Report by Dale Jones
2006 Churchill Fellow

To study the ‘Ponseti Method’ for the treatment of Congenital Clubfoot and its application in an Indigenous setting.

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Signed: .............................................   Dated: .................................
INTRODUCTION:

Exponential opportunities! My Churchill Fellowship has enabled me to study the ‘Ponseti Method’ for the management of clubfeet at Iowa University Hospital with Professor Ponseti and then the implications for its practical application within an Indigenous setting in Uganda.

Added to these essential goals, I have had the opportunity to experience so much more. Most significantly it has been a major networking opportunity with people from all around the world with a special interest in clubfeet management.

I would like to acknowledge Professor Ponseti and his orthopaedic department at University of Iowa Hospitals and Clinics (UIHC) for welcoming my visit. Dr Ponseti has been very approachable, accommodating and interested in my work with Aboriginal people of Australia. Joyce Roller, his personal assistant has also been most helpful in my visit.

It is a rare opportunity to visit a developing nation and be able to learn from their wisdom and experience, so as to improve current methods in Australia. Uganda has wholeheartedly embraced the ‘Ponseti Method’ as the best evidence based treatment for Congenital Clubfoot and is currently working within a five year plan for sustainability. Acknowledgement to Professor Pirani who has welcomed my visit to Uganda and Marieke Steenbeek-Driese – Project Administrator – for her kindness in my daily support and nurturing.

My special thanks to the Winston Churchill Memorial Trust for providing me with the amazing opportunity to travel overseas and gain a wealth of knowledge and experience so that I am able to provide the best practice for the management of Congenital Clubfoot.

Finally, I would like to mention a very special ‘Thank You’ to my wonderful husband who single-handedly cared for our four young children during my time away and is always encouraging me to strive and achieve my best. Without his invaluable support I would have been unable to follow my pursuit of excellence.
EXECUTIVE SUMMARY:

PERSONAL DETAILS:
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PROJECT DESCRIPTION:
Investigate the theoretical basis and practical application of the ‘Ponseti Method’ for the management of Congenital Clubfoot in two settings. Spend two weeks with Professor Ponseti the orthopedist from Iowa who created this management protocol. Secondly, follow-up with three weeks in Uganda to experience the practical applications of this method in an Indigenous setting, in order to assist in the identification of barriers and solutions within the Australian Indigenous setting.

HIGHLIGHTS:

a) Iowa: Iowa City, University of Iowa Hospitals and Clinics
• Meet with Professor Ponseti, author of this conservative management and have opportunity to observe, discuss and practice under his wisdom.
• Attendance at the ‘Ponseti Symposium’ and hear of the latest research papers as well as receive specific education and training in the method
• Worldwide networking opportunities of professionals from many countries providing outstanding ‘Ponseti Method’ management.
• Shadowing a paediatric physiotherapist, Kathi Anderson in the Neonatal Intensive Care Unit.

b) Uganda: Kampala, Uganda Sustainable Clubfoot Care Project
• Spend time with Professor Pirani, the Project director
• Coached by Marieke Steenbeek-Dreise, the project administrator
• Involved with planning meetings of the project management team
• Support supervision visit to Fort Portal with local team
• Learning to make the clubfoot braces from local Indigenous workers at Katelemwa rehabilitation hospital

CONCLUSIONS:
The ‘Ponseti Method’ has outstanding published and anecdotal evidence as the best ‘Evidence-based Practise’ for the management of Congenital Clubfoot. The technique can be applied not only to newborns, but also following delayed treatment and poor management with continued fantastic outcomes. It is of utmost importance to effectively implement the program on a regional, state and national level so that all children are able to access this intervention. Practical application of the method needs to be coupled with changes in education and training from tertiary institutions to provide sustainable impacts.

RECOMMENDATIONS FOR DISSEMINATION AND IMPLEMENTATION:
Lessons to be outworked in the following recommendations to provide a scaffolding of sustainable outcomes:
1. Local and regional education and training of doctors and allied health professionals.
2. Sensitization of local government and non-government organizations at an administrative and ‘ground’ level.
3. Sensitization of local community through educational evening as a means to improving awareness of the ‘Ponseti Method’.
4. Initiating contact with tertiary institutions for the inclusion of the concept of the ‘Ponseti Method’ in undergraduate training for therapists and medical doctors.
5. Collaboration with other therapists and surgeons in Australia already sensitive to the ‘Ponseti Method’ to form an interest group for training and parental advice.
6. Finalize epidemiological research paper on the incidence of clubfeet in the Northern Territory as a means to formalizing projected levels of resources required for the region.
7. Explore the possibility of developing a local workshop to make the clubfoot braces.
PROGRAMME:

OCTOBER 8TH - NOVEMBER 12TH 2006
(5 weeks)

- October 8,9: TRANSIT
  - Transit from Katherine, Northern Territory to Iowa City, Iowa, USA

- October 10-21: UIHC(University of Iowa Hospitals and Clinics)
  - 2 days shadowing a Paediatric Physical Therapist in the Neo-natal Intensive Care Unit, Kathi Anderson.
  - Attending clubfoot clinics with Dr Ponseti
  - Visited general orthopaedic clinic with Dr Jose Morcuende (associate professor of orthopaedic department)
  - Ponseti Symposium course 13-14th October
  - Met John Mitchel, orthotist of ‘Ponseti’ technical tools

- October 21-22: TRANSIT
  - transit from Iowa City to Entebbe, Uganda

- October 23 – November 10: USCCP (Uganda Sustainable Clubfoot Care Project)
  - 24th: Dr Mugiso – Department of Education for Surgeons
  - 24th -26th: Professor Pirani – Project Director
  - 24th: Dr Naddumba – country Project Director
  - 25th: Dr Nathan – Dean of Paramedical Services
  - 26th: Dr Waiswa – Orthopaedic Surgeon for Project
  - 30th: Christine Waiiseme – physiotherapist at Katelemwa (children’s rehabilitation center)
  - 31st: Fort Portal – regional community hospital for support supervision of clubfoot clinic
  - 4th-5th: Sponsored child visit to remote Western Ugandan Village
  - Attendance at clubfoot clinics on Mondays and Thursdays

- November 10-12: TRANSIT
DEFINING CONGENITAL CLUBFOOT:
Congenital Clubfoot – or Talipes Equinovarus (TEV) – is a condition that occurs during gestation. The deformity becomes evident during weeks 16-20 of gestation and is characterized by the following components of the deformity:
- CAVUS: a high arching of the foot
- ADDUCTUS: foot pulled in towards the opposite leg
- VARUS: heel tilted in towards the opposite leg
- EQUINUS: foot pointing downwards

Initial theories of cause pointed to gestational environmental factors but have since been disproved. There is now strong evidence of a genetic factor in the prevalence of Clubfoot. The University of Iowa is providing some initial evidence of this in various research projects.

The incidence of Clubfoot varies across all people groups (1):
- Caucasian incidence = 0.6-1/1000 live births
- Aboriginal incidence = 3-6/1000 live births
- Maoris incidence = 2.74/1000 live births

The reason for this is not clearly understood.

Clubfoot is also 3 times more common in boys than girls and can occur in one or both feet of the child.

CLUBFOOT IN KATHERINE:
During 2005 a small group of physiotherapists were networking regularly for professional development and social occasions. Some babies with clubfoot began to surface and following discussions with the therapists a consensus to treatment regime could not be identified. It became apparent that all major children’s hospitals around Australia were in fact managing this, the most common congenital deformity of the foot, with varying protocols. Thus the internet was accessed in an attempt to identify current treatment methods. The ‘Ponseti Method’ was noted to be possibly the best practice intervention offered for clubfeet.

There is across all medical professions currently, a push to be providing the best ‘Evidence-Based Practise’ for all medical problems. The intervention is thus to be based on good empirical data providing excellent objective outcomes for the client. After discovering this unheard-of management protocol I followed up with a literature search through the local health library to understand the ‘Ponseti Method’ more effectively. It became quickly apparent that the ‘Ponseti Method’ was in fact the best evidence-based practice for the management of congenital clubfoot. The most recent research paper sites results from a 40 year longitudinal study from patients treated with this method displaying excellent outcomes – not yet published. Following this discovery, it became a topic of much discussion and discovery. I decided to apply for a Churchill Fellowship in
an effort to become an expert in the technique, and set up processes for providing this best evidence-based practice particularly for the Aboriginal population that we service who have a much higher incidence than the rest of Australia.

**PONSETI METHOD:**
The ‘Ponseti Method’ is a conservative approach to management. Traditional management has involved radical surgical releases of soft tissues and joints leading to much scarring and poor functional outcomes. A recent paper following patients 25 years after surgical releases demonstrates the very poor outcomes of this intervention technique (2). The Ponseti Method offers patients a treatment affording them normal growth, development and function.

The ‘Ponseti Method’ involves stages of manipulation and maintenance. Following identification of the Clubfoot the baby receives weekly manipulations and casts for 4-6 weeks, gradually stretching the foot into a ‘normal’ position. Once the appropriate position is gained, a tenotomy of the Achilles tendon is usually required – performed under a local anaesthetic only – and then a final cast for 3 weeks. After removal of this cast the baby is required to wear a foot abduction brace in order to maintain the corrected position, for 2-4 years until the foot has slowed down in its rapid growth phase (5).

**IOWA INSIGHTS:**
On October 11th, I began my adventure which was to be my Churchill Fellowship. Iowa was to be the first destination, but a lengthy journey and forty hours in transit preceded my arrival. This journey included a bus to Darwin from Katherine, and flights to Sydney, Los Angeles, Chicago, Cedar Rapids. In Iowa City, I was based at the University of Iowa Hospitals and Clinics (UIHC) within the department of Orthopaedics. Dr Ponseti, Professor Emiritus of the department, is very happy to have professionals visit from all over the world, and become familiar with the ‘Ponseti Method’. His passion to see the technique well established as the primary intervention for Congenital Clubfoot is noble and inspiring. At 92 years of age he is still a strong and diligent advocate for this conservative method that allows children normal life opportunities. Dr Ponseti’s clubfoot clinics run on Mondays, Wednesdays and Fridays.
On my first day at the UIHC I met with Bruce Miller, the head Physical Therapist and he allowed me to shadow a Paediatric Physiotherapist working in the Neo-natal Intensive Care Unit for 2 days. I accompanied Kathi on her usual rounds and realized her passion for ‘Developmental Therapy’: a ‘whole-child’ approach to multi-disciplinary intervention for premature babies. The concept is to limit the baby’s stimulation (due to light/noise/touch etc) in an effort to reproduce the ‘in-utero’ environment and maximize normal development. It was helpful to see babies in this setting as I am often encountering in my position, babies who have started in the Intensive Care Unit and then returned home.

At the end of the first week in Iowa I attended the ‘Ponseti Symposium’ with more than 40 other health professionals including: orthopaedic surgeons, general practitioners, physiotherapists, podiatrists. The aim of the course is to teach the patho-anatomy of clubfeet and then the ‘Ponseti Method’ in detail. The opportunity was used to present the most recent papers on clubfoot intervention and this was important information to take back to Australia and use in the education and sensitization process of professionals and the general community in Australia.

Throughout my time in Iowa the excitement and enthusiasm of the mothers of the babies with Congenital Clubfoot, for Dr Ponseti and the treatment regime, became very contagious. There was such a strong sense of trust, hope and discipline in applying the sometimes very awkward regimes, for the best opportunities for their children. Parents busily filmed and photographed their regular appointments with Dr Ponseti and showered him with gifts of gratitude. The anecdotal evidence for this management protocol was mind-blowing.

The regular discussions with Dr Ponseti to tease out questions and concerns with other health providers was an important tool in developing personal confidence in applying this procedure back home in Australia. Dr Ponseti dealt with a well educated, Caucasian population and my clientele in Australia comes with a very unique and individual set of barriers and difficulties, thus my Fellowship next led me to Uganda.
UGANDA EUPHORIA:
Again after another lengthy but very exciting journey I ended up in Uganda in order to visit the Uganda Sustainable Clubfoot Care Project (USCCP) based in Kampala. It has always been a childhood dream to work in Africa, thus to be able to visit for my professional experience was like a dream come true and quite a euphoric experience.

The USCCP is the second stage of a dream of Professor Pirani, a Ugandan-born Indian Paediatric Orthopaedic Surgeon based in Canada. Growing up for many years in Uganda, Dr Pirani has a special connection with the country and the people. Once Dr Pirani learned of the ‘Ponseti Method’ he was converted to this conservative technique and became excited about the possibilities of introducing it into the Uganda Health Care System.

Uganda has a population of 23 million with 10 000 babies born each year. With an incidence of approximately 1 per 1000 live births, there is a huge prevalence of Clubfeet due to the sheer volume of births: 1000 babies with Congenital Clubfeet are delivered annually. The deformity of Clubfoot in Uganda has traditionally been seen as an operable disease. Due to the very small number of available orthopaedic surgeons in Uganda there have been historically a very large proportion of children unable to access the surgical technique thus growing up with a ‘neglected’ clubfoot deformity. This deformity, like many others in Uganda, then becomes the initial step in the downward spiral of disability, dependency, demoralization, depression and despair. Furthermore it results in a decreased standard of living for the entire family and a burden to the community. The ‘Ponseti Method’, due to its essentially non-surgical approach offers the opportunity of intervention and treatment within a public health approach.

UGANDA CLUBFOOT PROJECT
In 1999 Professor Pirani, with his team, set up the Uganda Clubfoot Project (UCP) with a view to educating local health care workers in the Ponseti Management. This was a five year project funded by the Rotary Foundation from 2000-2005.

The Uganda Poverty Eradication Plan released in March 2002, cited ill health as the most frequent cause and consequence of poverty. The burden of the disease and lack of available resources allowed the project plan to be able to marry with the goals of the ‘Poverty Eradication Plan’. When coupled with the first of the United Nation’s Millenium Development Goals – Eradication of Extreme Poverty and Hunger – the project sought to be an intrinsic part of combating poverty as a result of a treatable deformity. Local Orthopaedic Officers learning the Ponseti Method in an undergraduate setting would provide the opportunity of eradicating neglected clubfoot. At the completion of the five year project it was obvious that the Ponseti Method was a viable solution for treating clubfoot, but a further period would be required in order to ensure the sustainability of this inexpensive and accessible intervention. Thus, the second stage of the sustainability plan was dressed as the ‘Uganda Sustainable Clubfoot Care Project’ (USCCP), another
five year plan funded by the Rotary Foundation. This allowed the continuation of the three fold plan to (3):
1. Build consensus
2. Build capacity to detect clubfoot
3. Build capacity to treat clubfoot.
A major ingredient to the sustainability of the clubfoot management is the developing of regional clubfoot clinics in various regions across Uganda.

PROFESSOR PIRANI:

I was very fortunate that my visit to Uganda coincided with a visit with Professor Pirani to the USCCP. Thus my first week included attendance at various meetings with Dr Pirani allowing a glimpse into the administrative side of the project. It was a very important lesson to learn the extreme importance of seeking out the support of educational facilities, specialist training programs and the state health department. Support of each of these components was crucial in setting the stage for a successful sustainable approach.

Orthopaedic Officers in Uganda provide the manipulation and casting component of the intervention. The training for the Ponseti Method is offered in the undergraduate setting and practical experience is given through attendance at the clubfoot clinics at Mulago Hospital. I was afforded the opportunity of visiting the training school as well as assisting in the practical training dimension during a clubfoot clinic setting.

The need to hurdle many unique barriers for the successful implementation of the project was evidenced:
- Lack of available materials
- Few jobs available for the recently trained officers
- Huge numbers of officers to coordinate into the practical sessions at the clinics.
UGANDA SUSTAINABLE CLUBFOOT CARE PROJECT:
The project management team consists of:
- Marieke Steenbeek-Driese: Project Administrator
- Dr Naddumba: Country Project Coordinator
- Dr Waiswa: Orthopaedic surgeon
- Mr Derise: Senior Orthopaedic Officer
- Mr Henry: Orthopaedic Officer.

Marieke agreed to be my contact and support during my stay in Uganda. Marieke and her husband Michiel are expatriates from Holland who have lived in African countries for 16 years and provide a wealth of insight and knowledge of African culture and contacts. Marieke was an invaluable support and was always willing to honestly share of her insights and difficulties in ever-striving to achieve the project goals. I attended the Clubfoot clinics on Mondays and Thursdays and was involved in the practical application of the casting procedure. This was an important part of developing confidence in my practical casting skills.

Members of the project team aim to visit various regional, newly established clubfoot clinics every 4-6 weeks in an effort to review, problem solve and offer assistance to the orthopaedic officers establishing the clinics. During my second week, I accompanied two of the team on a support supervision visit to Fort Portal – a regional hospital in the Western Region of Uganda. The visits consist of meeting up with the hospital Medical Superintendent, offering a sensitization session and attending the clubfoot clinic. This was a very interesting opportunity to learn from locals of the many issues facing Uganda generally and the project specifically. The widespread issue of corruption was discussed and its specific impact on the project goals. Corruption is yet another huge difficulty to the successful application of the project goals. The energetic tussle for the individual Ugandan to overcome extreme poverty seems a large platform from which diving into corruption is sadly a welcome choice for many. Some of the regional centers are succumbing to a corrupt regime and charging mothers for the plaster of paris for the casting, the braces for the maintenance, even though these things are offered free through the project.
KATELEMWA REHABILITATION HOME:
Katelemwa is run by CBMI, a long-standing Christian mission servicing the people of Africa. As well as providing rehabilitation support through therapists and orthopaedic officers, it houses a fantastic orthopaedic workshop delivering high quality products: crutches, Cerebral Palsy postural chairs, wheelchairs, prosthetic limbs, calipers, braces etc.

I was fortunate enough to be able to spend some time firstly with the local physiotherapist and be involved with the clients she services. Secondly I spent 2 consecutive days learning how to make the Steenbeek Foot Abduction Brace (SFAB). This brace was designed by Marieke’s husband, Michiel, in an effort to provide an affordable, brace made from local materials to be available for the poor population of Uganda. Unlike the ‘Ponseti Brace’ $350 at cost price, the SFAB costs $6! I have taken numerous notes and photos in an effort to be able to reproduce the shoes and my training in Australia.

SPONSORED CHILD VISIT:
An extremely special part of my trip to Uganda, included the opportunity of visiting a child that our family sponsors through ‘Compassion International. Daphine is 8 years old and lives in a remote village in Western Uganda. So remote is the village that I am one of the first ‘muzungu’/white persons that most of the village has ever seen. I was able to visit the project and have a meal with Daphine’s family. It is a very humbling experience to be served with such thankfulness and love for a very small sacrifice of $40 a month.

The visit even became another opportunity of sensitization as I chatted with the project directors of the purpose of my trip to Uganda and discussed the intervention strategy even available to children in this village. The project workers did not know of this situation and were very excited of the opportunity as they particularly support the ‘poorest of the poor’ and disabled through the project funds. Compassion International supports 60 000 children across Uganda and thus would be a wonderful tool to support the sensitization of the Ponseti Method through many remote villages. I was able to discuss this option with the USCCCP management team.
CONCLUSIONS:

The Ponseti Method is definitely the best evidence-based practice for the management of Congenital Clubfoot. This conservative intervention is suitable for newborn babies and older children following delayed intervention or poor management of the deformity.

Sadly, it is a management technique poorly recognized by the Western world where orthopaedic surgeons and thus surgery is more readily accessible and acceptable. Sometimes failure to offer the Ponseti Method is due to a lack of awareness of the protocol, but often it is a choice to ignore the fantastic documented outcomes. In the developing world it is a well-received protocol to manage a high prevalence of the most common congenital foot deformity that threaten to throw the child against a steep gradient of disability, dependency and demoralization.

Although fairly easy to learn, the Ponseti Method requires an extended time of practice and specialist instruction to ensure a confidence and proficiency that results in continued ideal outcomes. A small percentage of Congenital Clubfeet is more rigid and resistant and requires a slightly different technique for effective correction (4). It is of utmost importance that the Ponseti practitioner pays careful attention to the resolving deformity in order to identify the ‘Complex/Atypical Clubfoot’ that follows this resistance and to provide the correct intervention.

In order to achieve a sustainable approach of the Ponseti Method for the management of Congenital Clubfoot, it is imperative to foster strong links with educational facilities. Until this technique is fully recognized by the training facilities, it will not become an expected intervention standard. These links need to be developed with a view to changing the baseline for the future. Coupled with this vision is the day-to-day commitment to sensitize the current professional workforce of physiotherapists and orthopaedic surgeons already involved in treating clubfoot. If a developing nation is able to include the Ponseti Method into its Health Care system, then surely with all the resources of the Western world, we can do similarly.

As on the ground training occurs it is also helpful, as modeled in Uganda, to develop a data collection system so as to formalize the correct incidence and thus make projections for local resources required to manage the deformity. Intervention requires an extended period of follow-up, initially weekly for 4-6 weeks and then extending to three monthly and six monthly. This follow up is extremely important to monitor the corrected deformity as the foot continues to grow rapidly until six years old. It is also an important part of the intervention as a means to supporting the family in maintaining the expectations of the treatment regime. Relapses identified early are able to be well-managed by the indicated treatment modality: another burst of casting, anterior tibial tendon transfer (ATT) (4). Unlike the radical joint releases, the ATT is a suitable alternative in relapses.
as it does not invade any joints and thus maintains the excellent outcomes provided by the Ponseti Method.

Following the initial casting series, a foot abduction brace (FAB) is used to maintain the correction and prevent a relapse of the deformity. Each Ponseti expert has their own individual style of hand placement which is confusing when learning from more than one facility but demonstrates that the results are still reproducible in so far as the basic principles are adhered to. Also, various FAB are used in various locations, and it is important to note that the $6 brace made in Uganda is as effective as the $350 brace fabricated in Iowa.

Specific implications are evident when working within a different people group and particularly an Indigenous setting. Being aware of the barriers significant to the people and region you are working with is an important ingredient in the success of the intervention method. Uganda’s biggest barriers are poverty and immense population numbers coupled with awareness of the alternative intervention. Katherine region’s biggest barriers are language/cultural differences and a small population over a huge physical area.
RECOMMENDATIONS:

Being exposed to clubfoot clinics and training in two very different locations have led me to make the following recommendations for Australia:

1. Local and Regional Training of the Ponseti Method

I wish to offer training programs in the Ponseti Method combining the theoretical information as well as the practical guidelines and experience. Initially I would offer this within the current district I work, Katherine region. This would include government and non-government organizations, physiotherapist and transdisciplinary therapists in the region. At my workplace there is a high turnover of staff, and although this is bad for the department it would provide a means to spreading experience of the Ponset Method around Australia as staff return to many locations from across Australia.

On a regional level I would also like to offer workshops for therapists across the Top End and Northern Australia, as a follow-up to some basic training already received. It is apparent that training needs to be followed up to ensure confidence and proficiency in the technique application.

In the Top End there is only one available orthopaedic surgeon to do the tenotomies. Thus I would also hope to work with him in identifying other local experienced General Practitioners to be available to perform the tenotomies due to the infrequency of his visits to Katherine.

As part of the training program it is important to identify procedures of casting, tenotomy and bracing to be performed in the acceptable manner.

2. Sensitization Programs

Integral to the effectiveness of the Ponseti Method is the awareness of involved service providers about the technique and its effectiveness to ensure appropriate detection and prompt referral. Katherine region is serviced by three non-government health boards as well as a government health service, for whom I work. Firstly it is important to meet with the administration of the health boards for sensitization and also offer this to the staff on the ground.

Many pregnant women in Katherine have an ultrasound during their second trimester and thus the possibility of early detection and early sensitization of the Ponseti Method. This would also be beneficial for planning service and compliance with the intervention method.

The remote team at my workplace visits remote communities and health centers and thus it is crucial to sensitize them well so that in turn they are able to provide formal and informal sensitization sessions.

A local community sensitization session highlighting my trip but also explaining the Ponseti Method clearly, is another worthwhile opportunity to inform the local
community. This opportunity always leads to an informal spreading of the information and knowledge, personally and professionally.

3. **Tertiary Institution Partnerships**
In order to achieve sustainability of the Ponseti Method in Australia it is necessary to link with tertiary institutions to revise current teaching practices. My plan is to contact Physiotherapy faculties, initially at one or two institutions to initiate sensitization of the Ponseti Method. Due to the large thrust for evidence-based practice in Australia, I am confident that the Ponseti Method will be well received to finally become included into the undergraduate program. After tackling the physiotherapy faculties, medical faculties need also to be contacted to pursue a similar plan.

4. **Australian Ponseti Practitioner Network**
While studying with Dr Ponseti he discussed with me the few Ponseti Practitioners that are currently practicing around Australia. I would like to contact each of these professionals and gain their consent to formalizing a network of contacts. The purposes of this group would be to:

- Share advice about complex presentations and treatment
- Be a resource for parents in Australia to access information and advice on the Ponseti Method
- Be a joint professional body to work together for a sustainable future of the Ponseti Method through education facilities and in practice

5. **Epidemiological Research and Data Collection**
Recently I began collecting data with a view to producing research about the incidence of Congenital Clubfoot in the Aboriginal population in the Northern Territory. A similar study in Western Australia has already been compiled and cites the Aboriginal population as having one of the highest incidences of the world. This information is also useful in making formal projections of expected numbers of the deformity in particular regions and thus plan for the practical and professional resources required to apply the Ponseti Method. This objective tool is very helpful on an administrative level for service provision and budgeting.

Data collection on the incidence of clubfoot is very difficult in the Northern Territory as there is no central register. Thus contact must be made with the medical records departments at each of the hospitals.

6. **Clubfoot Brace Workshop**
After visiting the orthopaedic workshop in Katelemwa and learning how to make the Steenbeek Foot Abduction Brace from local materials, I have begun to dream! Currently the braces we are using cost $295, come up from Adelaide, and are made from thermoplastic which is very unwelcome in the tropical climate
of the Northern Territory. I am hoping to make some enquiries about setting up our own brace workshop in Katherine to make the braces from local materials. This would have a fantastic possibility of achieving greater goals than just producing locally made braces: an opportunity to involve the local Aboriginal people in a program to become specialists in producing these braces and learning skills that would benefit their own people. Various grant opportunities will be investigated as well as the more formal programs of ‘Work for the Dole’ and CDEP programs.

The SFAB also offers a brace more suitable to wear in a tropical climate and one that cannot easily be tampered with. Currently we are having much trouble with the clientele removing the bar and screws and losing various components. The SFAB is unable to be adjusted by the family, and thus is used more effectively.


