IN CONVERSATION WITH

Harvey Coates

Indigenous health would remain a Cinderella part of our speciality were it not for the work of a few outstanding pioneers. **Kelvin Kong** speaks to one of them: Professor Harvey Coates AO.

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Harvey Coates is a paediatric otolaryngologist and clinical professor at the University of Western Australia, School of Paediatrics and Child Health and University Department of Otolaryngology, Head and Neck Surgery.

He was appointed an Officer of the Order of Australia in 2005 for his work and research in paediatric otolaryngology and ear disease in Aboriginal children. He has multiple research interests including otitis media and adenoid disease, obstructive sleep disorder, new born hearing screening, and Indigenous children's ear disease.

He has also won multiple awards including the Deafness Council WA Inc Dr Harry Blackmore Award (2004) the Australian Lions Foundation William R Tresise Fellow Award for humanitarian services (2002) and the Fiona Stanley Medal (2001) as well as the Inaugural RACS Aboriginal and Torres Strait Islander Health medal.

He is held in extremely high regard for his work, his commitment and his passion for ear disease, particularly pertaining to paediatric populations. He has mentored and inspired many around the world, including myself. There are not many people in Australia that can manage a purely paediatric practice, and to have accomplished this such a long time ago is a testament to the work he is doing!

It was a real pleasure to interview Harvey and share with readers the insights of such a remarkable person.

Thanks so much for joining me Harvey. Let me start by asking how it came about that you became involved in ear, nose and throat surgery?
Initially I wanted to be a plastic surgeon and I went to Mayo Clinic on a fellowship to do so but after a year it became apparent that I was not suited to general surgery, which I had to do for four years. So I then heard about a French resident - an ENT who had lost his job because he was a little lazy - so they gave me the opportunity to switch from general surgery to ENT. That was a serendipitous moment in my life.

Did you study medicine in Australia?
Yes I did. We migrated from Auckland, New Zealand, to Queensland when I was 12 and I went to the University of Queensland.

So you trained in surgery, then went overseas to embark on a definite surgical career, and things changed when you arrived there. How did you find changing from general surgery training to ENT?
It sounds strange but it was not as intense at that time. I started general surgery at Mayo Clinic and was helping with cardiac surgery, but it wasn't suitable for me at the time. I had a passion for research and I changed to ENT to have time to write and to do research. This was a move in the right direction towards subsequently becoming a paediatric ENT surgeon.

So you completed all your training in surgery in the United States and then came back to Australia?
I did, yes.

Have you always had a passion for research from your early years of studying medicine?
I have. When I was a medical student I was approached by a professor of physiology to pursue research. I grasped the opportunity and together we made a discovery about a haematologic condition, which we never published unfortunately, so I am going to continue doing that in my last few years in practice. At Mayo Clinic it was encouraged to do research - in fact you could do a Master's Degree as part of your whole training programme - and I did some work on nasopharyngeal cancer.

On returning to Australia, have you always been purely paediatrics?
No, the only position available when I arrived was in a children's hospital and I followed Bruce Pearson's advice that I should take whatever opportunities arose. It rapidly became my preferred subspecialty: it wasn't however until 1991, about 25 years ago that I went totally paediatric.

How did you 'fall' into ear disease specifically? Were you mainly looking after the children's ears or did you pursue ear disease?
Absolutely. I think what happened was that in Western Australia, we have an area of a **million square miles** and there were only a few ENT surgeons in Perth. So sometimes we would have to take a two to three hour jet flight and then an hour or two by light plane to get to communities that we needed to see. It became very apparent to me early on that there was a significant ear disease burden amongst the Aboriginal children and that this had not been addressed adequately because of the small numbers of ENT surgeons and the fact that not all wanted to go out and do this work in the communities.

Have you always done work in the Aboriginal communities since you started practising?
I have, yes. From 1978 I started work in the Exmouth Onslow area and have since worked throughout much of Western Australia.

How did you come to work in the Exmouth area and, for our international guests, is that far from Perth City?
Exmouth is about 1000kms north of Perth and it was a centre of an American Navy telecommunications base. I didn't think it had many Aboriginal people, and in fact it didn't, but nearby there was a township called Onslow, where there was a large number of Aboriginal children. Here, the causative factors of otitis media became very apparent. There were children living in what we could call 'humpies' at the edge of town, 50% of whom had chronic suppurative otitis media (CSOM). For the children that lived in town, it was 30% and for those who had health worker parents in town, it was down to 20%. So there was an obvious relationship between poverty, poor accommodation, lack of education and all the other social determinants of health represented by these children, who had disparity in their prevalence of otitis media.

Can you describe a 'humpy' for those who may not know what it is?
A 'humpy' in Western Australia was often just a lean-to shed with a few poles holding up a number of sheets of old corrugated iron. Some of them were open and some of them just had a roof. They were very basic.

So you touched on the fact that poverty was probably a factor in this. This is in the 1980s. Have you seen much change over those years?
I think we have seen change, and most of it for the better, but it has been slow. So sometimes it is two steps forward and one step back.

So you have continued to work in Aboriginal ear health for all those years, including the Kimberleys, further north in Western Australia. How long have you been up there for and how did you end up working up there?
I was invited by the then clinical lead, Dr Alistair MacKendrick, to go to the Kimberleys and I would do this for two to three weeks a year. As the time came for him to retire from that position, I took over the lead, and would spend, on some occasions, seven weeks travelling through the Kimberleys and small communities seeing the children. I have myself relinquished that clinical lead this year.

Are you sad to relinquish that clinical lead?
Very sad but I think we must give the young, particularly those enthusiastic otologists, opportunity to continue the work.

Over the years you have been going to the Kimberlys, and I must thank you because you allowed me to come and join you for some of the trips, which were fabulous. Can you tell me a bit about the communities, your ups and downs and some of the kids that may have touched your heart, as well as your head, over those years?
Absolutely. The community that I really enjoyed was Warmun, previously known as Turkey Creek. This was a community that had a very famous artistic heritage, with people like Rover Thomas and Queenie McKenzie, and it was about two hours out of Kununurra. I found the people to be gentle and friendly. The children were always bright-eyed, friendly and outgoing. The problem with their ears was principally chronic draining ears, but some had middle ear effusions. It became apparent to me that in those children who are better nourished and live in the urban areas - which 75% of the Aboriginal children in Australia do – there was, surprisingly, more middle ear effusion compared with CSOM. So then I tried to introduce programmes in order to help with these ear problems and joined Gija Health - a community health care plan - along with some well-known Australians, including Professor Fiona Stanley, (former Australian of the year) and Professor Ian Constable, ophthalmology Professor. Together we worked to try and improve the ear health situation. Interestingly, a flood came through Warmun and the whole community had to move to an abandoned mining camp outside Kununurra. There, the community lived in reasonable accommodation with hot running water and three square meals a day and lo and behold, children's ears got better. This is great evidence that the social determinants of health make such a huge impact on middle ear disease. When they moved back to Warmun, the children had a central kitchen which provided them with meals for about six months. However, that closed and I soon noticed a change in the ear disease; it was becoming more infectous again.

When you started talking about the kids in Warmun, it brought a huge smile to your face and obviously took you back to that time. Can you tell me a success story from your time there?
Absolutely. I had one child who was three, with virtually no language at all, and she was quite delightful. I noted that she had middle ear effusions and a 40dB conductive loss. We fast-tracked her to have grommets inserted, and the next time I caught up with her nine months later, she had a smile on her face and was talking up a storm; I will never forget that. From a girl that was virtually aphonic she had become a little chatterbox.

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Going to the other end of the spectrum, having spent a lot of time amid this poverty, is there anything involving hearing loss that really broke your heart during this time?
Yes there was. I think this was actually a real problem. We had a child that had a cholesteatoma in her middle ear which was too extensive to be fixed at that time in the Kimberleys, so we arranged for the child to be sent down to the Children's Hospital in Perth. Unfortunately, she was placed on a routine waiting list for surgery at the Children's Hospital rather than accelerated. By the time she came to Perth, she had an extensive cholesteatoma with a brain abscess and subsequently passed on. We were all devastated because this was preventable. She should have been seen more rapidly and that didn't happen.

You obviously travel a large distance to visit these communities. How does it affect your family time and how do you manage that over the years?
Over the years it has sometimes been difficult to get away for one to two weeks at a time and particularly the seven-week visits. It was, however, manageable because my wife was a nurse and, although not practising, she really took on the job of helping when we went to places such as Warmun. She would bring the children from my office to a classroom to see the audiologist and it was delightful to see her walking hand in hand with them. She really engaged with what I was doing at that time. My wife is very strong and supportive and has enjoyed coming on some of these remote visits and being part of the team. That has strengthened our relationship.

You have two children. I understand one of them is now in the Kimberleys working?
Yes, my son Matthew is a psychiatrist with a particular interest in peri-natal psychiatry and he is working in the Broome Hospital.

We are currently at OMOZ 2016: how important is it for us to have these meetings around otitis media? And how have you felt about the meeting this week?
I think that otitis media meetings are important when this is such a huge burden in the Australian – particularly the Aboriginal - community. I think it's critical that we have at least biennial meetings to keep the high profile of this condition up amongst those of us who are doing work in the field, whether we are general practitioners, otolaryngologists, audiologists or, most importantly, Aboriginal health workers and nurses. I feel that this is the only way that we can continue to advocate for middle ear disease management and, in particular, for it to become an acknowledged chronic disease so that the government will put more assets and funding towards its management. In our country there are special categories for chronic diseases such as cancer, heart disease, renal disease and diabetes, but most of these affect mainly adults. Otitis media is primarily, but not totally, a paediatric condition, and one that affects children in the first five years of their lives significantly. The average Australian Aboriginal child has 32 months of hearing loss in their first five years of life, whereas a non-indigenous child has only three months of hearing loss due to middle ear effusions. So the impact on education and vocational outcomes is enormous.

You were appointed Officer of the Order of Australia in 2005. Could you tell us a bit about why you received it and the memories around that?
In 2005 I was surprised and indeed humbled to receive the high honour of Officer of the Order of Australia. This was not only for my work with Aboriginal children and my research, but also for developing the first major new born hearing screening programme in the country, as well as my work with various institutions, particularly the Telethon Kids Institute; I was on their board for some 16 years. In addition, I had been honoured to be one of the three ENT surgeons who founded the first paediatric subspecialty group, which was in those days called the Paediatric Otorhinolaryngology Study Group with Dr Victor Bear and the late Dr Ted Beckenham. I think it was a combination of all of the above. I was overwhelmed and very honoured. What's interesting is that when you receive an honour such as this, it makes you want to continue working hard to justify your receiving such an award.

That is wonderful! Can you tell me a little bit about when you met Prince Charles?
Oh yes. When I was at the Telethon Kids Institute or, as it was known then, the Telethon Institute for Child Health Research, it was opened by Prince Charles and he had an opportunity to have lunch with us (a stand up lunch). As he walked around, he conversed with each of us and made a few funny observations about some of the food. Then we got into a discussion about trekking in Nepal which we had both done, and in the same region. He was the most welcoming, interesting and kind gentleman and, in fact, came back to talk with me later, after he had gone around the circle. It was a very interesting time for me.

Can you tell me about the research you have been involved in?
It would be good to talk about some of the research work and discoveries that our team has been involved in. We have discovered some of the methodologies of bacterial resistance - bacterial biofilm for example, intracellular bacteria in the middle ear mucosa and neutrophil extracellular traps which are the DNA strands that capture bacteria but also gels the bacteria and makes the glue in glue ear so thick.

The famous swimming pool study in Jigalong and Burringurah was another example. This was published in the *British Medical Journal*. If children went to school, they would be allowed to use the community swimming pool. So when it was 45°C, the 'no school, no pool' rule proved to be a great incentive to attend school. We believed and showed that subsequently, there was a reduction in chronic ear disease. In addition, the children's eyes, skin, coughs, and lungs got better. Furthermore, there was a social cohesion where the whole community could meet around the pool - I don't think that this has been mentioned in other studies of swimming pools.

Wonderful. Tell me a bit about the dream for the surgical bus. I think it is something to look forward to!

For the last 10 years I have had the dream that I would like to have a bus fully equipped for surgery to go around (on the bitumen rather than on the rough roads) to those remote towns and communities near where the Aboriginal and non-Aboriginal people live. There is a great deal of reluctance for Aboriginal people to be treated outside the community, and a trip to Perth, for example, for complex treatment is quite an undertaking for them. A fully equipped surgical bus, like they have in the UK and New Zealand among other countries, on which day surgery can be performed, is very inviting. We produced, with the help of the government, a feasibility study but unfortunately it was very limited in its outlook and only concentrated on two towns in the Kimberleys, which would be unable to be visited for six months of the year during the wet season. I had thought that during the wet season in Western Australia the buses could have moved to other townships and communities further south. The aim was for children to be seen, assessed, have a straight forward adenoidectomy, grommet insertion or myringoplasty done on the bus, recover on the bus, or if necessary in the adjoining hospital, then sent back home to the community and followed up.

How far away is this dream?

I think the dream is a distinct possibility because our current director general of health is showing some significant interest. The Australian Medical Association as well as the Royal Australasian College of Surgeons have been very supportive.

INTERVIEWED BY

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Declaration of Competing Interests:
None declared.