That is what we are waiting for as well—to see how effective is the screening system.

The CHAIR: But you said that we had the lowest number of implants. How do we find out how many children —

Professor Rajan: The thing is that you can go on population statistics. We know that in an average population in the States, in Europe and here, per million population, there are between 11 and 14 newborns born deaf.

The CHAIR: Eleven to 14 per million births.

Professor Rajan: Per million population. In Perth, with roughly three million, that gives you an idea how many there must be.

The CHAIR: There should be about 42 children.

Professor Rajan: We are not implanting even half of that, so where are these kids? Even of the ones we are implanting, we are capped by the health department just to do one side.

The CHAIR: To do?

Professor Rajan: To do one implant rather than two.

The CHAIR: You only do one.

Professor Rajan: We can only do one. It is not recognised —

The CHAIR: But is the standard meant to be that you do two?

Professor Rajan: Two. All over the world, it is two. There is enough evidence nowadays that if you give them two from an early start, they develop like almost normal hearing children.

The CHAIR: Is that just WA or is that Australia? Are the other states doing one or two?

Professor Rajan: They are implementing two.

The CHAIR: So it is just WA.

Professor Rajan: It is WA that lags behind. In other countries, I can tell you—in Europe, for example—cochlear implants are covered by the commonwealth. But because implants here in Australia are covered by state funding, every state has to generate money from somewhere for these implants. That shows the disparity. They only get one, but then also we are missing out probably double the kids that need one. There is a nice summary of this within the neurosciences network, which we did within the health department. We discussed this. If you want to access that —

The CHAIR: Can you remind us again, because it was a long while and I cannot remember?

Professor Rajan: There is a committee from the Department of Health dealing with neurosciences and we put forward this paper on what the situation is currently with regard to deafness management; otherwise, I can forward —

The CHAIR: Could you forward the paper to us? That would be very helpful.

Professor Rajan: Yes.

The CHAIR: Also, could you forward us the name of the committee? I think it would be a good idea for us to follow up with that committee. In that way, we can maybe follow up with that committee and ask for minutes of their meetings over the last 12 months and any recommendations that they have made to the government from those meetings.

Mr P. ABETZ: Would it be fair to say that the cochlear implant is really a very minute number in comparison with the otitis media that Aboriginal children have? That is a problem this big, but children actually being born deaf is only a very small problem. It needs to be addressed, obviously. But for learning and educational outcomes, the hearing problems that the children have in, say, the Kimberley would need to be addressed in an ongoing way. Is there any preventive treatment that can be done so that they do not even get the ear infections in the first place?

Professor Rajan: That is the role of research. Our team is doing a lot of research in this area. As I mentioned before, that is what the role of the hub would be—to combine the translation and research into this. There are a few concepts. We think we can reduce the infection rates and things like that, but it just needs, again, the co-location of these minds to make it happen. Prevention is better than cure. WHO gives out the guidelines that you have to supplement vitamin C and vitamin A into the nutrition. Nutrition is key. We know that nutrition is a key factor for prevention of any kind of infection, not only ear infection. Even vitamin A is crucial. Again, WHO guidelines are that every child needs to have this minimum amount of vitamin A. Just by doing that decreases mortality for infections. Clearly, prevention is better than cure. There is immunisation for mumps, measles and rubella. If you can immunise the girls before they get into puberty, you could probably eliminate any perinatal infections that cause deafness. It is not large in Australia. It is maybe around 15 per cent or 20 per cent that is caused by this. It would be higher in the Indigenous community.

The CHAIR: Is it from measles?

Professor Rajan: It is mainly rubella, and then measles and then mumps. But overseas in developing countries and Asia, more than 70 per cent of congenital deafness is due to rubella. It just shows you that dimension. I totally agree—prevention as much as you can.

Mr P. ABETZ: We have heard a lot about needing to inspect the ears and giving antibiotic treatment and all that. I would like to go back a step further. How can we stop this happening in the first place? It is quite interesting what you have raised there.

Professor Rajan: You know, like everyone else, about improving the socioeconomic environment and nutrition and shelter. Diet is crucial, especially in the Indigenous population, because their genetics are different from the Caucasian population and that needs to be considered in their diet.

Mr P. ABETZ: From what I have seen in the Indigenous communities, the diet leaves an awful lot to be desired in terms of what the kids eat. These kids would be getting far worse nutrition in remote communities than they would be getting in our lower socioeconomic areas in Perth.

Professor Rajan: Yes. You have to be aware of the genetics. They are hunter–gatherers. No matter where you go worldwide—you can go to South America, native America or Asia—in these similar cultures or tribes, the hunter–gatherers are prone to develop diabetes. All these things made them sedentary, so it happens everywhere. We were talking about prevention. I think that is absolutely key—if you can improve their nutrition, immunisation and, of course, education. That usually goes through the mother and the school nurses. That is what we have seen as well. The school nurse, probably especially in the Indigenous population, spends most of the time with the children. The parents are not reliable; you do not know where they are. But the school nurses know each and every child usually; they know what is happening. That is why our program—the spokes—includes them, because they could easily be trained, or a community nurse could be trained, to do the triage, do the otoscopic examination and put them into the web-based platform. We look at them and tell them this is what is done. Again, we discussed this in the areas. Clearly, there is a lack of school nurses in population health and education. It is probably something that would need to be addressed.

[12.30 pm]

The CHAIR: What do you think about the Closing the Gap funding from the federal government? The federal government in 2010 produced a report on hearing. One of the recommendations was that the government fund telehealth. I cannot remember now whether that was accepted or not by the federal government, but how long have you been going to the north west and do you think there have been, over the last few years, big improvements in Indigenous health?

Professor Rajan: I can just say for our area in ear health, not necessarily. Again, because of the —

The CHAIR: Over how many years, would you say?

Professor Rajan: Probably over the last five years.

The CHAIR: Over the last five years, no improvements?

Professor Rajan: Not a lot because, again, there are so many players involved in telehealth. Again, it is the same: it is a dead end, usually. Nothing happens. So that is clearly the challenge.

Mr P. ABETZ: Who is best placed to coordinate all these different things that are happening? It seems that nobody is pulling it all together.

Professor Rajan: I think we should create one department that is dedicated to that and that coordinates these things. Also, I do not think everyone is suitable; a lot of groups and organisations want to do something but probably in a different way, rather than this. It makes it very inefficient. Probably the role would be to identify suitable partners and then create a coordination unit; that is what we have put down in the proposal to make sure that everything gets into this pathway and is streamlined.

Ms L.L. BAKER: That was very interesting, and thank you for your very thoughtful observations.

Mr P. ABETZ: Do you have some more things to tell us? I am sure there is a wealth of information you could give us.

The CHAIR: We have recommended to the government that it look at utilising school nurses for hearing checks. Someone has mentioned having a mobile surgical unit, but in these days when we have a lot of money coming in from mining, if you were asked to nominate what three priorities were, where we should invest the time and money, what would your three priorities be?

Professor Rajan: I would say prevention research—research to really improve the prevention; people; and infrastructure so that, as I said, no matter where you go you can give proper treatment. Everyone talks about e-health and telehealth, but if you look at the systems, it is just like Einstein said: they are probably 10 per cent of what you could do with the technology we have. I am always surprised how almost infantile these systems look; you could do much more with the technology we have. Again, that is because a lot of people are trying something rather than focusing their efforts; I think that would make a big impact.

The CHAIR: I think that some school nurses would probably be able to come back and you would be able to give them additional training to identify otitis media for the antibiotics, but for school nurses who are only there for a short while and who have not had that training, in order to get the audiometer that takes the photo to then send it by telehealth, how much does that equipment cost? It might be that in some areas you do not have a school health nurse but you have a community health nurse or an Aboriginal health worker. Where they are not able to say this is otitis media and we need the antibiotics, and they are linking to that hub, what is the equipment they are using so that we could look at the pricing on such equipment?

Professor Rajan: The otoscopes are commercially available; nowadays they are between \$800 to \$1 000.

The CHAIR: I thought they were about \$5 000, so they are much cheaper than I thought.

Professor Rajan: That is if you go via certain distributors; again, that is sort of a mismanagement with equipment, just to point it out. We do not know why suddenly these waves of equipment come in, even the AMS equipment. They have not ordered for it, and nothing happens, but the AMS in Roebourne has five audiometers just sitting around. That is five times \$24 000. They are not getting what they are asking for. There is one distributor, obviously, and they just send it out. Again, that goes into this multiplayer thing. As you were saying, there is no coordinated approach. That could also save some money as well.

The CHAIR: I would like to thank you very much for your evidence before the committee today. A transcript of this hearing will be forwarded to you for the correction of minor errors. Any such corrections must be made and the transcript returned within 10 days from the date of the letter attached to it. If the transcript is not returned within this period it will be deemed to be correct. New material cannot be added via these corrections and the sense of your evidence cannot be altered. However, should you wish to provide additional information or elaborate on particular points, please include a supplementary submission for the committee's consideration when you return your corrected transcript of evidence. I will hand you a copy of the report that we tabled on the key learnings of our committee trip, and again, thank you very much.

Hearing concluded at 12.36 pm
