



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

**HOUSE OF  
REPRESENTATIVES**

STANDING COMMITTEE ON HEALTH AND AGEING

**Reference: Regional health issues jointly affecting Australia and the South Pacific**

MONDAY, 31 AUGUST 2009

CAIRNS

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES



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**HOUSE OF REPRESENTATIVES**  
**STANDING COMMITTEE ON HEALTH AND AGEING**

**Monday, 31 August 2009**

**Members:** Mr Georganas (*Chair*), Mr Irons (*Deputy Chair*), Mr Bidgood, Mr Coulton, Mrs Gash, Ms Hall, Mrs Irwin, Ms King, Mrs May and Ms Rishworth

**Members in attendance:** Mr Bidgood, Mr Coulton, Mr Georganas, Ms Hall, Mr Irons and Ms Rishworth

**Terms of reference for the inquiry:**

To inquire into and report on:

Regional health issues jointly affecting Australia and the South Pacific

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**Committee met at 8.56 am**

**CHAIR (Mr Georganas)**—Good morning, everyone. I declare open this public hearing on regional health issues jointly affecting Australia and the South Pacific. The House of Representatives Standing Committee on Health and Ageing resolved to undertake an inquiry into regional health issues that jointly affect Australia and the South Pacific. The inquiry is in conjunction with a committee delegation visit that committee members will undertake to Papua New Guinea and the Solomon Islands later this year. The delegation will be the inaugural official outgoing committee delegation to be undertaken in alternate years by House of Representatives and Senate committees. In order to better inform committee members about cross-border health challenges that jointly concern Australia and Papua New Guinea, and prior to travelling to Papua New Guinea, the committee decided to conduct meetings and inspections in Cairns and on Saibai and Thursday islands. Topics discussed today will include malaria, dengue fever and the spread of communicable diseases such as drug-resistant tuberculosis and HIV-AIDS. A roundtable forum to be held in Canberra next month will complement these visits.

At the public hearing, committee members will discuss cross-border and other regional health issues further with invited participants. The purpose of this inquiry is to engage with our neighbours on key health priorities of mutual concern to Australia and its close neighbours, to discuss existing cooperation and to examine the scope for further collaboration to enhance the health and wellbeing of citizens in the region. Today the committee will hear evidence from researchers from James Cook University and Queensland Health's Tropical Population Health Services and Tuberculosis Control Centre, as well as Cairns Base Hospital. The hearing is open to the public, and a transcript of what is said will be placed on the committee's website. If you would like further details about the inquiry or the transcripts, please ask any of the committee staff here today.

[8.58 am]

**HAUQUITZ, Dr Alan Craig, Senior Lecturer, Anton Breinl Centre for Public Health and Tropical Medicine, James Cook University**

**MAGUIRE, Associate Professor Graeme Paul, Associate Professor, Medicine, School of Medicine and Dentistry, James Cook University**

**RITCHIE, Dr Scott Alexander, Senior Research Fellow, James Cook University**

**RUSSELL, Dr Darren, Adjunct Associate Professor, James Cook University**

**SPEARE, Professor Richard, Director, Anton Breinl Centre for Public Health and Tropical Medicine, James Cook University**

**WRONSKI, Professor Ian, Pro-Vice-Chancellor, Faculty of Medicine, Health and Molecular Sciences, James Cook University**

**CHAIR**—I now call representatives of the Anton Breinl centre to give evidence. Although the committee does not require you to speak under oath, you should understand that these hearings are formal proceedings of the Commonwealth parliament. Giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. On that note, I ask if you would like to make a brief introductory statement before we proceed with questions.

**Prof. Wronski**—Yes. Each of us would like to just speak about a couple of issues for a couple of minutes before we open up for questions.

**CHAIR**—Certainly. Perhaps you would just like to tell us very quickly about the capacity in which you appear. We then have till 9.35.

**Prof. Maguire**—I am a clinician, researcher and educator.

**Dr Ritchie**—I am with James Cook University and also with Queensland Health as a medical entomologist.

**Prof. Speare**—I work in communicable disease control.

**Dr Russell**—I am an adjunct associate professor in the School of Medicine and Dentistry at James Cook University and also the director of sexual health here at Cairns Base Hospital.

**Dr Hauquitz**—My areas of interest are economics, management and policy.

**CHAIR**—Thank you.

**Prof. Wronski**—I would just like to draw the committee's attention to some issues around the health workforce. There is a serious question about sustainability of health systems in Papua

New Guinea and the Western Pacific and their relationships to Northern Australia. The production of relevant graduates is inadequate, and the shape of the workforce may not be the most suitable for the task at hand. For instance, despite valiant efforts from universities in Papua New Guinea, the UPNG intakes in medicine are in the order of 40 per year, servicing a population of 6½ million, and nursing training programs are clearly not producing enough graduates for the system. Data from the WHO *World health statistics 2009* indicate that per capita populations of doctors and nurses in PNG are one per 100,000 and five per 100,000 respectively, compared with Indonesia, with one per 100,000 and eight per 100,000, and Thailand, with four per 100,000 and 28 per 100,000.

There are very significant pressures on the Australian health system from this, as PNG is very close to Australia, with probably 50,000 people movements per year under the treaty obligations. There is a significant risk of currently exotic diseases being established or re-established, and you will hear from my colleagues about the details of that. I believe we need different approaches to health workforce production based on long-term strategies and the development of long-term partnerships between institutions with joint long-term strategic interests. Historically, many relationships have been driven by personal commitment of individuals in Papua New Guinea linked to Australian institutions such as universities, and these were based on previous service of these individuals in PNG. In many cases that was several decades ago, and many of these people have aged and retired; that has resulted in a vacuum in the relationships that once drove activity and institutional support. We need a long-term approach by institutions whose back yards adjoin each other. In Australia, JCU was placed in this position.

Whilst activity and relationships are growing, not enough resources are being channelled to allow appropriate growth. New models are needed. For instance, the Commonwealth's rural clinical school model initiative in rural Australia could be developed and established with clinical schools jointly managed between Australian and Papua New Guinea universities to build workforce production, research activity and future leaders. This could be expanded to joint arrangements between institutions such as hospitals, resulting in national exemplars or national demonstration projects that build a series of cross-institutional and perhaps jointly managed facilities, such as hospitals, health facilities and health education, training and research facilities within North Queensland, possibly in Cairns and Townsville, with capacity in the Torres Strait. We also need to establish a centre for tropical health and medical workforce, building on the capacity of JCU's dozen or so health professional programs and veterinary science and public health and tropical medicine training programs that target the training of health personnel for underserved populations of the region. This body would interlink with the institutions amongst our near neighbours to provide institutional support, staff rotation, student rotations, student and staff exchanges and curriculum development opportunities—in essence, an expansion of the Tropical Triangle initiative between the Fiji School of Medicine, the Fiji School of Nursing, UPNG, Divine Word University and JCU that developed around 10 years ago.

**CHAIR**—Are there any other statements by any of the other members who are here?

**Prof. Speare**—I am speaking on my own behalf, as well as for Lee Skerratt, who is also at the Anton Breinl Centre. I wanted to talk about biosecurity at the northern border and to put forward to the committee a novel proposal to address the problem of communicable diseases coming across from PNG. The North Queensland-PNG border is of concern as a conduit for communicable diseases of humans and animals to flow into Australia. To stop the entry of

communicable diseases into North Queensland from PNG, the most effective strategy is to assist the national government of PNG and the provincial government of the Western Province to control communicable diseases at source in the Western Province, particularly in the south. This could be done as nation-building exercises on both sides.

The health workforce along the southern coast of the Western Province is minimal in number, has a low level of skills, currently attempts to work with a deficient infrastructure and has a severe lack of resources. The animal health workforce in the same area is nonexistent. The situation offers the opportunity for Australia to assist itself from PNG.

We would like to propose that this standing committee consider making recommendations for strengthening the communicable disease control system for both humans and animals simultaneously in the southern zone of the Western Province. A very broad perspective is warranted, since zoonotic diseases—diseases that jump from animals to humans—are a major concern to Australian biosecurity. Since the majority of emerging infectious diseases are zoonotic and spill over to humans from wildlife, surveillance strategies should include PNG wildlife as well as domestic animals.

The Western Province could be used as a model for exploring the effectiveness of the ‘one health, one medicine’ concept, a concept that is gaining increasing traction globally. Infrastructure, particularly along the southern coast, could be strengthened to support both human and animal disease control, and this could also include human and veterinary clinical components as well as public health activities. A combined workforce could be trained to act collaboratively to use scarce resources efficiently. The advantage to Australia would be, firstly, reduction at the PNG source of the risks of human and animal diseases invading Australia via Torres Strait; and secondly, positioning Australia in a global leading role in putting into practice the one health, one medicine concept. The advantage to PNG would be a better functioning health system and arguably, for the first time, implementation of an animal health control system in the south of the Western Province. Thank you.

**Dr Ritchie**—I am going to talk a bit about vector borne diseases, in particular dengue. You may not realise it but we are currently in a pandemic of dengue. It has been going on for several years now and it is getting worse. We have had over a thousand cases in North Queensland this year and we have had twice as many imported cases into Cairns this year as we have ever had before—and the year is not over. So we definitely have a PB.

We cannot change the amount of dengue coming into Cairns but we can change our receptivity to it by reducing the numbers of mosquito vectors that are here and preventing them from spreading and getting established elsewhere. Particularly, I am worried about places like Brisbane. Whether or not global warming is truly happening, policies and people are acting like it is. People are buying rainwater tanks and people are hoarding water in—you name it—rubbish bins, old pool filters, all sorts of things. Those things are not protected. Rainwater tanks are generally protected from mosquitoes but a lot of this other stuff is not.

Currently in Brisbane we do not have the dengue mosquito, but we used to. In fact, it used to be quite common all the way down into Sydney. There were big epidemics of dengue in Brisbane during World War II and there was a massive epidemic in New South Wales in the twenties, so we could be going back to the future. What can we do about it?

We need to look at our policy about saving water, storing water, to make sure that it is safe. That includes reinspecting water tanks. If you can buy a water storage unit at Bunnings, they need to be legislated so they fit some standard. The other thing is we need support and vector control programs. At a local level the state may need to help with support. Local government needs to lift its game too.

At James Cook University we have a research program. You may hear about a little critter called wolbachia if you watch *Catalyst* this Thursday. It is bacteria that we put into the dengue mosquito. It is passed on to the offspring and it triggers the immune system of the mosquito so that it will not get infected with dengue. So it is a dengue vaccine for dengue mosquitoes. If we support these efforts with policy for better rainwater storage and also novel ideas like wolbachia, we can go a long way to reducing the receptivity of Australia to dengue outbreaks.

**Dr Russell**—I have worked in the field of sexual health for 20 years now. I have been an HIV doctor since about 1990. In Cairns we have the highest incidence, that is the number of new cases per head of population, of HIV in Australia. We also have one of the largest populations of HIV-positive people in Australia, which is quite strange considering we are such a small city. Our closest capital city is Port Moresby. As you found from coming up here, it is a bloody long way to travel. The Torres is not far away and there are lot of people movements between Papua New Guinea and the Torres and between the Torres and Cairns. According to the latest UN AIDS report, Papua New Guinea has about 54,000 people with HIV for a population of 5½ million. Australia has a population of 21 or 22 million people but we have 18,000 people with HIV and that is fairly stable.

In Papua New Guinea and the Torres region, the border region, HIV is transmitted heterosexually and you need three things really for HIV to take off. You need a fairly high rate of partner change, that is one individual having more than one partner or swapping partners regularly. We do not really have an idea in the Torres how common that is and we need that information. You need foreskins. That sounds a bit strange, but if a man has foreskin he is about nine times more likely to contract HIV. We have that situation in Papua New Guinea and the Torres Strait. And you need high rates of sexually transmitted infections. A study we recently did in Cape York of Aboriginals and Torres Strait Islanders showed a rate of genital herpes of about 58.5 per cent of the population having herpes. The number for Australia is about 12 per cent, so it is about five times the rate of that infection, which is not curable. So all the conditions are right for an outbreak of HIV in the Torres Strait, and yet we have not seen it, and that is something we do not quite understand. But there are a few things we can put in place to prevent it. My colleagues from the Tropical Population Health Unit will talk more to that afterwards.

**Prof. Maguire**—I am a clinician who has worked in PNG and Indonesia and across the north of Australia. Today I do not want to reiterate a lot of points that have been raised. We have spoken about health disparities in PNG. We have spoken about limited curative healthcare services in PNG. We perhaps have not raised the issue of people travelling particularly from coastal Western Province to the Torres Strait, which between 2,500 and 4,000 people do every year, with about 160 of those requiring further evacuation to southern centres in Australia. We have also highlighted the biosecurity issues associated particularly with this unwell population travelling across a largely unmonitored border into Australia., and the risk that that puts of introducing new versions of bird and swine flu or whatever else. So as a clinician and as a representative of the northern Australian clinical network, I would like to talk about how we

might be able to deal with this issue, particularly in the Torres Strait and coastal area of Western Province.

It is not an easy issue and it is one we have been aware of for at least the last 20 years. But, based on our existing linkages with PNG healthcare providers and our experience in working, training and providing health care in PNG and the Torres Strait, we propose the development of a clinician led partnership between Western Province and northern Australia health care providers which is outlined in the material that I have provided to the committee today. The core aims of this will be capacity building, clinical support, disease surveillance, cross-border communication and coordination far beyond any disease specific program alone, which is often how we view these issues. We believe this provides a unique and effective strategy which can be quickly deployed and sustained without further diverting already limited healthcare resources from remote northern Australia and particularly those devoted to Aboriginal and Torres Strait Islander peoples living in the Torres Strait.

**Dr Hauquitz**—I would like to follow on from what Graeme was talking about and discuss a strategy for improving health and wellbeing in near neighbour countries, the Millennium Villages project. Thank you for this opportunity to address the committee. The final report from the Commission on Social Determinants of Health reminds us that today's health inequalities are avoidable. However, to improve health, policies that affect the underlying economic, political and social forces must be implemented. A multisectoral approach is required. The achievement of the Millennium Development Goals by Australia's near neighbours would reduce the risk of cross-border transmission of disease. The Pacific is one of the regions that are seriously off track to meet the Millennium Development Goals by the target date of 2015. Papua New Guinea and Timor-Leste are unlikely to need any of the Millennium Development Goals and the Solomon Islands will meet few. In PNG and Timor-Leste, HIV-AIDS is continuing to spread. The incidence of malaria in PNG may be declining but is increasing in Timor Leste.

The Millennium Villages project was conceived by the Earth Institute at Columbia University to meet the Millennium Development Goals at the community level. It is based on a multisectoral approach and institutional partnerships that pivot around community-based, bottom-up empowerment of communities and local institutions. The initial projects were launched in 2005-06 in 10 sub-Saharan African countries to establish proof of concept. By investing simultaneously in interventions across many sectors, including access to business development skills, clean water, education, food production, health and essential infrastructure, poor communities are able to get a foothold on the development ladder. At the request of the PNG government, a consortium of PNG and international universities, including James Cook, together with other development partners and the PNG government, will trial the Millennium Villages approach in five districts of PNG. The Millennium Villages philosophy is aligned to PNG's development policies. The trial will provide practical lessons for achieving the Millennium Development Goals at the community level and then provide experience in scaling that up to district and provincial levels. The trial will actively engage a wide variety of partners and will ensure transfers of knowledge and expertise. Millennium Villages will build development capacity at the community and local government levels and strengthen public service delivery. The Millennium Villages trial will assist the government of Papua New Guinea to meet its Millennium Development Goals at a cost that is affordable to the development community. The strengthening of public services delivery and institutions, along with

improvements in population health and well being, for Australia's neighbours will decrease the risk of cross-border transmission of diseases such as HIV-AIDS and tuberculosis.

**CHAIR**—I think that is everyone. First of all, thank you for appearing today and for a very informative briefing on what is happening. Professor Speare, you spoke about the biosecurity of communicable diseases and about human to animals. Has there been any evidence of this actually happening at the moment in Papua or any of the places close by, that we have seen the spread of diseases throughout animals?

**Prof. Speare**—Some of the emerging infectious diseases, for example, that jump out of bats. We have got Hendra virus well-established in Queensland. But Nipah virus is a very similar virus which first appeared in Malaysia and it is carried by flying foxes. It has just been identified in Indonesia, so there is potential for it to move across into West Papua. You are probably aware of the highly pathogenic avian influenza virus, H5N1, which is sitting on the border with PNG at the moment, so there is quite significant potential for it to move into PNG and then come across with the birds.

**CHAIR**—When you say sitting on the border, are you talking about the Indonesian—

**Prof. Speare**—On the Indonesian side. It has actually been identified in poultry in West Papua. A lot of the other viral diseases have come across. Japanese encephalitis, for example, is a zoonotic disease which has made the jump across to Torres Strait and it comes across periodically, probably every wet season. So there are quite a number of examples where that does occur.

**CHAIR**—Would you say that the threat of an outbreak on a large scale is quite possible?

**Prof. Speare**—I think so. For example, if H5N1, that wholly pathogenic avian influenza, arrives in the Western Province, I think it is bound to come across to Torres Strait and then progressively move down through Australia in the wild birds. It would be difficult to stop but it would be very nice to know that it is actually coming.

**CHAIR**—The other thing, just for the benefit of some of us here, is the One Medicine, One Health—is that the correct term?

**Prof. Speare**—Yes, the One Medicine, One Health concept.

**CHAIR**—Do you want to elaborate a little bit about that?

**Prof. Speare**—It is a concept that proposes that humans and animals live in an environment, and share the same environment, and you can get efficiencies of control, particularly with communicable diseases, by regarding it as a whole interrelated system. A good example of that is some trials they have done in Africa. It is particularly relevant in resource poor areas. They form teams which go out to villages. One team will vaccinate livestock and another team will vaccinate the villages themselves, and so they optimise the utilisation of the resources. I think that sort of approach, where resources are incredibly scarce in the Western Province, has potential to maximise both animal and human health. The advantage of increasing livestock

health is that you then start to address the poverty levels of those populations, so it has a direct impact on human health as well.

**Ms RISHWORTH**—I have a question for Ian. You just mentioned that there are only a small number of people in PNG actually going into the health workforce. Apart from the breakdown in relationships and support from Australia, what have been the other barriers in PNG against people being attracted to the health workforce? What are some of the things we need to do in terms of government-to-government relationships?

**Prof. Wronski**—I would start with institutional capacity, and long-term relationships with, logically, Australian institutions—with the assumption that we are talking about 30-year horizons here, not stuff that turns over every few years. There are a number of universities in Papua New Guinea that do a lot around health workforce development. The University of Papua New Guinea, in Port Moresby, is the main one. Their intakes are largely limited by financing. So I guess one is a recruitment issue, but one is also an institutional sustainability issue, which needs to be seen as a long-term developmental thing.

In addition, I think this is a critical time to think about this. In many ways, there has been a generational change in the people involved in PNG and our near neighbours. We need to think about how we are going to do it from now on. We should have done that 10 years ago, but this is a different situation and we need to think about how we can do nation-building and organisational development, certainly between Northern Australia and Papua New Guinea.

**Ms HALL**—On that issue, what would be the general level of education? Would the number of people who are at a level to go into, say, training for medicine be slightly limited in PNG? I just thought that that might be one of the barriers to training.

**Prof. Wronski**—Yes. In every country, including Australia, the variable quality of high school is an important barrier—and in PNG it is too. That would be one of the things I would touch on in terms of institutional strengthening across the education system, not just at the higher ed level but also at the high school level. They are all really important.

**Ms HALL**—What would the literacy level be in PNG?

**Dr Hauquitz**—About 50 per cent.

**Ms HALL**—You mentioned in your presentation, Dr Russell, that there was very little information available on the number of people in the Torres Strait who had HIV. I am interested to know what kind of survey study needs to be done to establish a baseline and whether you have any recommendations for this committee in that area.

**Dr Russell**—We diagnose HIV only very rarely amongst Australians in the Torres Strait. It may be one case in every year or two. There is some screening for sexually transmitted infections which involve urine tests and blood tests, but it is often difficult to do those blood tests or they are not always carried out. One thing we do, though, at the base hospital is give every pregnant woman coming down from the Torres Strait an HIV test as part of a standard work-up for pregnancy. We do not find HIV in those women and we would expect, if there were significant numbers of HIV, that you would find that. So the numbers are very small. I know of

only three people in the Torres Strait region at the moment who have HIV, and only one of them is Indigenous. The other couple are white fellows living up there and working. So at any one time the numbers are very small.

**Ms HALL**—So, basically, it is not an issue.

**Dr Russell**—At the moment it is not an issue. But the soil is very fertile.

**CHAIR**—That is not to say that it will not become an issue in the future.

**Dr Russell**—Exactly. It must be an issue. Transmission on a significant scale is inevitable. What we do not know is when and to what level. It may be in small numbers or it may be in large numbers.

**Ms HALL**—What sort of overall health survey has been done of the population in the Torres Strait?

**Dr Russell**—I might have to let my colleagues from Tropical Population Health Services answer that question later. There have been no recent large-scale surveys, but there have been surveys in the past.

**Ms HALL**—We need to establish a baseline, don't we?

**Dr Russell**—Absolutely. The other thing we need to know about is what I refer to as sexual networks—if you will excuse the colloquialism: who's shagging whom up there. We get anecdotes about Torres Strait Islanders having sex with people from the border region. We have anecdotes about sex in exchange for money and goods. But we do not have an idea of the scale of this, so we really need some idea of what is occurring.

Around the world where you get outbreaks of HIV it is found initially in younger women in the 14 to early 20s age group and in older men in the 25 to 50 or so age group. That is what you see in Africa and Asia when the epidemic starts off. So the men have the money to get the women and the women need the money and the goods from men. There are differences in status between women and men and so on, so that is where it occurs. We really need an idea of exactly what is happening up there, and I do not think we really know that at the moment.

**Ms HALL**—The other issue I want you to comment on is child and maternal health. No-one mentioned that in their presentation. My understanding is that that is a significant issue when we are talking about millennium goals. You are saying that none of those millennium goals will be reached. They are two key millennium goals. Would you comment on them and link your comment in to your millennium village and the approaches you have been putting to us today?

**Dr Hauquitz**—I will respond to that. Certainly child and maternal health is a major area. As you rightly say, it is one of Millennium Development Goals. It is the one that is the least likely of any of the goals to be achieved globally and on which the least progress will be made. In PNG, as Professor Wronski was saying, there is a lack of institutional capacity. There is a lack of skills. Maternal and child health services, particularly outside of provincial cities, are often very rudimentary. Only about 40 per cent of women give birth with a skilled health practitioner

available to assist with the birth. Resulting from that we see high levels of maternal and child mortality in PNG. There are efforts to improve the reproductive health program in PNG, but those efforts are small scale to what is required.

If you look at what has been happening with the millennium villages program in those 10 African countries where it has been trialled, in each one of those areas there has been an improvement in maternal health activities. It is one of the focus areas. Within a catchment area not only is there the standard services available but also there is a staffing up so that emergency obstetrical care is available as well.

One of the main planks within that is the training of community health workers, not volunteers but rather paid workers, who act as a liaison between the health service and the community. They live in that community and then make referrals of women and children to the health centre. They actually work with the men as well to allow the women to seek the care and the services that they require. So another part of the whole program is looking at the gender equity issue, again working with women and men to promote amongst men the advantages of improving the status of women both economically and socially and working with women to help provide them with income for themselves so that they can become a bit more independent and strengthening health and education infrastructure.

**Mr BIDGOOD**—I would like to ask a general question, and I am not sure who is best placed to answer this. The committee is aware that there is TB resistance in the Asia-Pacific region. What I would like to know is the extent of TB in PNG and the Torres Strait, how that is being treated and how resistant the TB is to treatment. So whoever is best qualified to answer that can go ahead.

**Prof. Maguire**—I will make a brief comment from a clinical perspective. I trained as a respiratory physician and worked on TB in Port Moresby 10 years ago. TB was out of control then and remains out of control now. It has been amplified by co-infection with HIV, which has now become the big issue. The difficulty of people completing treatment means that multi-drug-resistant tuberculosis—so tuberculosis resistant to at least two of the usual drugs we would use for TB treatment—is now well and truly established in PNG, in Western Province, and now in the Torres Strait. We are seeing people move from Western Province into the Torres Strait. They are bringing resistant TB into Australia. There is no coordinated treatment program for following up people in Western Province who travel to Australia and then return to PNG. Diagnostic facilities for identifying people with TB and for identifying people with multi-drug-resistant TB are limited to nonexistent in Western Province and limited even in Port Moresby.

**Prof. Speare**—I think you have encapsulated the key points. The system does not work very well. We have worked up in Madang and TB patients are expected to come in to collect their drugs from the hospital rather than being pursued by a dedicated system that ensures that they take the drugs. As Graeme says, that actually generates multi-drug-resistant tuberculosis. There is a proposal put up by Oil Search to implement a DOTs program in the Gulf Province, and that is being considered for funding. If that gets up then there will be a true estimate of the incidence of multi-drug-resistant TB at the community level in PNG. At the moment it is just a guess; we do not really know. The suspicion is that between 10 and 20 per cent of the TB could actually be multi-drug-resistant TB, but that is just based on very limited surveys.

**Mr COULTON**—Professor Speare, you mentioned something that I was not familiar with. In Torres Strait is there sort of a blending of areas that are not really Australia and not really PNG but rather bits of both?

**Prof. Speare**—No, it is quite sharply defined—except that the border between Australia and the Torres Strait comes right up and arches around Saibai, Boigu and Dauan islands. Saibai is three kilometres from the PNG border and under the traditional visitors treaty people in those islands and in the border villages in PNG can move backwards and forwards freely.

**Mr COULTON**—So there are family relationships and that sort of thing.

**Prof. Speare**—Yes, the family relationships are very strong.

**Mr COULTON**—Professor Wronski, your multipartner clinical training facility sounds like a wonderful idea. You have obviously thought about that. Off the top of your head, what is the capital cost and the recurrent cost to run a facility like that in PNG, and at the moment do you have student or intern placements in PNG from your facility here in Cairns?

**Prof. Wronski**—Let me start with the last part of that question first. There is growing activity—for example, the Anton Breinl Centre for Public Health and Tropical Medicine teaches a tropical paediatrics program in Madang. There is an increasing number of students wanting to do electives backwards and forwards. But it is not organised enough. I think what we need to do is move from the informal to formalised structures. I do not actually know the cost of the PNG side, though it is something we are working on. I guess our approach would be to look at the Commonwealth health department's tremendous rural clinical school initiatives, which really in the last decade have transformed rural medical education in Australia, and talk about putting that offshore as well as some support facilities. Then you can start seeing the new generation of students, doctors and other health professionals developing relationships, and then you can see a strategy evolving over 20 or 30 years that would tie everyone together.

**Mr COULTON**—And you also see ancillary health, dentistry and that kind of thing involved?

**Prof. Wronski**—Yes, they would have to be involved. We need to think about some new health professions too. We can take Rick's point about the One Medicine, One Health concept. Maybe it is time we thought about the integrating of veterinary and medical training so that people who are going to be working in biosecurity are actually going to feel comfortable in both areas. I think the other interesting thing about that is that we did not know it was the same bug jumping across species before. So the world, including us and most other places, have different control mechanisms for wildlife, veterinary production and human production when really it is the same thing. So the way you think about bureaucracies and how you would organise disease control really changes. We need to take those sorts of things on board. I think there would be something for Australia to learn.

**Ms RISHWORTH**—Just on that, is there the will of the Papua New Guinean government for this? Obviously we are talking about changing bureaucracies and the way universities operate within PNG. Obviously we are not able to go in. Is there the will of the PNG government for this to happen? I would assume that we would need that will from the government for it to happen.

**Prof. Wronski**—I think that is important, but there is the will from the institutions. Governments come and go but I think most governments want to see development. I think the crux of this though is that it is about institution-to-institution relationships—people establishing relationships and putting their efforts long-term into those sort of facilities. I think that is what we need to take it that next step. For example, there need to be links between Townsville hospital and Port Moresby hospital, and between JCU and UPNG in Madang on the university side. We need to put some organised and formalised structures into place.

**Mr IRONS**—I have a question for Dr Ritchie in regards to the dengue fever side of things that you spoke about before. Dr Ritchie, can you tell us what the current status is and what you think we need to do to prevent or controlled dengue fever. You mentioned particularly water tanks, and there is a push nationally obviously to try and get people to put water tanks in. What sort of technology is available with water tanks to prevent the mosquito problem, which all the water tanks in Australia were pulled out because of.

**Dr Ritchie**—Yes, that is correct—it was in part because they wanted to get rid of dengue fever from places like Brisbane and coastal New South Wales.

**Mr IRONS**—Just in relation to that, does that have any relevance to the southern states as well.

**Dr Ritchie**—There is a complexity to this issue. There is another mosquito called the Asian tiger mosquito. That is more tolerant of colder weather. It has been shown to survive even in places like Chicago. So they are worried about that. It is also a dengue fever vector and a vector of a disease called Chikungunya which has been quite prevalent in South-East Asia in the last few years. It is a threat which could come down through that Indo-Papuan conduit that we discussed. The current status is that most of the rainwater tanks that you get right now are in very good nick. They are screened—they are legislated to be screened and there is no problem with them. But screens do break down, especially if you do not maintain them. You get your do-it-yourselfers who always want to jerry-rig things. I think particularly it is people who hoard water who take rubbish bins and run them into their downpipes and collect water in buckets and stuff like that who are really the risk. That is an area that is a new area that has never been looked at. We are just starting to look at it right now.

To give you a couple of numbers, there was a telephone survey by Queensland Health. There were 3,600 people across Queensland who were called, including 600 in Brisbane. Thirty-six per cent of the people had rainwater tanks. As I said, I think most of those are going to be okay right now. In five years, who knows? Twenty per cent of the people were hoarding water in some other unregulated container, be it a drum, be it a bin, be it whatever they had. The dengue mosquito that used to occur in Brisbane is now in some Queensland towns maybe 200 kilometres away from Brisbane, and there is a threat of it getting back into Brisbane. All it would take is for someone to move to Cairns with some pot plant bases that have dengue mosquito eggs in them and it could start the whole thing rolling again. What has probably kept the dengue mosquito from reappearing in places such as Brisbane is that the eggs dry out after two or three months, so you get the dry reason right now and all the eggs die. But if people are hoarding water and they have always got water present in large containers, they are going to be able to survive those conditions, just like they did back in the 1940s.

**Mr IRONS**—Thank you.

**Ms HALL**—I have actually got two questions but due to time restraints I will ask the one that I really need an answer to. What is the availability of antiretroviral drugs in PNG? How frequently are they used?

**Dr Russell**—Antiretroviral drugs are used for HIV. They can extend the life span of people with HIV by up to about 40 years or so and they also render the person almost unable to transmit the virus.

**Ms HALL**—Are they readily available?

**Dr Russell**—They are available in some areas, such as Port Moresby, Lae and Madang—the bigger cities. In Daru, which is the capital of South Fly District and is the closest town to Australia, there is very limited availability. The last we heard was that there were fewer than 10 people on treatment. That needs to be ramped up significantly.

**Ms HALL**—What is the percentage of people receiving it?

**Dr Russell**—We do not know because we do not know how much HIV is there.

**CHAIR**—Thank you very much. Just before we close, we need to table the submissions that were given to us. Is it the wish of the committee that the four submissions tabled by the Anton Breinl Centre be accepted as evidence to the inquiry into regional health issues and authorised by publication? There being no objection, it is so ordered. Thank you very much for your time and your briefing. If the committee has any other questions, we will be in contact with you, and we will ensure that we give you a copy of the report once it comes out. Thank you very much for being part of the inquiry.

[9.43 am]

**FAGAN, Dr Patricia Susan, Public Health Physician, Sexual Health, Tropical Population Health Services, Queensland Health**

**McCULLOCH, Mr Bradley Gordon, Senior Director, Tropical Population Health Services, Queensland Health**

**CHAIR**—I now call representatives from the Tropical Population Health Services unit of Queensland Health. Although the committee does not require you to speak under oath, you should understand that these hearings are formal proceedings of the Commonwealth parliament. Giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. On that note, I ask you to make a brief introductory statement and then we can proceed to questions. Thank you.

**Mr McCulloch**—There are a number of health issues in the Torres. There remain significant health disparities in the Torres. Relatively poor health literacy and relatively low access to healthy supplies of food have meant that the health systems in the Torres are under significant pressure. One of the causes of this is high levels of underlying disease. There are extraordinary levels of obesity and diabetes in the Torres, meaning that people in the Torres need relatively high levels of clinical care for extended periods of time. What this means is that there are fewer resources available for health protection activities such as testing and responding to diseases of public health significance. While the health systems in the Torres are clinically robust, there is a need to strengthen public health responses and understanding, and that really needs to happen through a strengthening of fundamental primary health care systems.

**Dr Fagan**—Given that my work is in sexual health and remote Indigenous sexual health, I wish to address that issue. There is no doubt that the people of the treaty zone region are extremely vulnerable to an HIV epidemic and that this is one of the communicable diseases of concern. There is a point to make about this, though, that it does stand as something different from other communicable diseases. It is a communicable disease that in itself poses no threat unless you have unprotected sex with a person who has the infection. The treaty zone arrangements you are familiar with and you understand that for traditional people there is free movement across the treaty zone area. There are 55,000 people movements a day on a daily basis. The background to this is that there are family relationships across this area between the families in the coastal villages and the people in the Torres Strait. The relationships are generational and there is a profound interconnectedness. As Dr Russell pointed out, there are very high rates of bacterial STI in far north Queensland and in Papua New Guinea, and there is an HIV epidemic in Papua New Guinea, but it is an HIV epidemic that is quite different from the epidemic that is affecting Australian people. The epidemic in PNG is generalised throughout the population. It affects young people of reproductive age, it is heterosexually spread on the back of high rates of STIs, which is the story of the sexual spread of HIV across the world. The people in the Torres Strait and in Cape York are thus vulnerable because they too sustain a high background rate of STIs. There is a need for an ethnographic study to give us greater insight into what happens within the treaty zone itself. But we have done some work around knowledge, attitudes and practices among remote living North Queensland youth and that adds to our sense

of their vulnerability. It would appear that knowledge around STI and HIV transmission is lower and that risk behaviours are quite common. So we have a lot of concern, hence my position.

Over the last five to eight years a number of strategies have been put into place that are implemented through the primary health care system. Indeed, these strategies have borne some fruit. We do have significant reductions in some of these common STIs, syphilis and trichomonas in particular. Where the primary health care has been functioning well we have reductions in chlamydia and gonorrhoea. However, the window of opportunity to prevent an HIV epidemic in the Torres and further south is very narrow and we need to up the scale of our efforts. In response to that, over the last three or four years we have developed a much more significant effort in sexual health promotion and also we are implementing complementary population wide STI testing strategies. There is no known local transmission of HIV among the people of Cape York and the Torres region, and we say that not on the back of a community survey but on the back of regular testing that is done under certain circumstances among those people who might be considered to be more at risk, for example people who have another STI. So 30 per cent of the young women in the Torres region and 15 per cent of the young men last year—this is an annual figure and repeated annually—had an HIV test.

I think my main message to you is that there is a window of opportunity to prevent an HIV epidemic which is narrow and on which we are trying to make a bigger investment, and we request your support to continue that investment.

**CHAIR**—Thank you. We will open up for questions. Everyone this morning has been talking about it being a given that HIV will happen at some stage. What has been preventing it thus far from becoming an epidemic? The risk factors are all there and have been there for a long time.

**Dr Fagan**—The short answer is that we do not fully understand that. We believe there is a history, as I said, of relationships partnering across the treaty zone. These families are related to each other. That is how people found their life partners, off their island on the other side. It may be that HIV in Papua New Guinea, while it is an escalating epidemic and we know that it has reached Daru, which is the large administrative centre, may not have reached the coastal villages that are part of the treaty zone to any significant extent to this point in time. The people who have come across from those villages to the outer islands clinics in the Torres Strait sick with HIV-AIDS are usually people who have a connection to those villages but who have lived decades of their life away from that part of the country and come back home because they are sick. That may be one reason. I would like to think that in the future I will be able to give a slightly fuller answer that has got something to do with what we are doing, but I am not sure about that at the moment.

**CHAIR**—It is intriguing, because all the risk factors are there.

**Dr Fagan**—The epidemic in PNG first began 30 years ago but we do not know the extent of that local problem in rural Western Province.

**Mr COULTON**—Dr Fagan, in Africa the spread of AIDS was largely attributed to the truck drivers and mobile men moving around. I have never been to PNG or that area. With HIV and with other infectious diseases, is there a mobile population, or are the villages quite insular? Are the distances people travel large or small?

**Dr Fagan**—I am not an expert on PNG though I have visited these coastal villages in the treaty zone in Western Province on the PNG mainland. They are extremely remote villages that are a two-hour-plus very wet banana boat ride from Daru, which is to the east. I am not aware of the land linkages, the roads. I do not know that. When I was there it looked as if there were not any, to be quite frank with you, but I might be wrong. My understanding of the way people get around in that part of the world is that it is by boat ride to Daru and boat ride to Saibai and Boigu.

**Mr McCulloch**—At the last health issues committee meeting the provincial administrator for the Western Province tabled some planning documents regarding the future development of a western highway that will run from one of the larger towns halfway up the South Fly district and it will run along the backbone towards the Indonesian border. That will create robust road linkages with some of these villages in the future. But those road linkages do not exist or are not well used at this point in time, is my understanding.

**Ms HALL**—Maybe you have answered the question as to why there is not such an infection in the Torres Strait population, because maybe most of the people come from those more remote villages, and when that highway is built maybe that will increase the incidence.

**Dr Fagan**—Yes.

**Ms HALL**—There is a question that I wanted to ask, rather than speculating. In your evidence, you put it forward to us that there is a very narrow window of opportunity, and you talked about investment. Would you like to go into that a little bit more? What kind of investment would you like in order to take the benefit of that narrow window of opportunity that exists at the moment to prevent escalation of the diseases and also to address, maybe, the issues of obesity and diabetes? The last report this committee did was into obesity, and we looked at those issues there.

**Dr Fagan**—Speaking more generally—Brad may wish to give the global—

**Mr McCulloch**—No, you go.

**Dr Fagan**—Having listened to my colleagues earlier on and thought about what we, from the TPHS point of view, would want to say, I think an investment in a much more significant population health capacity within the Torres Strait itself would benefit everything that everyone has been speaking about this morning. That is No. 1.

**Ms HALL**—Do you have a model in mind?

**Dr Fagan**—No, at this stage I cannot speak to a model. A model similar to the model that currently exists in Cairns within TPHS would not go astray, but that would bring the capacity much closer to the front line, where it needs to be. We do struggle in trying to implement population health programs at such a distance from Cairns to the outer islands of the Torres Strait. Within sexual health itself, we have had a strategy in place for a number of years which, as I said, relies on primary healthcare centre activity. Primary healthcare service systems, as Brad identified, are very difficult to maintain. Recruitment and retention of skilled remote area staff are a perpetual challenge to anyone who works in remote health. We put our effort into

those systems to work for us to bring around goals other than just meeting the acute needs of what walks in the door. So maintaining that system requires an enormous amount of effort.

In addition to what is happening there, we think that at the moment we can only get limited testing and limited quality of treatment through that system. So, in addition to that, we are paying far greater attention to health promotion in its broadest sense. I am talking not about STI education but about community mobilisation, very clever sexual health communications using youth-friendly digital approaches, continually building on what we are doing, thinking innovatively et cetera.

We also are quite passionate about wanting to do something about school-based sex education—just speaking about the area that I am interested in. School-based sex education has completely fallen off the agenda. I am not sure if it was ever on it, but it has completely fallen off the agenda of Indigenous majority schools in Far North Queensland, which, given the high rates of STI, the demonstrably low rates of knowledge and the high pattern of risk behaviour, is quite tragic. It is very difficult to work across government sectors, between education and health, to embed, institutionalise and implement a sensible approach in remote schools around such an issue, but we are trying and that requires an investment.

The other prong of what we are doing and hope to build on is complementary community-based STI testing and treatment strategies. If we do that well with appropriate social marketing, we can get quite high participation rates, and we believe they can be very effective in accelerating a decline in the overall STI burden, particularly in relation to chlamydia and gonorrhoea.

**Ms RISHWORTH**—I just have two questions, one to Brad and one to Patricia. Brad, what type of level of coordination is there between you, as in Queensland Health, and the PNG health authorities? Is there a level of coordination, and what does that involve?

**Mr McCulloch**—There are the meetings around the health issues committee framework, which obviously feeds up to the joint advisory committee and the senior officers and ministerial meetings. There is no direct engagement between us and the health authorities in Western Province. Part of that has been hampered by poor communications, and some of that has been improved recently. Tropical Population Health Services now employs a communications officer who has a counterpart on Daru funded by AusAID. Those officers communicate on a regular basis and they are working through issues around clinical coordination, tuberculosis communication frameworks and that kind of thing.

We have just finalised the licensing for a HF radiotelephone interconnect system. There are no reliable telephone services in Western Province but they have a very good high-frequency radio network, and we will now be able to interface the telephone system in Australia with the HF radio network in Western Province. So the clinicians on each side of the border will be able to contact each other and communicate. We hope that will lead to improvements in coordination and in the management of patients on the Western Province side. Beyond that, most of the formal coordination happens through the health issues committee framework that has been established.

**Ms RISHWORTH**—So it is more the long-term framework and less the on-the-ground health services communicating with each other?

**Mr McCulloch**—We are strengthening that through the communications officers and also through having a reliable mechanism of communication. We are hoping, and we are committed to it under the package of measures, that, should the facilitated cross-border arrangements be put in place—because currently under the treaty people may move across the border for traditional purposes only. Although as a population health manager I am sending highly trained environmental health officers to Boigu and Saibai on a regular basis, no framework exists for me to send them across the border to look at improving the standards of living in the communities on the other side. It would not be legal under the current framework. They would need to go from Horn Island to Daru and then back down, as Trish mentioned, in the boat. Should those facilitated cross-border mechanisms become available, we would be looking at having a much stronger degree of interchange between Queensland health professionals and those on the other side.

**CHAIR**—Would you say that it is a necessity to have a framework in place for cross-border mechanisms?

**Mr McCulloch**—Is it a necessity? ‘Necessity’ is a big word from the point of view of a population health practitioner.

**CHAIR**—From the point of view of a starting point for improvement.

**Mr McCulloch**—It is an absolutely fundamental enabler. We legally cannot send anyone across the border to do anything to improve the health and wellbeing of people in Western Province unless they go via Horn to Daru and then back down by boat, which is obviously prohibitively expensive. Given that I and Queensland Health already have officers in attendance at Boigu and Saibai, the marginal cost of having them pop across the border to look at water supply sanitation issues in Western Province would be very low—that is, if we could go directly across. We would obviously be very receptive to that kind of marginal investment.

**Ms RISHWORTH**—For people with HIV and TB, is the relationship that people with HIV are much more susceptible to TB? Is that the issue? I know there is an interaction but I am not sure what it is.

**Dr Fagan**—I am not an expert in either HIV medicine or tuberculosis; however, when you have HIV your immune system does not work very well and pre-existing TB might make you ill again or you would be more susceptible to developing TB. Once you have had it, it is much more difficult to treat. People will die of tuberculosis but the underlying reason is that they have HIV.

**Ms RISHWORTH**—Someone mentioned earlier that part of the TB resistance comes from not being able to finish a course of treatment.

**Dr Fagan**—That is right.

**Ms RISHWORTH**—Is that exacerbated by having underlying HIV?

**Dr Fagan**—No. I do not understand the resistance as being a cause of that.

**Mr McCulloch**—We know that Dr Simpson is giving evidence to you. He is the best person to ask.

**CHAIR**—We will ask him those questions. You mentioned earlier the high levels of obesity among people in the Torres Strait. Why do you think this is the case? For your information, we have just completed an inquiry into obesity levels in Australia and I think it would be of interest to all of us to get your views on that.

**Mr McCulloch**—There are a number of issues. They are in some way intergenerational. We have relatively poor access to healthy food such as fruit and vegetables. There has been a very strong change of lifestyle away from a traditional diet to a diet that is centred around the food that is available to people in the stores. We are selling massive quantities of sugar sweetened drinks in the Torres. They are by far and away the biggest sellers in those stores. While the stores are working on that through differential pricing and other issues, we need to significantly address the issues of what people are putting in their mouths. That is the fundamental driver of obesity and diabetes in the Torres.

There are intergenerational issues linked to mums and bubs. There is recent evidence around the thrifty phenotype and the Barker hypothesis that the intrauterine environment has an impact. We clearly need to intervene much more strongly in terms of childhood growth and assessment so that we do not get the big obesity rebounds that we are seeing in four- and five-year-olds. Fundamentally, the issues are centred around nutrition—what people are eating, the choices people are making—and that is not a situation that is readily amenable to change. It is not an issue that is unique to the Torres Strait either. The solutions to that are going to require community engagement, community mobilisation and the community and individuals taking control of their own health.

**CHAIR**—Is there much fresh food produced in the Torres Strait Islands in terms of growing vegetables.

**Mr McCulloch**—Virtually everything is imported. There is significant fishing done and we had some very interesting data showing the differences in red-cell folate, which is a marker of nutrition, depending on whether you live near the migratory sardine patterns. Fundamentally, there are limited amounts of water available. They use desalination plants to supplement natural water and so the water supply simply would not be there for large-scale agriculture.

**CHAIR**—Thank you very much for your submission. It is much appreciated. We will stay in touch in case there is anything else we need to know and vice versa.

**Proceedings suspended from 10.07 am to 10.27 am**

**KONSTANTINOS, Dr Anastasios, Director, Queensland Tuberculosis Control Centre, Queensland Health**

**SIMPSON, Associate Professor Graham, Director, Thoracic Medicine, Cairns Base Hospital; and Director, Cairns Regional Tuberculosis Control Centre, Queensland Health**

**CHAIR**—Welcome. Although the committee does not require you to speak under oath, you should understand that these hearings are formal proceedings of the Commonwealth parliament. Giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. On that note, I will ask that you make a brief introductory statement and then we can proceed to questions.

**Dr Konstantinos**—Given the overall brief of this committee, being health issues in the Pacific, in my role as the director of tuberculosis in Queensland I am particularly interested in cross-border TB, and in particular that relates to New Guinea. I also have a wider interest in that I am the chair of the National Tuberculosis Advisory Committee and have done WHO consultations in Kiribati and for the SPC in assessing global funding for the Pacific community nations as a whole and have visited the Solomon Islands. I also helped Papua New Guinea develop their current TB control strategy.

In terms of the briefing of this unit, it is probably worth remembering that TB is still considered a global emergency by the WHO. It is still one of the leading causes of death worldwide, although in Australia we have very low rates. The chronic nature of latent TB infection means that no country is ever going to control TB unless there is control of TB in a global fashion. Because of that, we are particularly interested in Pacific nations. Rates are very high in Papua New Guinea, Kiribati, Micronesia and the Solomon Islands. Specifically for Queensland, there is a cross-border area with a treaty zone where people have free access to outer Torres Strait islands. We have noticed a growing number of TB cases in that region, signalling a failure of TB control there. From 1990 to 1999, there were probably only seven cases that came across that border. Since 2000, it has been escalating. In 2000 to 2004, there were approximately 43 cases. There have been more than 20 each year since then. Since 2000, 25 per cent of them have been multi-drug-resistant TB cases, which adds complexity to their treatment.

We believe that everyone should be treated because transmission continues if people are not treated. There is no treatment on the other side of the border. That has been our stance. The issues that I faced as the director for the Cairns regional TB control unit—and Graham Simpson may elaborate—included the perceptions of cost and who should pay. That is an issue between the Commonwealth, states and local health regions and is a continuing issue that we are faced with.

There is the issue of legality of people accessing care for health as opposed to treaty visitation rights. We have had to deal with that on a number of occasions. The other issue that I have had to deal with at a local level is the perception of that the local health unit within which Graham Simpson works is a unit within the hospital. The role of the Cairns regional TB control unit in ranging health issues for broader Far North Queensland is often not recognised in staffing. That

is an issue that has confronted me on a number of occasions. I will leave it there. Graham may have something to add.

**Prof. Simpson**—From Cairns, we have to cover the whole of Far North Queensland, which extends up to the outer islands of the Torres Strait. Boigu and Saibai are only a couple of kilometres away from the New Guinea coast. There is very free traffic under the terms of the treaty across that narrow strip of water between the coastal villages in PNG and the outer islands of the Torres Strait. Because of the TB situation in PNG, the TB crisis has been filtering across into the outer islands. We were left trying to contain that. After some years of effort, we established specialist clinics on the outer islands so that we could treat the TB patients there.

An allusion has been made to the legal and immigration issues that we face. We have elected to more or less ignore those and treat on a humanitarian basis and also a public health issue basis. You cannot ignore infectious cases of TB, and the best public health response is to treat these infectious cases to safeguard the health of the Australian islanders. The issue of costs is very complex. We are getting some help now that we have had to expand our services, but the underlying costing issues have not been clear for the last 30 years. That is about all I have to say.

**CHAIR**—Thanks. I will start the questions. How many people contracted TB in Queensland in the past year, and how many of them were multi-drug-resistant to TB? I know you mentioned some figures of people who were screened and diagnosed coming across the border, but what about for actual Queenslanders?

**Dr Konstantinos**—In Queensland we have traditionally had about 100 cases per year. Now it is about 120 cases per year. I think a lot of that increase is probably related to PNG cross-border TB. The majority of multi-drug-resistant TB in Queensland is from PNG, as are the vast majority of cases in Australia. In Brisbane at the moment I am treating only one MDR TB case. I think we have only had about three or four in the last three or four years. So it is only about one per year in the rest of Queensland.

**CHAIR**—If everything continues the way it is at the moment—no changes to any programs or to any of the assistance—do you see those numbers increasing?

**Dr Konstantinos**—It is very hard to say. It is clear that the epidemic in the South Fly District of Western Province has grown. It is a small population and you probably would reach a stage where the incidence would plateau simply from people dying of TB if they do not access treatment. I guess the numbers have been staying similar for the last couple of years. MDRTB cases probably peaked in 2005, although they are still clearly 25 per cent of all cases. It is hard to know what will happen in the face of lack of services on the PNG side. The positive thing there is that PNG is starting to get a national TB program together and they now have a provincial coordinator in the western provinces. If that becomes effective in delivering care to the villagers in western provinces, we may see a peak. I do not know whether this committee will ever get to see the villages in the South Fly District, but there are incredible issues related to transportation, just reaching those villages and providing a basic health service at the village level.

**Ms RISHWORTH**—We gave heard from previous witnesses that providing that coordination on the ground with the Western Province, PNG health authorities and Australian health

authorities can be a bit difficult due to communication and also some of the border issues and health professionals not being able to cross the border without going through Horn Island. Is there a level of coordination now between the new Western Province TB coordinator and the Australian authorities at the moment?

**Prof. Simpson**—We are getting better. Communications has been the big problem. The Western Province TB hospital is based on Daru Island. We managed to visit them for the first time last November. Despite that visit and all the agreements we made, we still have huge difficulties communicating with them. The agreement we came to was that we would identify the drug sensitive cases of TB because PNG, the whole country, does not have facilities for culture and sensitivity testing. So the only information available is the information we have gathered. Despite the agreement that we should transfer the care of the drug sensitive cases to them, that really has not happened to a great extent because we just do not have a method of telling them about them. We have a communications officer. Essentially, we have now got to the stage of using him as a carrier pigeon. He physically takes the information, because we cannot do it reliably by mail, fax or email, which is a bit sad.

**Dr Konstantinos**—The other important thing to remember is that drug resistance does not occur naturally. It occurs only as a result of the failure of a TB program. That is another concern we have—that in fact it is a failure of the program that has resulted in all this drug resistance. We want to be sure not only that there is good communication but also that there is a service that can treat people effectively before we give an overall transfer.

**CHAIR**—If you do not complete the full course of the TB treatment, what are the implications?

**Dr Konstantinos**—The implications of not completing the full course of treatment are that you have treatment failures and relapses, and the implications of the regimens not being given correctly are that you allow the emergence of drug resistant organisms by not giving a full combination of drugs. New Guinea has had an issue of both in the sense that they have not been able to track patients on release from hospital into the provinces. The other issue has been erratic drug supplies—which hopefully have been fixed—which means that different drugs run out at different times, so people end up being on substandard regimens.

**CHAIR**—That would be the main cause of drug-resistant TB?

**Dr Konstantinos**—Yes.

**Ms RISHWORTH**—I asked a previous witness a question on the interaction between HIV and TB, but they said you were probably more appropriate to ask. How do they interact? What is the prognosis? Obviously, we have heard that there is a potential epidemic of HIV in the Torres Strait. How does that interact with tuberculosis?

**Prof. Simpson**—We have been very scared about that the whole time, and we have been very good about testing. In fact, we only have two or three cases of coinfection—the person with the most recent case died within 24 hours of presenting anyway. The patients we have had with coinfection of TB and HIV I think are all dead. They have done very badly. But we have not seen the great overlap that we were worried about, as yet.

**Ms RISHWORTH**—What was the interaction? Why were people worried about it? I am just asking about the science of it.

**Prof. Simpson**—If your immune system is destroyed by HIV then in world terms the thing you are most likely to die of is tuberculosis.

**Ms RISHWORTH**—The drugs do not work as well?

**Prof. Simpson**—The drugs work as well, but they also have more drug-resistant TB. The problems in New Guinea probably would be similar for sub-Saharan Africa. You have the question of accessing treatment. Just treating the TB, of course, does not fix the HIV.

**Dr Konstantinos**—The important thing to understand about the HIV interaction is that they fuel each other. The HIV actually brings things to the fore. If you look at the thing that happened in New York—and I do not know how many people are aware of this—where TB became a major issue, it was largely related to the fact that with the breakdown of their public health systems for managing TB it interacted with HIV. So what would have occurred over a period of 20, 30 or 40 years came to the fore in about five years because people with HIV are more easily infected, more easily develop disease and more easily progress to serious disease. TB and HIV have a terrible interaction that way. They both make each other worse. I think the other side—and this is the point that a lot of people are missing—is this. If you cannot manage TB on a six-month treatment course, how are you going to manage lifelong treatment of HIV with antiretrovirals?

**Mr BIDGOOD**—Thanks very much. This is something that does concern me. There are a couple of issues I want to go to. First of all, I want to know what you believe federal government should be doing to address the TB issue in PNG, the Torres Strait and Western Province. Second, there is a threat perception and obviously there is a reality. I hear the figures are low at the moment. How immune is North Queensland and ultimately the rest of Australia to TB, particularly to the resistant strains? What is the real threat and the real threat perception? What do you think federal government should be doing?

**Prof. Simpson**—The numbers are small because both populations are small. South Fly has only less than 10,000 people, I think, and the Torres Strait has about the same—so the absolute numbers are small. We certainly have proof of transmission of MDR-TB within the coastal villages. We have not had transmission of MDR-TB into the Torres Strait, but we have certainly had transmission of drug-sensitive TB, so it will be only a matter of time. From our perspective we are confident that we can contain that. It might be expensive. Treating MDR-TB is an expensive hobby. We will be able to deal with those issues. The absolute numbers are not going to be so high that they will overwhelm our systems. The answer has to be at the New Guinea side.

What can the federal government do? We have discussed this in other forums. Things are in place and things are looking encouraging. But first of all New Guinea have got to get their standard DOTS program and their management of drug-sensitive TB—the easy stuff—right, and they have not done that yet. They have then got to address the issue of treating MDR-TB, and they are a very long way away from doing that. They do not have the drugs; they do not have the expertise.

So, in terms of protecting Northern Australia, I think support for Daru Hospital and support for communication between Daru and Cairns is the first thing and then, realistically, some arrangement whereby we can carry on doing what we are doing—that is, treating the difficult cases on the out rounds or, if necessary, on TI or in Cairns. Curing them will minimise the infection threat until PNG gets its act together.

**Mr BIDGOOD**—Following on from that, if TB were to come across, what is the immunity status of northern Queensland? Are our own health standards good?

**Prof. Simpson**—Yes. In terms of immunity, we have kept up our BCG vaccination program in the Far North for various reasons, and that gives a degree of protection but it is not a great vaccination. You can argue there is a protective effect, but it is not great. So we are not looking at immunity; we are looking at contact tracing, identifying infectious cases and treating infected people. It is a response to infection rather than a vaccination sort of program.

**Mr BIDGOOD**—Right. Thank you.

**Mr IRONS**—I have heard every witness talk about things like protection of Australian health and containment and freedom of access. If there were an outbreak of disease, do you know if there is a facility to make changes within the treaty in order to contain the movement of people? If not, is that an option that we would look at?

**Dr Konstantinos**—I am not sure what the treaty situation is. There are two things that make this TB issue a little different. These people are accessing us; we are not going out and looking for TB. These are people who have actually elected to have their health looked after, so we could not have a more compliant group of people. The process we have in place at the moment is that if someone refuses treatment or becomes non-adherent through factors beyond their control we let the authorities know and we try to limit their movement. Either you are treated properly or you are not treated at all, and that is a good principle for TB. From a public health point of view, it is better not to treat it at all than to treat it badly. So that is the step we put in place and we have had support from Immigration people on that issue. I do not know what the legal stance is.

As for the containment of TB, there is not an ideal vaccine. Containment of TB is principally detecting infectious cases and treating them—and, I guess, from the Commonwealth point of view, it is ensuring that the perception of who is paying is clarified. TB is unfortunately also occurring among a group of Indigenous people, who see this funding as funding for their health issues going elsewhere. So it is about clarifying the cost of this, and there are a lot of issues across Commonwealth, state and local funding about where that bucket of money sits. If that could be clarified and people understood that treating these people is in fact in their interests, I think that would go a long way.

The other thing is that there has been a tradition in foreign aid to fund programs for one, two or three years. My stance is that, if AusAID go in and fund a TB program for three years and then decide to stop funding it because money is needed elsewhere, they might as well have never started funding TB at all. Once you start funding for TB, it has got to be for 10 or 15 years. It is that long before the people at the peripheries start to see the benefits, which allows a strengthening of local services. That is often an issue with TB funding. I think you need to review programs regularly to make sure they are on track but I think that to threaten the

withdrawal of funding in two or three years makes funding TB programs very difficult. If you do pull out too early, as I said, you might as well never have started; all that money will have been washed down the drain.

**Mr IRONS**—Further to that, do you think that, because there is ease of access to our resources, that is a disincentive for PNG to implement their own capacities?

**Dr Konstantinos**—I think people would have to observe PNG to make a judgment. It is very complex. There are a lot of complex issues in PNG. Their whole system of government, where they have provincial governments and national government, makes things very difficult. There is the issue of the way the national government sets agendas and how the provinces interpret them. There is an impression when you have been to PNG that loyalties are not necessarily to the country as a whole and might be to various village structures and things like that. There are a lot of things that make things very complex. I think it is important to ensure that whoever is in charge of TB has a commitment to TB so that they drive it. If they drive it, they need to drive the government plus the peripheral services.

**Prof. Simpson**—The clinicians at Daru hospital are good and very keen. They want to do it themselves, so there is certainly no resistance from the clinicians at Daru. If they get the tools, they will do the job. That is not the issue. The issue may be slightly higher up in the chain.

**Mr COULTON**—Thank you. My question is a bit basic. If someone has TB and is not treated—they do not seek treatment or they do not get treatment—what does it mean to them physically? What are their symptoms and what is the mortality rate?

**Prof. Simpson**—The principal things are respiratory. TB of the lungs is the most common and most important, because it is then the infectious form, so most of the symptoms will be respiratory. They will cough; they will lose weight; they will have sweats and fevers. Untreated, about half of them will die fairly quickly, about half of the remainder—so about a quarter—will go into a state of remission and the last quarter will develop a sort of carrier state, if you like, where they are chronically ill and still infectious. That is speaking roughly.

**Dr Konstantinos**—The Bronte family is always a good example of the variability of TB, in the sense that the Reverend Bronte, the father, infected all his children, who died at a young age, and he finally died of his TB at a much later stage in his life. So it is a very complex disease. The natural history of it is exactly as Graham said. Those people who self-cure or have it become chronic can actually continue to relapse over many years.

**Mr COULTON**—So the people who may become carriers or the last quarter, if you like—the chronic sufferers—are incapacitated. So there would be an issue with poverty, support, welfare and things like that?

**Dr Konstantinos**—Yes. The determinants are crowding and lack of ventilation. Someone who has a chronic cough and cannot access care will continue to cough up the germs. If people are living in crowded environments where there is no exposure to sunlight, the germs just remain circulating in that crowded environment. So that is where poverty exacerbates the TB.

**Mr COULTON**—Is the tropical environment a place where TB flourishes or is that not important?

**Dr Konstantinos**—It flourishes in crowded dwellings. In fact, the tropical environment is probably a good environment where you have a lot of exposure to sunlight. The highest burden of TB since the 1900s has been in Inuit people. The more crowding of people and staying indoors there is, the worse it is. Our Indigenous people have five or 10 times the rate of TB of other Australian-born people, but even so their rates are very low when you compare them with other Indigenous people, and I think a lot of that has to do with an external lifestyle.

**CHAIR**—I would just like a clarification. We have just been privately discussing this amongst ourselves. I recall that as kids we had TB vaccinations.

**Ms HALL**—We would get tested.

**CHAIR**—Was it being tested?

**Ms HALL**—Tested, yes.

**CHAIR**—They used to do a scratch.

**Ms HALL**—And if you got a blister then you went for another stage.

**CHAIR**—Okay, so that is what it was. There was never a vaccination in place.

**Dr Konstantinos**—Yes, there were vaccinations in place. It consisted of testing people, and people who had no reaction would get the vaccination. People who had a positive test would be assessed for having acquired, maybe, a latent TB in the past. It was a measure of how many people were exposed to TB.

That program stopped because TB transmission is really rare in Australia. The vaccine is not a perfect vaccine. It is not a great vaccine. Its main benefit is stopping serious disease in young infants, so we now target the BCG vaccination to infants of people who are at high risk of developing TB—Indigenous people and migrants from high-risk countries.

**CHAIR**—So people are being targeted in the Torres Strait, for example?

**Dr Konstantinos**—Yes.

**Prof. Simpson**—We have very good coverage of the BCG vaccination in the Indigenous populations.

**CHAIR**—That obviously would be assisting—

**Prof. Simpson**—It helps. As Tom said, it really stops you getting the invasive tuberculosis meningitis forms in childhood. It does not do very much to stop you getting TB of the lungs as an adult. Can I just comment on the treaty? We did not quite finish answering Mr Irons's question. The treaty as it stands excludes people coming across to access health services unless

they have been acutely injured or are on the point of death from an acute infection. TB sits uncomfortably in the arrangement. You can come down to have a spear taken out of your chest, get fixed up and get sent back, and that is one episode of care. When you are treating multi-drug-resistant TB, you can be just as ill and just as likely to die but managing that episode of illness might take 2½ years. This is the difficulty that we have with the treaty—we get these desperately sick young people and we can sort of fix them up, but in order to fix them up properly we have to keep seeing them for two years. They have to come to and fro, and that is contravening the terms of the treaty. If we could clarify that it would make life a lot more comfortable.

**Mr BIDGOOD**—So that is a key issue that the government can address.

**Prof. Simpson**—Yes.

**Ms HALL**—Do you think that it would be beneficial to Australia if the treaty were strengthened to allow the treatment of diseases such as TB under the treaty?

**Prof. Simpson**—Yes.

**CHAIR**—Could you just go through the symptoms of TB. How does someone identify and say to themselves, ‘I’d better go and get some treatment for this’?

**Dr Konstantinos**—TB is a very non-specific, chronic process. It usually begins with a little bit of lethargy, a little bit of tiredness, weakness and maybe some low-grade fevers in the afternoon. They are often mild symptoms that people do not pick up on. The thing that the WHO ask developing countries to concentrate on is a cough protocol. Anyone who coughs for two to three weeks should be assessed for TB. That is the typical program in developing countries. If someone has a cough for two or three weeks that is not improving, if they have unexplained fever, if they are losing weight and if they have night sweats, they are the sorts of things that should alert people to TB. In developing countries there is a higher likelihood of TB being the cause of that, but there are a lot of other things that do the same thing, so it does result in false diagnoses where people cannot do the testing.

In our population it has other complexities, in that elderly people with TB are often missed because the most common causes of chronic cough in our population tend not to be TB and TB tends to be forgotten where it does occur. I guess TB is a subchronic illness. For months and months it has that chronic subacute type of presentation and then eventually you end up with the typical consumption, where people are losing weight and are obviously sick. But it begins as a very slow, non-specific illness. In people who do not have health-seeking behaviours, who live in a community where you do not have a high expectation of health anyhow, TB diagnosis can be very delayed.

**Mr BIDGOOD**—Can I follow up something you said earlier about the New York experience. Do you see anything like that happening in Brisbane, Cairns, Sydney, Melbourne, Perth, Adelaide or Darwin?

**Dr Konstantinos**—One of the great strengths that we have had in Australia—I can definitely say this for Queensland, I think I can say it for South Australia and Western Australia, and I hope I can say it for New South Wales and Victoria—has been the maintenance of good public health

systems for TB. In New York, there was a period under an earlier, Republican, government where a lot of public spending for TB was cut. There was a good study from one of the Harlem hospitals where they found that 60 to 70 per cent of people never had follow-up from the time they were discharged from hospital. So there were a whole lot of issues of failure of community public health measures in New York which led to the epidemic, and they fixed it by spending millions of dollars. They have actually controlled TB very well in New York by putting back in place a very good public health system to ensure community care of people. We have not ever let that go in Australia. Hopefully we will not. There was someone in the thirties who said, 'The first country that will eliminate TB will be the one that keeps its programs going right up until the very end.' We have been far-sighted enough to maintain that sort of structure for TB control.

**CHAIR**—There being no further questions, thank you very much. If we have any further questions we will be in touch with you, and vice versa.

**Dr Konstantinos**—Thank you.

[11.01 am]

**BEATON, Dr Neil, District Executive Director of Medical Services, Cairns Base Hospital, Queensland Health**

**CHAIR**—Welcome. Is there anything you would like to add about the capacity in which you appear today?

**Dr Beaton**—I am the acting executive director of medical services for the Cairns and Hinterland Health Service District of Queensland Health. My qualifications are MBBS, FACRRM, DA. I am a rural generalist by trade. I have been a rural generalist senior medical superintendent for 15 years in this district and was recently appointed to the position of executive director for the district.

**CHAIR**—Although the committee does not require you to speak under oath, you should understand that these hearings are formal proceedings of the Commonwealth parliament. Giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. On that note, we would ask you to make a brief introductory statement and then we will proceed to questions.

**Dr Beaton**—I have to admit that my expertise lies in my staff and therefore in my statement I will refer to ‘the experts’. Dr Simpson is one of our experts working for our respiratory unit in Cairns. The other experts include Professor John McBride, who unfortunately, rather ironically, is away at a conference in Papua New Guinea. Dr Enzo Binotto is our infectious diseases consultant. And Dr Darren Russell has I think already presented on HIV. So a lot of my testimony will refer to their expertise, if you do not mind. I can give you good advice on the general scope of the service in Cairns Base Hospital.

**CHAIR**—Yes, please.

**Dr Beaton**—And I can give you an overview of some of the concerns by our clinicians.

**CHAIR**—Would you like to give us those overviews?

**Dr Beaton**—Cairns Base is, I guess, at the frontier of the borderline for the tropical north, and it has a significant job to do in terms of managing the high morbidity from Cape York and the Torres Strait but also in terms of cross-border issues. We are normally the first point of contact apart from Darwin when it comes to those cross-border issues. So we are acutely aware of the challenges that face us. In practical terms, the decision has to be made quite frequently regarding funding for ongoing treatment of chronic diseases like TB and HIV where the guidelines suggest that we can provide funding where life is at risk.

This can be quite difficult for me as an administrator to interpret sometimes, because there are ethical challenges around managing some of the patients who come across the border from Papua New Guinea into the Torres Strait, whereas I heard Dr Simpson mention that if somebody comes across with a trauma and you pick up TB in the process it can be quite difficult and quite

challenging to work out what is the best treatment and how to pay for the ongoing treatment if they have a co-morbidity such as TB or HIV. I can trust Dr Simpson to have covered a lot of the TB issues and Dr Russell to have covered HIV. I am not sure if the panel has had any insights into the other viruses that we are faced with.

Japanese encephalitis is a challenge. My expert in that is Professor John McBride, who is both at James Cook University and our infectious diseases consultant. If the committee wishes we can get him to present an overview of that in the form of a paper. In essence, there is no Japanese encephalitis in the Cape at the moment, but there have been cases in the past. We did not expect Japanese encephalitis to come into Australia, but it has in the past.

**CHAIR**—Would you like to tell us a little bit about Japanese encephalitis.

**Dr Beaton**—It is a rather nasty brain infection which is often fatal and difficult to treat. It is an arbovirus, in the sense that it is spread by mosquitoes. It is moderately common in communities which are overcrowded where a lot of pigs are reared, because the vector is a pig. It is not swine flu; it is swine encephalitis, if you like. Encephalitis is an infection of the surface of the whole brain, so it is like meningitis but worse. It is very difficult to treat. It is infectious through mosquito-borne transmission, and the vector is the pig. Luckily, the traction that that sort of infection would have in causing an epidemic is limited by the number of pigs and the population, so the density of the population in Cape York and the Torres Strait is against its massive transmission and down to big population areas like Cairns.

**Ms HALL**—Is there any residual disability from Japanese encephalitis?

**Dr Beaton**—There can be, because of the brain damage. The brain can be badly damaged in the process. The brain will swell. In the same way as meningitis can cause abscess formation, secondary infection, secondary meningitis, overwhelming sepsis and overwhelming viremia, it can kill and cause global brain damage. So it can leave people with significant disability or cause death.

**Ms HALL**—That makes sense.

**Dr Beaton**—Obviously, there is a potential for drift down to Cairns, and we are concerned about that. There have been public health measures through the public health unit. Dr Scott Ritchie is the expert in the public health unit. Hopefully, they have submitted—because I suggested they submit it—information on JE and other viruses. I spoke to Drew Wenck, the intensive care specialist. He has not seen any for at least a year and a half in Cairns. We have not seen any in Cairns but we are vigilant.

The difficulty in PNG is the capacity to test for these things and to mount a significant public health response to them. Dr Ritchie will describe how challenging that can be in an environment like Papua New Guinea—and then dealing with the cross-border issues. As I said, we did not expect it to creep over the border but it has. That is JE. It is a significant challenge.

**CHAIR**—Has it crept over the border previously?

**Dr Beaton**—Not to my knowledge.

**Ms RISHWORTH**—Is that because of the pigs or because of the mosquitoes?

**Dr Beaton**—Both. The pigs create the environment to breed it and the mosquitoes create the environment to spread it. That is the best way to look at it.

**CHAIR**—Why does it have the tag ‘Japanese’?

**Dr Beaton**—Why is it called Japanese encephalitis?

**CHAIR**—Yes.

**Dr Beaton**—That is where it was first found. Japan was where it was initially identified.

**Ms RISHWORTH**—My understanding is that the vaccination itself is also quite dangerous in terms of who can have it. Would a wide-scale vaccination program be out of the question, considering the difficulty in the response to that vaccination?

**Dr Beaton**—It would be very challenging to pretest. My understanding of the issue here—and I am not an infectious diseases expert—is that giving the vaccine to somebody previously exposed is highly risky and therefore pretesting and the associated tests are important, and that of course puts the cost up. The monitoring of that also puts the cost up. We can suck resources into that quite easily, and the benefit and the cost of it has to be carefully looked at. That is a public health issue rather than a Cairns Base Hospital issue specifically.

**CHAIR**—Jill, you have a question.

**Ms HALL**—Dr Beaton, finish your presentation and then I will ask you my question.

**Dr Beaton**—I am quite happy to answer it.

**Ms HALL**—No, please finish the presentation.

**Dr Beaton**—The rest of my presentation is based around the other issues that we have to deal with: TB, HIV and Japanese encephalitis. That is probably the hot arbovirus but there are other arboviruses that we do not know about because they have not been discovered yet. There are a lot of infections and we have not got to the bottom of what causes them. They are not common, but we certainly have a number of undiagnosed viremia that have lead to death and we have not got a diagnosis. This is speculative, but we also know that this region has a very high unexplained intrauterine death rate. We do not know why that is. Despite all the testing for current infections and genetics and the usual tests that we go through, we have not found a cause. That is something like three times the rate of unexplained intrauterine and foetal deaths, which suggests that there may be a vector infectious factor. Whether that is part of the viruses which tend to drift from the north of Asia into Papua New Guinea and then across the border, we do not know. In that context, the viral infection issue is quite difficult to manage in terms of public health because, firstly, we do not know what we are dealing with and, secondly, the cost issue around testing for these viruses and identifying the viruses is significant for Third World countries and for developing countries. Those viruses are already here and we do not have a picture of them.

At the moment, if you have an undiagnosed virus, the specimens go to Geelong to the wet lab. A wet lab is a secure facility for viruses, where PCR testing is done. This is a polymerase chain reaction type of testing, which can give you good information on what kind of infection you are dealing with. There is a risk with sending viruses from here to Geelong; it is a long way. There is a move a foot by James Cook University to establish a wet lab through the Commonwealth government. I understand that that submission is well progressed. We were talking to Professor Wronski about this. Our plan would be to establish one of the floors in the new redevelopment in Cairns and share that with James Cook University—not to put the wet lab there; the wet lab will be at Smithfield—to act as a research institute. The new district manager and I are very keen for Cairns to take a lead in this type of research and educational support in a partnership with the university, and that is progressing. The idea at the moment is to give them a floor where a research institute can be established through James Cook University. That will be very helpful in unpacking some of the mysteries around the spread of viruses. I would recommend that Professor McBride and Professor Wronski are probably far more eloquent in speaking on that matter than me. That is my understanding of it, and I think it is a very good idea and a good thing for Cairns. A wet lab is an expensive commodity and it is expensive to maintain.

**CHAIR**—What sort of cost?

**Dr Beaton**—I think the build cost is something like \$11 million, but do not quote me on that figure because I am not privy to the project plan. But we have discussed how we would work together with the university to combine our forces against this threat. Testing is limited, so our epidemiology is limited. So we do not know. But what we do know is that we have got some unexplained things going on. The potential for drift from Asia is there, but we do not know how great that potential is—these are the other viruses that we do not know about. The only cases of malaria we are having to deal with are airport malaria. We have the odd case of airport malaria. In a recent case the malaria mozzie jumped off the Papua New Guinea plane and flew to Machans on the wind. It bit a man and the man got airport malaria. That is the risk. Obviously it is quite easy to transmit malaria through aeroplanes, so I would have thought that that would be fairly simple to transmit wherever we go. So that is the real issue. We do not really have malaria mosquitoes in Cairns. There have been cases of endemic malaria in Yarrabah and at Mossman but, to my knowledge, it is a very uncommon occurrence. So the potential for malaria is really there through airport malaria.

From my point of view the public health responses are there. We have a very good tropical health unit, and we need to maintain that. We certainly need to get better information about what is happening at Cairns Base Hospital in terms of all its systems and making sure that we report well. That is part of my job in terms of making clinical governance work properly in Cairns. That is about all I have to say. I would recommend that Professor McBride present to you. Unfortunately, he has been away, so I have not been able to get the full information from him.

**CHAIR**—The committee will ask you a few questions now. I know that Jill has one.

**Ms HALL**—Yes, I actually have a couple of questions. Dr Beaton, you mentioned that you have to make decisions when managing chronic diseases. I would like to get an idea of how you make those decisions in relation to treatment and maintenance of people living in the Torres Strait and in relation to the example you gave of somebody coming across who has been wounded in some way or another and discovering that they have tuberculosis.

**Dr Beaton**—Generally speaking, I would escalate those decisions to my CEO and the guidelines would be brought into play.

**Ms HALL**—Maybe you could send the committee a copy of those guidelines, because I am none the wiser from the answer you have given.

**Dr Beaton**—My honest answer to that is that I have not had to deal with that issue since I started three months ago, but the guidelines are there. I rely very heavily on the clinician to see what the implications are. If I had to deal with it, my instant response would be to talk to the public health unit and my CEO and the Deputy Director-General, Professor Andrew Wilson. I would probably challenge things in accordance with the needs of the patient and the community risk. There is a balance between the risk to the community and the cost.

**Ms HALL**—Could you please get some information and forward it to the committee.

**Dr Beaton**—Yes.

**Ms HALL**—You mentioned payment. What is the arrangement for payment for somebody from, say PNG? Is there an arrangement between Queensland Health and PNG?

**Dr Beaton**—There is an agreement between the Commonwealth, PNG and the state around treatment. My understanding of the guidelines is that the condition needs to be life-threatening. That is where the bone of contention might lie, for example. Do you understand what I am saying?

**Ms HALL**—Yes, I understand.

**Dr Beaton**—So you have got broad guidelines which are not specific enough, which makes the decision making difficult. On the other hand, it gives us a degree of flexibility, because then the clinicians can balance the risk a bit. But it still comes down to the fact that most of the time we are not going to be able to afford to pay for it. If they come into Cairns Base Hospital, I think we have a moral duty. The difficulty is, as Dr Simpson pointed out, is that it is not a one-off treatment; it can be a protracted treatment and therefore the costs of monitoring and managing that for the individual is difficult. Secondly, the risk to the broader community is there. If we were going to treat TB in Australia, we would go through a large contact-tracing process in the whole community. That is, in practical terms, impossible.

It is quite frustrating to only be able to do half the response. To provide the drugs is one issue—that is costly as it is, because it has to be monitored and there are side-effects—but then the broader public health response which is required to contain it in asymptomatics, when you have got an open TB case in a crowded community, is the challenge. I would support what Dr Simpson and this previous TB team have to say, which is that we really do need to clarify some of those arrangements around ongoing chronic treatment. The same applies to HIV, where you may have ongoing treatment required and then secondary infections and those sorts of things. It is quite problematic.

If we decide not to treat or not to provide the cost for treatment, it is quite possible—and often is the case—that patients who are wealthy enough can come down and get private treatment, and

they do. They get a private prescription and private treatment through an infectious diseases private specialist clinic in Cairns. That is an option for them. Public treatment is not always an option.

**Ms HALL**—But basically it can lead to a person receiving half the treatment they need. My next question is: what sorts of community health programs are provided out of Cairns Base Hospital to the Torres Strait Islands?

**Dr Beaton**—None from Cairns district, apart from an outreach service. The Cairns Base is actually one of the leaders in Australia in terms of outreach services. It probably started 25 years ago, with Dr Maser and Dr Hazlewood taking paediatric teams up to the Cape to try to get upstream of the drift of patients coming in for in-patients. I was proven in the early nineties that, for every dollar we spend in the community, we will save \$5 or \$10 in the tertiary sector. So the principle that outreach is a good thing is there. That was followed by Dr Hadfield and now a range of other specialists heading out to the Torres Strait and the Cape district to do community specialist clinics to help address chronic diseases, chronic disease management—including TB—some surveillance and those sorts of things. So we have Dr Simpson, who travels; a chest clinic; a general medical clinic; some surgery happening out there; and we have got paediatrics and paediatric community health, which is a team based system that goes and visits.

**Ms HALL**—Maternal health?

**Dr Beaton**—FROGS, the Far North Regional Obstetric and Gynaecological Service, which Professor Humphries set up in the early nineties, is still going. These services depend in part on Medicare income from what we call option A. With option A a specialist can bill under Medicare under the agreement and then that can go into the Queensland Health pot and that contributes to the service.

What we have discovered in our financial analysis is that these services are simply not covered. We estimate we are probably running something like between \$7 and \$9 million behind in terms of funding those services, and clearly with the global financial crisis there is a pressure on my CEO to look at ways in which those services can be maintained without causing a negative drift of the budget. There is no doubt that it is costing. One program of the Commonwealth, the Medical Specialist Outreach Assistance Program, or MSOAP, will assist with some trouble. That program has shrunk. Again, I have only been in the job for three months, so it is on my list of tasks to have a look at how much it has shrunk and how we can do something about it. But, certainly, funding generally of the outreach service is patchy, it is not guaranteed and it will be problematic if it is withdrawn—put it that way. At the moment I am advocating for outreach because I believe that if outreach disappears we are going to bring the patients down here instead of going up to the Strait. It is much better to travel to a patient and not bring the TB into Cairns. I guess my answer to you is that the funding, like many things between the Commonwealth and the states, is unclear. I have no blame approach.

**Ms HALL**—I am sure you have been looking at the health reform commission report.

**Dr Beaton**—Absolutely.

**Ms HALL**—My final question is: in the evidence you gave us you mentioned better information. Is that better recording of data, or receiving better information? Would you like to expand on that for me please?

**Dr Beaton**—Yes. In terms of clinical audit I think that, generally speaking, not just in Queensland Health but Australia wide, we could do it a lot better. Information systems are limited, and the electronic health record is something that we are all dying to have. It not only provides good information for the patient—both individually and when moving between providers, which is obviously going to save money on pathology testing et cetera—but is also a good way of collating health information. If we get the diagnosis and the coding right, we can actually give clinicians at unit level really good public health information and it will integrate the public health information. At the moment there is information around but it is all very patchy and it is very difficult to report on. So, for somebody like an infectious disease consultant, or me, to be able to see what the broader picture is of not only the individual but the public health information, the integration is not there. There are some systems, but they are just not integrated.

The other thing is that there is not a clinical health record on computer. A lot of the recording is manual. That is prone to error. There is a lot of recording which does not have a common language and therefore is prone to error as to how you interpret the diagnosis and whether your date is correct. There is a lot of work to do on getting electronic records and audit systems up to speed to be able to give us the right information to make clinical decisions around resource allocation.

**Mr COULTON**—I have a general question. When you are treating people from remote islands, as you do, how do you overcome cultural issues? This committee was at Maningrida in the Northern Territory some months ago, and they had a peer support or a buddy system where someone would travel across. There was a combination adjacent to the hospital there. How do these people who are very community based and from an isolated area react when they are brought to Cairns for long-term treatment? Do you have a special cultural program? How do you treat that?

**Dr Beaton**—We have Aboriginal and Islander liaison officers. This is a complex question, so I will try not to give a complex answer. The answer is yes, it would be a good idea if we could have a cultural broker at every consultation, somebody who is trained to understand the medical and clinical language and interpret that because the barriers are quite significant in getting a good history and developing trust. Cultural brokerage has been suggested and we have done that through general practice. I have been very involved with writing curricula for national colleges. In fact, I did a project for the Commonwealth on designing health services in the early 1990s. There is no doubt that, where you have Aboriginal people involved in the service, it creates a sense of trust. I think we could do better in that regard in making sure that we have that communication patched up. You need to bear in mind how complex that matter is with the different cultures. When you say ‘they’, there are 700 nations and it is really difficult to say which Aboriginal or Indigenous person might need a culture broker, for a start. Noel Pearson probably does not but ‘Jimmy Putchimunka’ from Aurukun probably does—that is not a real name. If you see what I mean, it is a complex issue. We do need to invest more time and effort into that very issue, I agree.

**Mr COULTON**—In practical terms, do you have staff who ferry people, after they have had treatment, back to the airport, that sort of thing?

**Dr Beaton**—We have health workers. We use the health workers as much as we possibly can to help that process. Transport is a particularly difficult issue because you need to have indemnity to travel with travel with a patient. Generally we use ambulances. Once they are discharged, it is quite difficult for a Queensland Health employer to give somebody a lift under indemnity requirements and liabilities. As I say, it is complex. We would love to do that but as soon as we do what ends up happening is that all the resources of the Aboriginal health workers go into travel and not into what they should be doing, which is culture brokerage. I think we need to increase the number of Aboriginal liaison people and we need to create a better environment for them to work in. That is something we should be working on.

On the plus side, there has been a lot of effort put into cross-cultural training in the district for the last 10 years. It is a compulsory competence. My personal view is that we should increase the percentage of health professionals who are Indigenous working in the hospital environment in particular. We have an awful lot of Indigenous people coming through the system.

**Mr COULTON**—So you would support a clinical school of tropical medicine which trains not only doctors but ancillary health workers and a range of people on location?

**Dr Beaton**—Absolutely. One of my jobs is to look at medical education as well as education and governance generally. My view is that a department of rural health, which includes medicine, would include a multidisciplinary team with some core competencies for everybody, covering the primary health care team as well as the hospital team. Health is a team based affair and we should have team based training. That is my opinion. I think JCU is uniquely and well-positioned to develop a significant partnership with the health department in that regard.

**CHAIR**—There being no further questions, we thank you for your submission. If there is any other information that we are seeking, we will contact you—and vice versa; if there is anything else you would like to forward to us, feel free to do so.

**Dr Beaton**—Thank you. I will try and get the guidelines and the planning.

**CHAIR**—That would be great. Fantastic. Before I close this meeting, I would like to thank all the committee members; all the witnesses; Hansard; and the secretariat, Penny and Sara.

Resolved (on motion by **Mr Irons**):

That this committee authorises publication, including publication on the parliamentary database, of the transcript of the evidence given before it at public hearing this day.

**Committee adjourned at 11.35 am**