To study

Advance practice nursing for Chronic Kidney Disease in Primary Health Care in Eire, Ghana and Cuba.

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**Introduction**

As a specialized renal nurse, I have always wanted to work in the pre-dialysis area and I have been blessed to be one of the first renal nurses in Australia to be employed in a general practice setting within Australian primary health care sector. With the highest rate of kidney disease of any state in Australia (NT Renal Services, 2008) the Northern Territory is continuously forced to use initiative. I have been working as a renal nurse for the Aboriginal Medical Service, Danila Dilba in Darwin, Northern Territory for over 2 years. However it is very hard to be a ground breaker for a new role. The Churchill Fellowship has given me the opportunity to observe and network with a large group of advanced practice nurses worldwide seeking answers to how my role could improve management outcomes for clients with kidney disease whilst simultaneously developing a framework of practice as a nurse practitioner.

Since moving to the Northern Territory in 1999 I have crossed paths with a number of Churchill Fellows. It was only recently that I met one from a health background and made the connection that I too could apply for this prestigious award. I would like to thank Jason Warnock for the encouragement at the 2009 chronic disease network conference to those of us in Indigenous health – “think about a fellowship”.

There are two other people that I would like to acknowledge as without their contribution to my application I would never have been successful. Elaine Bowen, Clinical Nurse Manager, Dialysis Outpatient Service, Royal Darwin Hospital and Bhavini Patel, Director of Pharmacy, Royal Darwin Hospital were my referees and wonderful supporters, not only for the fellowship but also of my role as renal nurse for Danila Dilba. Dr Emma Fitzsimons and Aboriginal health worker Phillip McGinness of the kidney health team at Danila Dilba must also be mentioned for their willingness to work together as a great team in developing the advanced practice renal nurse role in a primary health care setting as well as support to take up this award.

The many people that I met during the fellowship from the national directors to the library assistants, are the reason that the trip will remain the highlight of my career for which I give thanks to the Winston Churchill Memorial Trust for this wonderful opportunity.
**Executive summary**

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The Churchill Fellowship 2010 to study advanced practice nursing for chronic kidney disease in primary health care in Eire, Ghana and Cuba.

**Highlights**

- Clinical placement at the low clearance renal clinic Cavan Regional hospital, Cavan.
- Attendance at the European Dialysis and Transplant Nurses Association/ European Renal Care Association annual conference 2010.
- Clinical placement at Yendi Church of Christ mission clinic Northern region Ghana.
- Visiting the department of preventative nephrology in Cuba.
- Meeting and talking with health personnel in Habana Cuba.
- The impromptu inclusion for 2 days into the Unconventional Convention Cuba program for Australian practitioners conference being held in Habana, Cuba.

**Recommendations**

- Australia should continue to formulate the advanced practice renal nurse role in a general practice setting even though it appears not to be utilized in the global areas visited. Funding should be secured for such positions to continue and expand chronic disease programs and with specialized nurse led clinics at a primary level not only in the Indigenous communities but within the general populace as well.

- Nurse practitioners authorized in Australia working in general practice should have their specialization as well as advanced generalist competencies. These should include public health studies as well as vaccine and pap smear provider qualifications.

- Nursing organizations and institutions should encourage and support nurses to become competent in advance practice to work in the rural and remote areas through appropriate post graduate courses to ensure an adequate primary health care nursing work force for the future.

- Mentorship of primary care health practitioners by nephrologists and tertiary renal unit staff should be seen as a way to foster awareness of chronic kidney disease management and empower the workforce.

**Dissemination**

The results of this study will be shared amongst colleagues and other stakeholders within the rural remote and indigenous health primary care sector. Papers and dissertations will be presented at national conferences and submitted to relevant journals for publication.
Program

This fellowship explores the question – “how do advanced practice nurses work in the management of chronic kidney disease (CKD) in the primary health care setting?” Three very different health systems within the global community were chosen for this study.

Eire  - Sept 14-17 Cavan Regional Hospital.
      - Sept 18-22 European renal nurses conference (EDTNA/ERCA).

Ghana  - Oct 18-22 Accra – Korle-Bu Hospital, Legon University.
       - Oct 23-31 Church of Christ Mission Clinic Yendi, Northern region.

Cuba  - Nov 12-26 Cuban national kidney program.
Report

Background
Attending the International nurse practitioner/advanced practice nurses network (INP/APNN) conference in Brisbane was an excellent set off point to my worldwide trip to investigate advanced practice nursing for Chronic Kidney Disease (CKD) in Primary Health Care (PHC). This conference was also the annual meeting for the Australian College of Nurse Practitioners of which I am an associate member. Nurse Practitioner authorisation is now the goal for advanced practice nurses in Australia. Although we have had advanced practice in nursing through the roles of clinical nurse specialists and clinical nurse consultants for many years the Nurse Practitioner status allows an autonomy of practice that has not in this country been afforded to nurses before. With the changes to health care legislation under the current Labor Government’s overhaul of health policy, the role of Nurse Practitioners in Australia has recently gained momentum (ANJ, 2009). Many Australian delegates at the conference were the pioneers of this newest rank of nursing and for the past three years I have been networking and studying with some of them as I worked towards this goal. In undertaking research as part of my Masters degree examining Nurse Practitioners working in chronic disease management, I became confused. “How would my role as specialist practice nurse be enhanced and changed by becoming an authorised nurse practitioner?” It was my inability to define a practice framework for a Nurse Practitioner specialized in chronic kidney disease management in the Australian primary health care sector that led me to put my academic studies on hold and apply for a Churchill Fellowship.

With conference delegates from all corners of the globe what became very clear was that the role, function and title of advanced practice nurses across the world remains unclear. “Role clarity is a problem for public and professional alike” as stated by the Canadian delegate during a panel discussion. Having the insight from the discussions and presentations at the INP/APNN conference that my international colleagues whom I was about to visit, may also be experiencing this confusion made me wonder what may lay ahead. Eire, Ghana and Cuba, the countries chosen for the fellowship have very different health systems. Therefore advanced nursing practice for CKD was explored in the context of existing CKD management within the individual country and also nursing frameworks.
**Observations in Eire**

Eire has a traditional biomedical model of health care dominated by the tertiary institutions and private general practices; advanced nursing practice was only recently supported by new legislation. The first week of observation was spent at Cavan regional hospital, a clinical placement arranged with an advanced practice nurse (known there as clinical nurse specialist) and the multidisciplinary team that works in the low renal clearance clinic. I attended the annual conference for the European Dialysis and Transplant Nurses Association/European Renal Care Association (EDTNA/ERCA) the following week which is the largest renal nurses conference in Europe.

**Cavan Hospital**

At Cavan regional hospital I was able to observe the practice of Clinical nurse specialist Mrs. S McKenna. Along with the clinical observation, there were many reports that were accessible to study in relation to advanced practice nursing in Eire, including the 1998 “*Report of the commission of Nursing: a blue print for the future*”.

Eire completed the transition of nursing to a degree program by 2002 and developed a pathway for nursing with the creation of both CNS and advanced nurse practitioner (ANP) posts. “*The recognition of CNS or ANP status will be characterized by extensive relevant experience, appropriate post registration educational qualifications and an extended scope of practice..... The development of specialised programs will be overseen by the national nurses council.* (p4-5)

In Cavan, the CKD advanced practice nurse was not a nurse practitioner (NP) but a CNS with accredited prescribing rights. This unique accreditation in Eire enables nurses from all areas with experience (not dependent on CNS or NP position) to apply for a prescriber's certification. Legislation was introduced in Ireland in 1999 called “Collaborative practice agreement for nurses with prescriptive authority, 2007” (CPA). Once obtained through a certified course, the CPA is very much position dependent, cannot be transferred, and must have a collaborating medical practitioner's signature. CNS McKenna passed this qualification and had a CPA documenting

- details scope of practice,
- details practice population,
- listing of specific medications and categories of medications (formulary).

This requires annual review and approval by employer and medical practitioner.
In terms of formulary the CNS is only restricted by scope of practice and is restricted to national Pharmaceutical Benefits Scheme equivalents including dialysis prescriptions. She is able to titrate the restricted Erythropoietin Stimulating Agents drugs. From a personal perspective the CNS McKenna found that her need to prescribe was not great. However it was a good competency to have in terms of practice.

Investigations such as pathology request were not a problem. Requested in the name of the clinic, under the specialists name on hospital forms signed by the CNS, the clients are able to attend any laboratory for their regular tests. Despite this she held no authorization for any other investigations such as ultra sound, Xray and other standard tests. Stratifying patients to be seen in the clinic was the role of the nephrologists. At Cavan, the CKD clinic operates within a multi disciplinary team format. It is held weekly and the CNS is kept busy ensuring all clients are up to date with their blood test monitoring prior to their clinic appointment. There are no designated nurse-led clinics however; telephone follow-ups are often done by her.

In observing the operation of the CKD clinic, each health professional had their own consulting area, seeing clients individually and joint discussion occurred infrequently during the actual clinic process. As with most clinics, there were a few clients who failed to attend. The CNS saw all clients after the nephrologists and some times before the dietitian. Her consult centered on the clients’ understanding of what the nephrologists had spoken to them about answering any questions and adding a small amount of education. I noted that she sometimes gave feedback to clients on issues that she had researched for them from a previous consult, providing them with materials and resources that helped to answer their questions.

The next day I discovered why there wasn’t a need for team communication during consulting time as I was used to in my own practice. The team met weekly to discuss the next clinic’s patient listing, as each mentioned their concerns whilst discussing the plan of care. This weekly meeting also served as an ideal time for mentorship and education. Although the CKD team was based at the hospital, the General Practitioners in Cavan region continue to have an active part in their clients’ management even after they commence renal dialysis because they are responsible for their medication. This is very different to the Australian practice where renal units often control the medications of those on dialysis leaving the GP without a current medication list.
European conference

The conference was the biggest I have attended in my career. With over 1200 delegates from all around the world it was quite overwhelming. The first night the president of Eire, Mary McAleese, encouraged us in her opening speech – “Put your piece on the table to see where it fits onto the picture to share with the world so that they can compare and build together”. This was exactly why I was here to learn from the global community, this was the mission of a Churchill Fellow. I too would have my turn to make a contribution to the learning of others during my presentation.

Two presentations of keen interest to me were cancelled from the program, both were from nurses in the UK with similar positions to my own, and whom I found out later had had their positions made redundant due to funding issues. At the time my own position’s funding was under debate back in Australia. The conference keynote speakers consisted of the foremost researchers and authors in the renal nursing world. It was an opportunity to update myself in the trends of renal nursing and meet in person those of whose papers and textbooks I had studied. It was interesting to hear that the challenges in renal care that we face in Darwin, Australia were the same globally; the need for shared client records, co-ordinated care, more accountability and the fact that renal units were unwilling for shared care approaches.

I took the opportunity to hear from nurses working in Romania, Sweden, Netherlands, UK, Saudi Arabia and an Irish haemodialysis client. Administrators of a large renal research study called DOPPS in which 20 units in Australia participated presented their report on global trends in renal treatments. Although Australia and New Zealand (ANZ) are linked together in the data collection ANZ have excellent dialysis clearance rates (the effectiveness of dialysis on the individual clients) in the world 2nd only to Germany according to this study and that made me proud that we deliver quality treatment in Australia. One interesting reported finding from the data collected was that travel time to access treatment was the single most important issue in haemodialysis treatment, with adherence less likely if >60 min travel time thus increasing risk of mortality.

Although there are often discussion and calls for more preventative action in relation to chronic kidney disease globally in this associations journal, “Renal Care”, it was disappointing that I could find no other renal nurse working in any primary health care arena attending this conference accurately reflecting the Australian picture at the Annual renal society of Australasia conference for renal nurses. With $65 billion spent globally on renal treatment annually (2008 figures) according to speaker
Dr. Plant from Eire and $55 billion in dialysis alone. It seemed as if the Northern Territory of Australia was really alone in its employment of specialized renal nurses in the PHC sector.

**Observations in Ghana**

Ghana has a socialized medical model within the traditional biomedical model with focus on a district base grouping. The use of advanced practice nurses, known as medical assistants, managing nurse-led clinics are an important part of their health system. Starting in Accra, the plan was to visit the main tertiary hospital in the country, Korle-bu teaching hospital, to understand the type of renal treatments available in Ghana and to whom they were available. A clinical placement was arranged with a medical assistant at a Non Government Organization clinic 5km from the district’s poly clinic and hospital in Yendi, a remote town in the Northern region.

**Accra sector**

Korle-bu teaching hospital is the finest in Ghana and has a renal unit with 20 dialysis machines. It is one of 5 hospitals in Ghana with renal replacement treatment options. Unlike nurses in Australia or in Europe the ward nurses in this hospital were not willing to freely talk and directed enquiries to their supervisors until I found myself waiting to speak with the Director of Nursing Services, Mrs Quaye. She was most cordial and helpful allowing time for us to speak freely about the work of renal nurses in Ghana and the necessity for them to have post graduate training. Currently there is no clinical post graduate study for renal nurses in Ghana and they would appreciate any help to provide it; Ghanaian nurses working in the renal unit are currently training on the job. Renal dialysis treatment is not covered under the national health insurance scheme. Therefore, very few people take it as a long term treatment option for chronic renal failure. We spoke about the medical assistants in the country and concerns at the change in the medical assistants’ education program which can now bypass basic nursing training and experience.

The next call was Legon, University of Ghana to determine what I could discover in relation to post graduate nursing training in Ghana as well as the training, role, and recent changes to the medical assistants. Unfortunately such reports are not as easily accessed in Ghana as in Eire or Australia and I had to be content with the sparse documents and news reports found through the institutes’ web sites and online. I am extremely grateful for the generous time given by library assistants in assisting me.
with searches and organizing computer laboratory time.

**Ghanaian Medical Assistants**

Medical Assistants have been a part of the Ghana health workforce since 1969. This designation is obtained after a registered nurse has practiced for at least three years and then undertakes an advanced diploma course; the Post-Basic Medical Assistant Program, at the Rural Health Training School in Kintampo, which until recently was the only accredited institution for such a course. The 18 month course consists of 12 months full time study covering a variety of subjects with a heavy emphasis on community and public health, followed by 6 months placement at a regional or district hospital. To undertake training students must pay quite high fees relative to other educational courses (Ghana news agency, 2009) and the placement is unpaid. The course equips graduates to work in the rural areas and at district health levels. Within Ghana’s health system qualified medical assistants have the opportunity to run their own private clinics.

Traditionally, medical assistants have emerged from a nurse-based education. This situation is now under threat with the government policy changes in 2006, calling for a greater supply of medical assistants. The high demand for medical assistants to service the rural areas has resulted in the formation of a 4 year stand alone diploma course with no previous nursing training, obtaining entry from their final year senior secondary school exam results (Hanvoravongchai, P. 2007). The original MAs are nurses with advanced practice skills and there was never any confusion within the public or professional view to their role and function in the health system. With the onset of a 2 prong system beginning in 2012, the confusion may begin. Currently at Kintampo there are 100/year nurse based students and 80/year direct entry. Ghana has also recently experienced the development of private universities and colleges offering tertiary education. Some of these colleges offer an American based style physician assistant course. Institutes such as Central University, Ghana are applying to have their physician assistants course accredited, advertising the qualification as higher than the MA and nurses, this will move these health professionals even further away from the nursing base from which the Ghanaian MA was founded. There is a lesson here for nurses in other countries; if they are not willing to work towards advanced practice qualifications and work in the rural/remote areas that so desperately need them, governments will adjust policy to meet the needs of their populations (Dovlo, Delanyo, 2004).
Before I left Accra the 8th annual general meeting of the Ghana Medical Assistants Association (GMAA) was held in Cape Coast and reported on in the news. There were reports that MA would be now regulated. If they are no longer nurses they are no longer under the nurses board for regulation. Those MAs commenting on the news report were quite appreciative of this announcement believing it will further enhance their role in the future (Ghana news agency, 2010).

**Chronic Kidney Disease Management**

According to the National Kidney Health Foundation in Ghana, (2008) there are very few physicians specializing as nephrologists. I never got the chance to meet a nephrologist during my short time in the country. Specialist renal treatment is not readily accessible to the population in Yendi where I visited to see the management of CKD by a MA.

Ghanaian health providers working in the “middle level”, non medical sector have been working under the “*Standard Treatment Guidelines*” (Ghanaian MOH, 2004) published by the ministry of health in 1996 and revised in 2004. The 1996 edition covered only acute conditions, the 2004 edition has been expanded to look at the management of chronic diseases. Chronic kidney disease is covered in the in the 2004 edition with clearly defined management, clinical goals and referral pathways in a similar way to the “*CARPA standard treatment manual 5th edition*” (2009) that practitioners use in the Northern territory of Australia.

**Mission clinic in Yendi**

For a week I worked alongside Mr Peter Bombande in the small mission clinic. A specialized psychiatric nurse, he was sponsored in 2004 by the Church of Christ mission to undertake his medical assistant training. As I have already reported, this training was a very expensive undertaking and I had wondered how the average nurse could afford it without sponsorship. Mr Bombande had been working in the same clinic prior going to the course for 6 years.

The mission clinic operates in a similar fashion to many others in Ghana, directed by the medical assistant, there are a number of other staff in the clinic team (Miniclier, Antwi & Adjase, 2009). It has a staff of 13 including a midwife, pharmacy attendants, computer data assistant, primary health care workers, a driver, grounds staff and security. There are staff from the ministry of health to assist the NGO in
performing a good service as well as a second medical assistant 3 days a week, usually an intern on placement at the district hospital.

Each day the MA and clinic staff will attend to approx 100-120 clients. This is possible due to the systemized flow of clients and a good use of the team approach. A client is seen by up to 5 health professionals throughout the course of their consultation. It is this flow that allows the medical assistant to concentrate on examination of the client and writing the prescription. About 10% of the clients seen have chronic diseases such as diabetes, cardiovascular and respiratory problems. Some of these clients are very regular in their visits to receive their medication, which can be prescribed for 3 months before the client needs to return for further prescription. Mr. Bombande uses the standard treatment manual, although he rarely consults it due to his years of experience, as well as a formulary from the Ghanaian Nation Health Issuance scheme which gives standard pricing. Initially I notice he keeps to those medicines he seemed to know well, however I came to realize its more a supply issue. Drug supplies are purchased by clinic to be dispensed to clients. Company representatives do the rounds of rural clinics, which is helpful to them in accessing stock but then limits supply to those particular drugs that the company produces. Cash flow for stock purchasing also has an impact. Although the angiotensin converting enzyme inhibitors are an important category of drug in preventing the progression of kidney disease in diabetics and are on the NIHS formulary the up front cost to this clinic to purchase, these drugs are prohibitive and therefore they’re not often prescribed.

Whilst the pharmacy is on site, the clinic has no laboratory workers. Apart from the point of care rapid tests for malaria and pregnancy, all other pathology must be referred to the local hospital. All clinics, government and private, are seen as part of the district health service and communication channels are very clear and straightforward. Pathology and Xrays forms in Ghana paid for under the NHIS are requested in the name of the clinic. Forms signed by the MA allow clients to attend any laboratory without charge.

A visit to the Yendi District Hospital was arranged whilst we were there and Dr Sampson Abankwah, the senior medical officer for the hospital, warmly welcomed me to the region. We discussed the management of CKD in Ghana and in Yendi region. Due to the high incidence of acute care problems, the screening and management of chronic diseases such as CKD has yet to become a priority. Diabetic
clients are often diagnosed in the clinics and referred for 6 monthly check ups at the regions base hospital in Tamale which is 110 kms away. There glycated haemoglobin (HbA1c) and renal function tests are available for monitoring of their condition. CKD clients in stage 4 could also be referred to Tamale if they wished to go. There is a dialysis machine there according to Dr Abankwah, but no trained staff at this time. It is therefore very rare for someone with CKD at end stage living in Yendi to undertake dialysis. Management for CKD is conservative, at ground level clinics, managing those with diabetes and hypertension with medication and lifestyle modification.

The Ghanaian medical assistant works autonomously without direct supervision, although the reporting framework within the district and the regular visits by various department of health officers allow for a type of informal mentoring to take place. They work within a defined scope of practice and are governed by their own competency (the government is currently working on regulations). In terms of managing CKD, the MA and his team commences diabetic and hypertensive medication, titrating doses on reviews. In addition organise pathology investigations and give education regarding lifestyle behavior and diet. Referral to a medical officer is made as required according to the standard treatment guidelines. Management of type 1 diabetes is out of the MA scope of practice and so is titrating of insulin for Ghanaian MAs.

The acute care needs of the population in Ghana where malaria is still endemic are overwhelming and management of chronic diseases often takes second place, similar to some remote-area primary health care posts in Australia. In Ghana, some of the PHC clinics formed special clinics within the daily routine to ensure that chronic conditions were attended to. At Yendi they had a chronic wound clinic 3 days a week. I did hear of other clinics having medication clinics for their hypertensive and diabetic patients operating on special days. Preventative educational programs run by national heart foundation and kidney foundation has not yet made their way to such rural areas but they are operating in the regional capitals.

**Observations in Cuba**
Cuba has a world famous population based socialized health system. My knowledge was limited concerning the role of advanced nurses in the system prior to this study. Cuba has a preventative nephrology program that has been published through medical conferences, and for this reason I was interested to see the role the family practice
nurses have in chronic kidney disease management. The itinerary was based in Habana. Meeting with advanced practice nurses, known here as clinical nurse specialists working in hospitals and family clinics as well as visits to the institute of nephrology, ministry of health, nurses council would provide me the opportunity to explore my fellowships objectives. Due to the Spanish language barrier, I was unable to arrange official visits prior to departure and on arrival I found myself in a difficult position of having a tourist visa and not an academic or scientific one. This was required to grant me access and for official observation of institutes. I, however, was very blessed to meet some wonderful people who helped to fulfill my visits objectives. On arrival my pre-arranged guide and interpreter helped me arrange meetings with the ministry of health nursing division and the Cuban Institute of nephrology. This was very worthwhile.

Cuban Institute of nephrology

Each tertiary hospital has a designated institute so there is one for nephrology and the Preventative department is only one section. My first meeting was with the Director of Preventative Nephrology Dr Miguel Almaguer, nephrologist who kindly outlined for me the management of CKD in Cuba. Being a population based health system they are very aware of the epidemiology of their country. Cuba like other nations is facing an aging population with 17% of the population over 60. The current population is 11 million and they believe that there are 11,000 with CKD (eGFR <60). This is similar to mainstream Australia (excluding indigenous Australians) likewise they have an increasing number of patients commencing haemodialysis every year. I found this interesting because despite their emphasis on preventative care, the aging population appears to be a major contributing factor with 65% of CKD due to diabetes and hypertension and roughly 5% from glomerular nephritis.

1996 saw the commencement of Cuba’s national chronic kidney disease program and the establishment of the institute and the preventative department of nephrology. There is a national co-ordinator of nephrology for the whole country, with 48 haemodialysis units spread across 14 provinces. All the units are housed in tertiary or secondary hospitals. There are no restrictions to accessing haemodialysis treatment, but peritoneal dialysis has not been available due to the availability of supplies. This is currently in the process of changing with a new trial recently commenced of 400 clients on automated peritoneal dialysis. Unlike in Australia this is
a very costly treatment option.

The national chronic kidney disease program works as part of the population based health care system. This is very different to the Australian system where the nephrologist is typically housed within the tertiary hospital and rarely holds clinics within the public PHC sector. Practice’s such as my own in Australia, with a monthly nephrologist visit being an exception. The Cuban nephrologists hold clinics in a shared care arrangement which is what we have been trying to achieve at Danila Dilba with some success. They consult within the polyclinic system in the provinces with clinic frequency dependent on numbers of clients not the availability of nephrologists. There is a Hepatitis B vaccination program for all diabetics as a pro-active measure which is not standard practice within Australia. Cuba developed their own erythropoietin stimulating agent for the treatment of anaemia related to chronic disease in 1998 and this had made a great difference to the mortality of CKD patients. Cuba has prioritised the development of their pharmaceutical industry due to the collapse of the Soviet Union and the blockade by the USA prevents the importation of many goods.

My next meetings were with the director of nursing for the institute, Roynel Rodriguez and his assistant Enrique Castro. In Cuba, CKD stages 1&2 are managed fully by family clinic team and there is referral at stages 3-5 to the nephrologist. At stage 4 ideally they will visit the pre-dialysis clinic at the district hospital. With adequate nephrologists in the system they are able to assist in the stage 3 treatment which in my own Australian practice numbers prohibits such referrals except in urgent cases.

Currently in Cuba today there are 7-10,000 family physicians who are the corner stones of the 14 health regions. This gives around 1:1,100 ratio of family doctor to population. The ideal is that each family clinic is responsible for 600 families. Although government policy was not in favour of nurse-led clinics, the nurses whom I met thought that the specialist nurses are doing very well in such areas where there was no doctor. The specialist family practice nurse I met had at one time been without a doctor in their clinic for nearly 4 years but, currently had one. Unlike Northern Australia and Ghana, Cuba has no official treatment manual for advanced practice nurses reflecting the official reliance on having a doctor on staff in every clinic.
Advanced Practice Nursing Cuban Style

Cuba has two streams for advancement in nursing. There is the purely academic stream that results in a master degree, and otherwise a clinical nurse specialist that results in an advanced diploma. It is, however, the advanced diploma stream that is the highest level of clinical nursing in Cuba. This appears to be well understood within the health care profession but as for the general populations understanding this was not explored in the study. Renal nurses can undertake a nephrology post basic training of 1 year, but this does not result in salary increase. There is also a diploma course which doesn’t either result in any salary increase. Masters of applied science (nursing) is not available in renal nursing and renal nurses wishing to have a masters qualification often elect to study the ICU or emergency nursing streams, this is taken over 5 years part time. A clinical specialist course is available by 3 years full time, but is not considered a masters course as it is clinical based. This is available in PHC and ICU. The Cuban renal nurses according to those I spoke with are currently working to have their own stream for a clinical nurse specialist qualification in nephrology. All education is free and taken by competency based modules each one building upon the next. All the nurses I met and talked with had undertaken either the ICU or PHC clinical specialist training. Once again, comparably to Ghana there was a heavy emphasis on public health within the PHC course, and the nurses explained that it was important to be able to give all round care to their clients in the community.

In talking to the family clinic nurse specialist, I found the answers to my own model of care. In her practice, she managed CKD clients, administered their medications and counselled them through the transition to renal replacement therapy. Once they commenced dialysis, her care did not stop, she continued to be their primary care provider. Her mode of practice often consisted of home visits which is a feature of the Cuban PHC program (Anderson, 2008). We compared our models of care and job descriptions. Her speciality was education and she practiced as a clinical nurse specialist most of the time and as a nurse educator at the local school of nursing when required. Her advanced skill included women’s health checks and she was surprised that I did not have this competency, working in general practice.

The family clinic basic work group was made up of doctor, nurses and medical students. There is often also a psychiatrist, social worker and gynaecologist attached to the clinic. In the Cuban system, as with the Ghanaian system, between the clinic and the hospital is the polyclinic, which acts as a referral centre and where the
specialists can work from. With many infectious diseases either eradicated or under control, the number one killer in Cuba today is heart disease, and preventative care is the ultimate goal of the entire system.

One unexpected privilege during my Cuba visit was an invitation, by Dr Jose Pertilla from the health ministries department of international affairs, to a presentation he was going to give to another group of Australians. Unconventional Conventions is a small family owned company organising extraordinary gatherings for health practitioners. Over the next few days I was presented with a wonderful overview of the Cuban health system that would otherwise have been impossible given my visa limitations.

A literacy program was one of the first major undertakings by Castro after the revolution in 1961. Commencing with the literacy rate of 47% the rate had climbed to 97% within a few years. This appears not so well known within the global health community although it has had good publicity at the time. I found myself wondering, “If health and literacy were a joint program in remote Australia, would the health outcomes for the Indigenous peoples living there be improved?”

According to Dr Pertilla when asked what can Australia learn from Cuba’s PHC system “Cuba’s health system can not be replicated, it has taken a revolution and 50 years of continual change for us to succeed.” The World health organisation has noted Cubas amazing ability to provide a world class standard health service in a country that has a GDP 10% of most western nations. The prioritisation and commitment to health care by Cubas government is what makes it succeed. In times of economic down turn governments in Australia are making cuts to health expenditure. Cuba in its hard times post the collapse of the Soviet Union actually increased theirs.
**Conclusion**

Working with autonomy, undertaken post graduate study, respected by colleagues as an expert in their field and holding advanced competencies is what sets an advanced practice nurse apart. These are some global commonalities found in this study, although in each country, titles are very different.

Advanced practice nurses working in the PHC sector, observed in this study, have their individual specialties. These specialties enhance their overall care but do not exempt them from study specific to the PHC sector. Unlike hospital or renal unit based Nurse Practitioners, a specialized renal nurse working as a Nurse Practitioner in a PHC setting requires a generalist course of study with a public health focus.

The management of CKD within the framework of the PHC is managed by the advanced practice nurse however when specialized programs are developed this ensures that the needs of chronic disease clients are not overlooked in urgency of acute care issues.

When nephrologists work out to the primary care clinic this not only improves access to care, it provides opportunities for education and mentorship which then enhances the capacity of the PHC team to provide CKD clients with improved management outcomes.

The results of this study will be shared amongst colleagues and other stakeholders within the rural remote and indigenous health primary care sector. Papers and dissertations will be presented at national conferences for nurses and health stakeholders in renal and PHC sectors and submitted to nursing journals for publication.
**Recommendations**

Australia should continue to formulate the advanced practice renal nurse role in a general practice setting even though it appears not to be utilized in the global areas visited. Funding should be secured for such positions to continue and expand chronic disease programs and with specialized nurse led clinics at a primary level not only in the Indigenous community but within the general populace as well.

Nurse practitioners authorized in Australia working in general practice should have their specialization as well as advanced generalist competencies. These should include public health studies as well as vaccine and Pap smear provider qualifications.

Nursing organizations and institutions should encourage and support nurses to become competent in advanced practice to work in the rural and remote areas through appropriate post graduate courses. This will ensure an adequate primary health care nursing work force for the future and limit the call for non nursing personnel to be added to the workforce.

Mentorship of primary care health practitioners by nephrologists and tertiary renal unit staff should be seen as a way to foster awareness of chronic kidney disease management and empower the workforce.
References

NT renal services (2008), Renal services strategies. NTG