William Cumming

Australian orthopaedics overseas

Introduction

Improving relationships between neighbouring societies and nations is one of the most important tasks in the modern world.

The marked and contrasting differences that exist not only include those related to culture but also to the level of sophistication of facilities and manpower resources. For example, Singapore has approximately sixty times and Australia one hundred times more orthopaedic surgeons per capita than their neighbour Indonesia. The available facilities and sophistication of care would mirror and match that manpower situation.

The consequences of a modern jet liner crash in a developing country may not be apparent to the traveller enthralled by the remarkably sophisticated tourist facilities of the area but they are painfully apparent to the few who are aware of the lack of medical facilities and staff.

Orthopaedic surgeons of more developed neighbour nations are in a position to address this problem by the interchange of knowledge and skills.

In the Asia-Pacific region there is a unique opportunity for Australians to contribute, particularly in the Pacific where until the era of modern air transport this vast expanse of ocean inhibited the development of medical services.

The ravages and sequelae of delayed and inappropriate trauma care, tuberculosis, osteomyelitis, diabetic sepsis and the sequelae of poliomyelitis and leprosy are major constituents of orthopaedics in such societies. Orthopaedic surgery is of critical value early in the advancement of medicine.

The Centres of Excellence in orthopedics which emerged early in the developing world including Hong Kong and Singapore provided a major contribution by addressing these problems.

Fig. 1 Discovery Monument in Lisbon, Portugal

Nations in the Asia-Pacific region are currently in a unique and interesting historical phase.

The Discovery Monument in Lisbon (Fig. 1), Portugal, bears testament to the historical significance of the great achievements of the Portuguese navigators of 500 years ago.

These men were the equivalent of this century's astronauts. They made it possible for their own and other nations to colonise and occupy almost every nation of the Asia-Pacific region and the whole of the American continent.

In the Asia-Pacific region this cycle of half a millennium is coming to a close with the emancipation of these nations. The Second World War provided an interchange of peoples and ideas which lit the spark, igniting the cultural and information explosion, highlighting the importance of national cultural identity. Australia also agonises over severance of past ties. The merits of any improvement medical or otherwise provided by the colonists in the past must be weighed against the loss of cultural identity of these nations.

Early Australian orthopaedics

Before World War 1 the great surgical pioneers with an interest in orthopaedics were Robert Hamilton Russell and W.C. McKenzie in Melbourne. The remarkable beginning

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of orthopaedic surgery in Australia was made in Sydney 1909, by a German, Maximillian Markus Herz who had been trained in Berlin, Dresden and Vienna by the doyens of his era, before he had migrated to New Zealand and then to Australia. He was interned in World War I and remained outside mainstream medicine for the remainder of his life. A biography of his remarkable life with comments on the medical bigotry he encountered has been written by Joan Clarke. Herz had already shown interest in orthopaedics in developing countries with a paper on the Negro Foot, delivered at the first meeting of the German orthopaedic society in Berlin 1901, following his visit to Africa in 1899, and subsequent papers on spinal tuberculosis. Allan T Roberts (1893–1968) was Australia's first orthopaedic surgeon to give service on a formal basis in Asia. Roberts was also a remarkable man who had been educated by governesses and studied for his matriculation while travelling in Russia. A Sydney graduate of 1914, following army service in France he acquired his F.R.C.S (Ed) in 1918, subsequently working in Manchester and Chester. His major interests were in fractures and orthopaedics and on his return to Australia he became superintendent at the Royal Newcastle Hospital, establishing a fracture clinic and the orthopaedic department in 1923. A man of many talents with his own home workshop and major interests in rehabilitation and poliomyelitis, he spent 1957 in Solo, Central Java under the auspices of W.H.O. With Raden Soeharso he established the remarkable rehabilitation centre now with its adjacent paraplegic village in Solo.

When Bill Cumming was the orthopaedic registrar in his department, he recalls only that he was away working in Asia. On his first visit to Central Java in 1971, he found Roberts' portrait photograph in central pride of place in the department office in Solo and realised for the first time the significance and depth of his contribution. The ongoing Newcastle contribution continued with that of Gordon Kerridge in multiple roles, many other volunteer surgeons, and the quarantined registrar position at Royal Newcastle Hospital. The Australian contribution to Asia has been significant and progressive.

More than 100 Australian orthopaedic surgeons have contributed by service and educational activity to the orthopaedic advancement of adjacent nations. The contributors come from all aspects of orthopaedics including individuals whose practice circumstances make locum replacement difficult.

The Australian Orthopaedic Association (A.O.A.) has formed an Asia-Pacific committee and also appointed a coordinator of overseas projects and education, and a supervisor of training in those programs which it endorses. It provides a graduate Diploma of Orthopaedic surgery for the national program.

Orthopaedic Outreach is an umbrella organisation which evolved from the F.O.T.P. (Fiji Orthopaedic Training Program) and conducts various overseas orthopaedic services and educational activities. It is situated at the St George Hospital campus, and is a registered international charity and a member of A.C.F.O.A. (Australian Committee For Overseas Aid).

The R.A.C.S. (Royal Australasian College of Surgeons) conducts the Pacific Island Project which has entered its second three year phase and has a strong orthopaedic component. The R.A.C.S. also convenes an international committee which has orthopaedic representatives including the A.O.A. Asia-Pacific chairman. (More details of contributions of Australian orthopaedists are referred to in subsequent paragraphs)

Informal and later formal education in orthopaedic surgery for Australians occurred initially and exclusively in the United Kingdom. These English trained orthopaedic surgeons looked to their teachers in the United Kingdom for continuing educational contact from 1957 until 1966 during which there was little organised Australia-Asia communication.

The orthopaedic administration of centres of quality in Hong Kong and Singapore were at that time headed by British surgeons, Arthur Hodgson and Donald Gunn. Many individual personal contacts had been made. Not the least of these was by Allan Dwyer whose unique cable system for intra-operative correction of spinal deformity found ready acceptance due to the high incidence of scoliosis and spinal deformity present in these centres because of poliomyelitis, neurofibromatosis and tuberculosis.

The problems which constitute orthopaedic practice vary dramatically from the developed to the developing world as they do also within the developed world between high density industrialised cities compared to low population rural areas. Visiting orthopaedists from the developed world usually learn more than they expect from their developing world colleagues who sometimes find them lacking. Surgeons of the still developing nations therefore very reasonably look to each other because they share a common orthopaedic pathology.

Fortunately for Australia there has been no significant exclusion or rejection of them as orthopaedic visitors. However, the concepts and attitudes of individuals, organisations and nations wishing to be involved must be appropriate. Attendance is clearly by "invitation only". Independence is non negotiable for these nations emerging from this period of outside control.

In 1966 an event occurred that was important for Australian orthopaedics. Under the presidency of Alex Dawkins from Perth, the A.O.A. held a combined meeting with the Singapore Orthopaedic Association and this was followed two years later by good Australian attendance at the Western Pacific Orthopaedic Association meeting in Hong Kong.

Indonesia

Following the visit by Allan Roberts in 1957 it was almost a decade before Australian orthopaedic overseas activity resumed in 1966. At this time the medico section of C.A.R.E. (Cooperative for American Relief Everywhere) was extremely active. In his book on the History of Orthopaedics in Australia, Hugh Barry states that the

development of the training program in orthopaedics in Indonesia is of interest, being a period which the members of the A.O.A. have every reason to be proud. The program was initiated following discussions between the late John Jens of Ballarat (Victoria) and Allan McKelvie of C.A.R.E. Medico.

McKelvie and Professor Bill Hillman of Nashville (Tennessee) had visited under the auspices of Orthopaedics Overseas and discussed the project with the Indonesian government and the University of Indonesia in the presence of Professor Raden Soeharso from Solo.

The program started in 1968 with Harry Fahrni from Vancouver, Canada. During that first year Professor Hillman died. He was replaced by Ron Beetham also from Ballarat who spent six weeks in Indonesia and there followed a long term involvement as Program Chairman and with Gordon Kerridge as first external examiners.

C.A.R.E. Medico's able administrators helped maintain the high efficiency of the program. The last of these administrators was Christoff Scheiffle who with his wife Hildegard sustained their lifetime communication with the Indonesian surgeons and with the volunteers, particularly the Australians. They were at the Bali program reunion meeting in 1995. Corporate help in Indonesia included significant funding from the Zimmer Corporation accompanied by the personal involvement of its senior executive Ronald Cridland.

In 1969 a house was provided in the grounds of R.S. Fatmawati and the unit was refurbished at a cost of about \$3000. Half of this was provided by C.A.R.E. Medico and half by the Ballarat East Rotary club. R.S. Fatmawati became the elective orthopaedic surgical unit for Jakarta and 42 Australian orthopaedic surgeons gave service to the program. Most surgeons and some families will remember Fatguest (Fatmawati Guest House) its housekeeper, Soetina and staff. Those families who visited there remember it as an exceptional cultural experience. A gallery of photographs of these visitors holds pride of place in the orthopaedic department office at the R.S. Dr Ciptomungunkusomo (Central Hospital) in Jakarta.

At the time the program commenced the surgeons with orthopaedic training or an interest in Indonesia were:

- Dr Subiatko Werejokosomo, Head of the Division of Orthopaedics, Department of General Surgery, Jakarta who had had one year of orthopaedic training in the USA.
- Major General Sujoto, Army Hospital, Jakarta
- Professor Raden Soeharso (Solo rehabilitation service), also founder of Y.P.A.C. (Centre for Crippled Children) initially at Solo and then other centres.

The trainees for the program were selected by Professor Djameluddin, Professor of General Surgery, Jakarta and Professor Raden Soeharso who maintained a strong interest and support for the program throughout his life. The consultant teacher program continued with surgeons from Canada, USA, Australia and Singapore.

In 1970 an Australian nurses' training program was set up and 32 Australian nurses worked in Jakarta, Bogor

and Surabaya, teaching both ward and operating theatre orthopaedic techniques. The first two successful trainees were Dr Tajib Salim from R.S. Fatmawati and Dr Soelarto Rekosprodjo who had returned from a year of training with Robert Judet in France.

Initially Australian surgeons flew to Jakarta by R.A.A.F. Hercules which were en route to Butterworth in Malaya. They were the first Australian military aircraft to land in Jakarta. Subsequently, through the enthusiasm of senior executive George Howling and the generosity of Qantas, seven years of air travel was donated.

A major advance was made possible when war hero and governor of Jakarta, Ali Sadikin allocated funding for a spinal unit and rehabilitation centre at R.S. Fatmawati. The late Sir George Bedbrook and Ellis Griffith helped to find equipment and extra finance for the spinal unit. Tajib Salim became the director of the paraplegic unit and subsequently Dr Subroto Sapardian the director of the spinal surgery unit.

In the early phase of the program a visit to Solo and Bogor was routine. Later graduates established services in major cities including Semarang, Palembang and Padang and training centres evolved in Surabaya, Bandung and Ujung Pandang in addition to Jakarta.

The P.A.B.O.I. (Indonesian Orthopaedic Association) was formed in Bandung in 1976 with nine foundation members. Dr R Soeharso was founding president. Though the formal Australian education program finished in 1978, it continued under Indonesian control.

In 1980 the department of higher education recognised orthopaedics as a specialty. Australian-Indonesian contact continued during this period and in 1988, at the invitation of the Indonesian Orthopaedic Association, Dr Ron Beetham and Prof. Bill Cumming became external examiners to the program.

The exams (Fig. 2) are conducted with the senior Indonesian orthopaedic surgeons hosting external examiners, usually from Australia and Singapore and occasionally Japan. This activity continues although with some recent disruption due to national and political circumstances in Indonesia.

Fig. 2 Exams in Indonesia

Two surgeons attend each of the exams which are held twice per year when approximately ten trainees have presented. Barry Elliott leads a team each January and Bill Cumming in July. John Stephen, Bill Bates and many other surgeons have contributed to this program.

Bill Cumming instigated a registrar interchange program. A.O.A. program training registrars accompanied the examiners and by sitting for the exam were able to meet the senior Indonesian examiners, and by invitation could remain for a month in Indonesian orthopaedic centres. Seven Australian A.O.A. trainees have visited Indonesia under these circumstances. Their time was recognised in Australia as training.

Indonesian program trainees and graduates have visited centres of quality in Australia for periods of up to six months. These activities may become more regular and formalised in the future via the quarantined registrar position at Royal Newcastle Hospital in the unit of Professor Y.A.E. Ghabrial. Contact between the associations continues with invited reciprocal Presidential visits to the associations' annual scientific meetings.

Two Indonesian trainees or recent program graduates are invited and funded from Australia to these meetings and usually remain for some weeks to visit quality orthopaedic centres. The A.O.A. has honoured Soelarto Reksoprodjo with corresponding membership and the P.A.B.O.I. has honoured senior Australian contributors by honorary membership. The Indonesian body currently has 130 orthopaedic surgical graduates of its training program. Senior graduates have contributed to international orthopaedics include Chehab Rukny Hilmy who was president of the Western Pacific Orthopaedic Association which culminated in an excellent meeting in Jakarta.

Dr Subroto Sapardan, eminent spinal surgeon, has developed a spinal implant system and has by invitation attended the Australian Spine Society annual meeting as Guest Professor. The Indonesian Orthopaedic Association welcomes Australian orthopaedic surgeons to the multiple orthopaedic centres for educational interchange. Bruce Conolly, eminent hand surgeon, recently performed an academic tour of this nature. A.O.A. registrars and recent graduates are welcome to attend with the examining teams who visit twice a year. Medical students are also welcome to visit on elective terms. To date several visits have been organised.

The work load of Indonesian orthopaedic surgeons is enormous but their energy is boundless. In Indonesia specialist training always follows a period of outpost service and training posts have a long waiting queue. Orthopaedic training consists of two years of basic surgery and three point five (3.5) years of orthopaedic surgery. A present difficulty is that following peripheral service program entrants are usually over thirty-five years of age. This has taken its toll with the demise of some quite young men.

It is interesting to reflect that as we move into the millenium, Indonesian Orthopaedic manpower will approach one orthopaedic surgeon per one million of population.

Fiji orthopaedic training program

Orthopaedics in Fiji started approximately 1973 when Australian orthopaedic surgeon, Dr David Roebuck, began by making a fortnightly clinical visit two or three times a year. In 1983 he became staff orthopaedic surgeon at Lautoka Hospital where he was resident and staff orthopaedic surgeon.

Always the adventurer and a natural teacher he had commenced a training program with two trainees, Mohamed Hussain and Robert Burness. When Bill Cumming was holidaying in Fiji he was invited to give some tutorials to the trainees. There were discussions about the future and when David Roebuck left Fiji in 1985, it was decided to attempt formalise the training program he had founded by using volunteers.

At that time Jill and Ray Judd, enthusiastic members of the Rotary club of Kogarah, who had Fiji contacts, were funding Fijian children to Australia for orthopaedic surgery. A chance social meeting brought these two concepts together. Rotarians agreed to the allocation of these funds to a volunteer orthopaedic program in which the surgeon could care for a large number of patients as well as teach orthopaedic trainees. In Fiji Bill and Marion Cumming were fortunate to have an audience to explain and plead the F.O.T.P. project to Ratu Sir Kamisese Mara, then prime minister of Fiji and a past medical student at the University of Otago.

The concept of the program outlined was based on the experience in Indonesia where the program was on maternal soil and where the teaching on pathology was that of the host nation with the trainees and volunteer surgeons providing ongoing medical care to their own people. To all of this Ratu Mara expressed his approval with his support and the enthusiasm of senior Fiji health and government authorities, particularly Dr Rika health minister, Dr Kurisiquila and Dr Buimawai (the latter then High Commissioner to Australia) and Dr Michael Sorokin, superintendent of Lautoka Hospital, were the determining factors in establishing the program.

In 1986 and 1987 interested parties were brought together in a series of formal meetings which identified and confirmed the F.O.T.P. and the responsibilities of its participants.

These parties were:

- 1) Fiji government and its department of health
- 2) University of South Pacific
- 3) Rotary club of Kogarah/Rotary International
- 4) St George teaching hospital
- 5) Australian Orthopaedic Association
- 6) AusAID (then AIDAB)

The four major meetings which formalised the program were:

- 1) Meeting of interested parties at St George Hospital (22/12/85)
- 2) Initial establishment meeting at Lautoka Hospital (5/9/86)

- 3) Program formalisation meeting, Lautoka (2/2/87)
- 4) Triumvirate agreement (Suva), – (the work of Brian Cameron, Canada)

Subsequent meetings and events of importance were:

- 1) Establishment of the F.O.T.P. management committee (Australia) Rep: Rotary, St George Hospital, A.O.A.
- 2) Establishment F.O.T.P committee (Fiji) R. Whitton, T Wilkinson later E. McCaig
- 3) Appointment staff specialist orthopaedic surgeon (K Bulwinkel)
- 5) Formalisation F.O.T.P. including international charity status
- 6) Appointment of supervisor of training (Fiji) E. McCaig
- 7) Formalisation Fiji committee by legal management trust
- 8) A.O.A. establishment supervisor of training
- 9) A.O.A. allocation external examiners' funding
- 10) A.O.A. provision of graduation Diploma of Orthopaedic Surgery (Fiji/PNG)
- 11) A.O.A. creation of o/s affiliate membership for program graduates.
- 12) Involvement of St George Private Hospital

Location for the training program in Fiji is excellent. Lautoka Hospital light, airy, modern is high on a hill. It is the ideal site in Fiji for elective orthopaedic surgery and for such a program. It lacks, however, proximity to the health administration and the university, centred at Suva.

The Fiji committee is chaired by Roy Whitton who with his wife Rosie, and son, Tony, are ably assisted by Tony Wilkinson and more recently, orthopaedic surgeon, Ed McCaig. Rosie and Roy are the owner/administrators of a large international travel agency, Rosies' tours. Roy Whitton and Bill Cumming share a 40 year personal friendship.

The Fiji government provides an excellent, large and comfortable condominium where the surgeon and his family are easily accommodated and welcomed. A car with petrol is also provided. The northern club is a delightful venue and membership is extended to the volunteer surgeon and family.

The Australian committee comprises orthopaedic surgeons, Rotarians and community contributors, representatives of the St George Teaching Hospital and more recently the adjacent St George Private Hospital providing a cross campus teaching facility.

The St George Teaching Hospital has a sister hospital relationship with Lautoka. The office bearers in Australia are:

William Cumming	Chairman
Raymond Judd	Secretary
Beverley Hughes	Executive secretary
Maurice Dalton	Treasurer

F.O.T.P. management committee recognises its responsibility and gratitude to parent bodies, the Australian Orthopaedic Association, Rotary and the St George Hospitals.

Jim Vote and his secretary, Helen Willmott, made a significant contribution by convening the program in the early years. A valuable grant from Howmedica (Australia), under the auspices of senior executive Jack O'Mahony, funded initial instrument and implant requirements.

The program is a four year course. The trainees initially numbered four and were selected by the Fiji health authorities. Those first trainees were given formal basic sciences training by Professor John Heslop (chairman of the primary fellowship committee of R.A.C.S.) and his wife Professor Barbara Heslop. The lifetime experience of these educators including the Dunedin training course was invaluable in this program. Each trainee has spent six months at Royal Newcastle Hospital in a quarantined registrar position made available by that institution under the supervision of Professor Y. A. E. Ghabrial (many orthopaedic surgeons in Newcastle have been volunteers to Fiji and P.N.G.) Peter Curwen-Walker (Melbourne) attended Fiji on at least six occasions and became warden of studies during that period.

Volunteer surgeons initially visited Fiji for approximately four weeks, usually with a short break in the middle of this period for some touring. A shorter period of service is now acceptable. Suva is a few hours drive away and a visit there to the CWM (Colonial War Memorial) Hospital and the University of the South Pacific is usual.

There is a modular orthopaedic education curriculum and its convenor is Ron Sekel of Kogarah. All volunteers are briefed regarding their educational contribution so that the course may be covered, their contribution appropriate and well prepared. Initially the Fiji trainee occupied the registrar position at Royal Newcastle Hospital during the last six months of training and so was examined in Australia with clinical patients with appropriate pathology. P.N.G. trainees sitting the exam also attended and their success was announced and diploma awarded at the A.O.A. AGM in October. It is preferable that the trainees be examined on their own land and the A.O.A. allocation of funds for this purpose now makes this possible.

The curriculum, the standard of training and the exit examination are supervised by the supervisor of training for the A.O.A. overseas programs Dr David Davidson. He reports and is responsible to the A.O.A. supervisor of training (previously Censor in Chief).

The program continued from 1983 but with a period of dramatic setbacks related to the two political coups in Fiji, with the dramatic loss of all program trainees who left Fiji and never returned. For a time Dr Kim Bulwinkel orthopaedic surgeon (now in Rockhampton) lived in Fiji as staff specialist orthopaedic surgeon and orthopaedic clinical tutor. This was accompanied by a serious medical brain drain for the Fijian nation.

Dr Ed McCaig started as a trainee in orthopaedics in Suva when David Roebuck was in Fiji working between the two centres. He subsequently became a graduate of the orthopaedic training program in New Zealand, returned to Fiji and has contributed enormously to the evolution of orthopaedic surgery in Fiji.

Fig. 3 Fijian nurses group

Following his return to Fiji he became senior orthopaedic surgeon in Lautoka and director of training. In his hands Lautoka progressed to a strong elective centre for orthopaedic surgery.

Communication between the supervisor of training in Fiji Professor Ed McCaig and Dr Ron Sekel, curriculum convenor and David Davidson, supervisor of training for the A.O.A. is ongoing. More recently Ed McCaig has moved to Suva with an increasing administrative as well as clinical role and as a health administrator he continues to support the program. Dr Frank Piscioneri (McH Orth Liverpool) surgeon at the University of the South Pacific has assisted in an orthopaedic clinical role in Suva. In 1997 a group of orthopaedic nurse educators from the public/private St George Hospital complex headed by Annette Barrand visited Fiji and provided an education seminar.

Subsequently five orthopaedic Fijian nurses (Fig. 3) attended for a month of structured post graduate orthopaedic education in the St George cross campus environment and it has a strong hands on component.

There remain two trainees on the program at Lautoka. Graduates of the program are now in Lautoka, Suva and Labasa on an adjacent island and the concept is to make the program more peripatetic with visits to these centres for continuing orthopaedic upgrading.

Changes of significance have occurred and will continue in the senior health administration in Fiji and in the activity of the University of the South Pacific. It is envisaged that the F.O.T.P. will continue to provide progressive orthopaedic service and education in team with the Fiji School of Medicine Post-Graduate program in the Pacific region and cooperate in the future training of generic and specialist orthopaedic surgeons.

This program is the result of multinational meetings of health ministers and then, subsequently, health administrators and clinicians sponsored by W.H.O. Bill Cumming was invited to be an Australian contributor. The meeting resulted in the Yanuka Island agreement and was attended by AusAID and other international benefactors.

The F.O.T.P. has received funding through the Pacific Island Project of the R.A.C.S. for three years until 1998, however, from August 1998 there is to be no further funding allocation. Professor McCaig has reported that the Fiji authorities estimate the required number of surgeons trained in orthopaedics in Fiji to be eight and that they wish the F.O.T.P. to continue. The university of the South Pacific has a regional charter and with the sophistication of medicine in the Pacific region it is likely that surgeons trained in orthopaedics will be required in the Cook Islands, Samoa, Vanuatu and Tonga.

Orthotics and prosthetics

Attempts have been made over 15 years to improve this problem in Fiji. Four fact finding visits have been funded. More than half a million dollars (Aust) would be necessary to establish a facility of substance. I.S.P.O. (Adrian von der Borch, Adelaide) is working hard to achieve this.

Twenty percent of bed days in Fiji are related to diabetes and diabetic sepsis in which lack of antibiotics frequently lead to amputation. The incidence of diabetes is increasing. It is most unfortunate that within the P.I.P. of R.A.C.S. framework there is no provision for rehabilitation or orthotics and prosthetics, a major need in the South Pacific nations.

Orthopaedic outreach

When the Fiji Orthopaedic Training Program was formalised into a legal entity, it became a registered international charity by the endeavours of honorary solicitor Jeff O'Brien of Kogarah. His advice was that it was not appropriate for this entity to administratively interface with and be responsible for funding related to other nations apart from Fiji.

The legal name of F.O.T.P. was changed to Orthopaedic Outreach (Fig. 4). In other respects, including its relationship to its parent bodies, the A.O.A., Rotary and St George Hospital, it remained unchanged. Orthopaedic Outreach is thus an umbrella organisation (including F.O.T.P.) which is able to receive and administer charitable donations for orthopaedic service and educational activities inside and outside Australia. Orthopaedic Outreach is a member of A.C.F.O.A. and conforms with its code of conduct. It is the only orthopaedic organisation so structured in Australia.

The St George Public University Teaching Hospital has hosted Orthopaedic Outreach in the Skills Laboratory complex. Here meetings are held, donated equipment and educational material are received, stored, sorted and then forwarded by container. It welcomes communication from volunteer surgeons and corporate organisations who wish to work to improve the quality of orthopaedic health relevant to Australasia and its geographic neighbours in the Asia-Pacific region.

Fig. 4 Logo of Orthopaedic Outreach

Bill Cumming is current chairman of Orthopaedic Outreach, a position in concert with being coordinator of projects and education for the Australian Orthopaedic Association.

Orthopaedic Outreach is involved in representation and or administration primarily or in team with others in the following organisations:

- 1) Indonesian orthopaedic activity including the external examiners program
- 2) The Fiji Orthopaedic Training Program
- 3) P.N.G. orthopaedic training program with P.I.P.R.A.C.S.
- 4) Vietnam/Cambodia activities (J. Ellis/B. Conolly)
- 5) International nurses education program
- 6) P.I.P.R.A.C.S. orthopaedic component and the international Committee of R.A.C.S.
- 7) Australian Orthopaedic Association and its Asia-Pacific committee

P.I.P Instrumentation

A significant volume of orthopaedic surgical equipment, instruments and implants is received in boxes, checked, autoclaved and prepared for forwarding between pacific nation team visits.

Fundraising is a vital task. Contributions by orthopaedic corporations have been essential and forthcoming, including those by Zimmer in Indonesia, Howmedica in Fiji, Mathys in P.N.G. and Johnson & Johnson in the P.I.P. project. Other major sponsors include Qantas, Air Pacific, Rosie's tours, Stryker International and other corporations, St George Teaching Hospital and the St George Private Hospital.

It is a strict policy of Orthopaedic Outreach that all personnel involved in the service and education aspects inside and outside Australia will be unpaid volunteers. Nevertheless, the project costs are significant particularly those relating to travel, accommodation and equipment. Financial independence may not be achievable, however, it should be the goal of such organisations to fund raise for themselves as far as feasibly possible.

Orthopaedic Outreach seeks this via a separate fund raising committee (Chairman W. Mallard) with generous help from Downes Venn and Associates and the St George Private Hospital.

The orthopaedic data base

The experience of others suggests that surgeons, patients, corporations, hospitals, business contacts, benefactors and service organisations may be the best collective source of funding.

World orthopaedic concern

This organisation in team with the American organisation Orthopaedics Overseas embodies the global interest in developing country orthopaedic activity. Ronald Huckstep, a legend in his work in this area is Emeritus Professor of Orthopaedic Surgery, University of New South Wales and he is Australian secretary. He and Ron Beetham are Honorary Members of the Board of WOC and Bill Cumming is on the Executive committee.

Australian orthopaedic association

The executive of the A.O.A. conducts its affairs in these matters via:

- 1) The Asia-Pacific committee (Chairman R. Bauze)
- 2) The coordinator of overseas projects and education programs (W. Cumming)
- 3) The supervisor of A.O.A. overseas training and exit examinations (D. Davidson)
- 4) World Orthopaedic Concern (W.O.C.)(Ron Huckstep, Ron Beetham, Bill Cumming)
- 5) Orthopaedic Outreach (Chairman Bill Cumming)
- 6) Western Pacific Orthopaedic Association(W.P.O.A.) (Involvement by A.O.A. member)

The A.O.A. has endorsed three post graduate training programs in orthopaedic surgery conducted by its members in Indonesia, Fiji and P.N.G. A trainee in the Solomon Islands (Honiara) is included in the P.N.G. component.

The A.O.A. established a formal subcommittee to administer the Indonesian program. The Fiji/P.N.G. programs were initially administered by F.O.T.P which became Orthopaedic Outreach. The A.O.A. was represented

by the Chairman of the NSW Branch of the A.O.A. (Neal Thomson) (22/12/85) at the initial establishment meetings of F.O.T.P. which became Orthopaedic Outreach.

The A.O.A. awards the Diploma of Orthopaedic Surgery (Fiji or P.N.G.) to program graduates who are entitled to apply for the position of Overseas Affiliate of the A.O.A., a membership category which has been created within the new revised constitution for this purpose.

The New Zealand Orthopaedic Association (N.Z.O.A.) has requested the A.O.A. to facilitate increasing volunteer interest of New Zealand orthopaedists to the Asia-Pacific region. An N.Z.O.A. representative has been invited to the Orthopaedic Outreach committee to improve communications and enhance an already strong commitment of New Zealanders contributing to neighbouring nations.

Papua New Guinea

Experience suggested Papua New Guinea could benefit from Australian orthopaedic involvement. Communication with an invitation by the Papua New Guinea health authorities lead to a visit by orthopaedic surgeons and Rotarians to discuss a training program. Professor David Watters, Professor of General Surgery, University of Papua New Guinea and Port Moresby, provided initial and ongoing support including becoming training supervisor for the ensuing program. Enthusiasm, hospitality and committee support also came from Rotary via Peter Hunt and Ray Judd in Australia and Phillip Parnell and David Conn in P.N.G. The program commenced in 1994 and in 1998 has a graduate in Port Moresby, Goroka and Rabaul with trainees in Lae and Honiara. Bert Bencsik deserves gratitude for convening the program in its initial years. The program will become increasingly peripatetic with trainees accompanying teacher volunteers to visit centres where graduates work. Jeff Mander (Bendigo) is warden of studies. Professor David Watters reports that the P.N.G. health administration assessment is that the nation would benefit from approximately eight surgeons trained in orthopaedic surgery.

There is a degree of civil unrest in P.N.G. but volunteers stay in safe hotel accommodation. Female partners and or volunteers are welcome but not encouraged.

Some orthopaedic nursing education interchange has already occurred but a structured program is planned for 1999 with visits to P.N.G. by an orthopaedic nursing education team, followed later in the year by a group of P.N.G. nurses to the St George Hospital campus. Initially the program was significantly funded by AusAID. In 1996 the P.N.G. orthopaedic training program was incorporated into the administration of funding for the P.I.P R.A.C.S. with also funding via AusAID. Synthes Australia, now Mathys, have made a very significant contribution to orthopaedics in P.N.G., the funding being administered in team with Orthopaedic Outreach.

There is a nursing component of the AusAID MONAPH program and it is hoped that this will assist in the funding and administration of the proposed orthopaedic nurses' education activity.

Fig. 5 AO internal fixation tutorial

Rotary

Rotarian contribution to Orthopaedic Outreach has been vital. The initial injection of Rotary funds previously used to bring children to Australia provided a financial stability and important needs were funded. Application for Rotary international funding was successful for an initial period. Most importantly the non-medical business acumen of the Rotarians has significantly enhanced the executive of Orthopaedic Outreach.

The Rotary club of Kogarah has been represented by Raymond Judd since he became secretary of F.O.T.P. and its successor, Orthopaedic Outreach. Rotary liaison with and help from sister clubs in P.N.G. has been most valuable for the care of volunteers and handling of donated equipment and educational material.

Rotarians in collaboration with Sister J Short (St George Teaching Hospital) have forwarded fourteen containers of donated equipment and educational material of inestimable value. Collections of journals and books have been donated by seven orthopaedists or their families.

Equipment selection criteria are important and should be observed. Drugs and outdated material should not be sent nor should equipment which is in average condition and or likely to need early maintenance.

Developing nations' facilities in the past have lacked maintenance expertise. Multiple maintenance programs exist or are planned including rotary interest from Orthopaedic Outreach.

Indochina (Vietnam/Cambodia, Laos)

The association between Indochina and Australian orthopaedic surgeons has continued by mutual invitations and visits since the Australian Vietnamese orthopaedic conference in Hanoi in 1994.

Invitation is extended each year to young surgeons (and one anaesthetist) from Laos, Cambodia and Vietnam to visit the A.O.A. annual scientific meeting. This

year (1998), John Stephen was instrumental in having a young Vietnamese surgeon from Ho Chi Minh City, Nguyen Tan Tran take up a non-accredited registrarship at Prince of Wales Hospital, Randwick. Dr James Ellis has made multiple visits.

Professor Bruce Conolly and Dr Peter Scougall, sponsored by Mosman Rotary have regularly visited Vietnam and this year invited a Vietnamese surgeon, Dr Hounh Manh Cuong, to come to Australia for six weeks to work at Sydney Hospital and St Lukes Hospital.

The fourth surgical congress of Cambodia was held 24–25 November 1998 and at their invitation an A.O.A. member (J.Ellis) attended and presented papers.

The NSW Department of Health with the constant help of Mr. Peter Brophy, has been instrumental in sending to Indochina large amounts of material unused by NSW hospitals as well as material donated by private firms; equipment traded in and no longer saleable in Australia.

Orthopaedic Outreach members have helped by classifying and assisting with packing the equipment, a most valuable project.

The A.O.A. and the Outreach committee have good friends in Hanoi, Ho Chi Minh City, Phnom Penh, Vientiane.

Some of these are:

- Prof. Dan Kim Chau and Dr Ngo Van Toan in Hanoi.
- Prof. Phung, Ho Chi Minh City, Centre for Trauma & Orthopaedics.
- Dr Sam Sophean and Dr Mok Theavy in Phnom Penh.
- Dr Som Ok Ingsada, Ministry of Health, Vientiane.
- Dr Graham Gumley, a member of the A.O.A., has for one year been head surgeon at the centre of HOPE Hospital, Phnom Penh performing invaluable work.

Myanmar

Professor Robert Bauze (Adelaide) has an interest in developing a gradually progressive training program in Myanmar and since 1976 has visited on multiple occasions. Prior to 1988 Colombo plan funding assisted some Myanmar surgeons to train in Australia. There is great goodwill between Australian surgeons and those in Myanmar. There is a similar per capita ratio of one orthopaedist for one million people as in Indonesia, and these surgeons are very poorly paid. It has been proposed that volunteer orthopaedic surgeons visit Myanmar for two weeks. One week would be work, one recreation. The surgeon would have to pay his own way to Myanmar but costs within Myanmar would be met by the government.

Individual entrepreneurs

Most importantly individual orthopaedists create more goodwill and generate a genuine and ongoing person to person interchange. Most well structured programs

evolve from individual activity. While it is important for the A.O.A. to know what its members are doing, it sensibly places no unnecessary restrictions on these adventurous individuals.

Aboriginal orthopaedic health

There is more extensive awareness and knowledge of this important subject among those individual orthopaedic surgeons who practice in areas of increased density of aboriginal people and Torres Strait Islanders.

In 1994 Jim Ellis and Bill Cumming set out to collate information about orthopaedic trauma and musculo-skeletal disease epidemiology peculiar to or significantly affecting these people. Contributions were received from:

- Stephen Baddeley – Darwin
- Paul Muscio – Cairns
- John Croser – Kalgoorlie
- Michael Tiller – Perth

In 1998 Bill Cumming represented the A.O.A. at the R.A.C.S. annual scientific meeting in Sydney at which a “hypothetical” was conducted and televised on ABC.

Tonga: Dr. Ian Stratton and team

Dr Ian Stratton and team have made fifteen annual visits to Tonga. The major purpose of these visits is for the care of club foot which is common, endemic and severe in this community. Since 1978 this team has corrected approximately 500 club feet in approx. 300 Tongan babies and infants and has virtually abolished untreated club foot in this small south pacific kingdom.

Further elective orthopaedic surgical cases are carried out for fractures and knee problems usually of a sporting origin. Dr Stratton's team comprises himself and on recent visits, Drs Andrew Leicester, Bowral and Dr Malcolm Hay, Perth. An Australian anaesthetist accompanies the team as on some occasions do other specialists. They work in team with the Tongan doctors, theatre and ward nursing staff and the Tongan plaster technician. The visits are sponsored by multiple donors including airlines, Rotary and business houses. Dr Stratton continues to plead the need for surgically trained doctors in Tonga.

The Pacific island project

The Royal Australasian College of Surgeons (R.A.C.S.) conducts this project funded by AusAID which commenced in 1995 for a three-year period. P.N.G. was included in 1996. A second triennium has commenced with a delay phase in 1998. Bill Cumming is the orthopaedic project manager.

In this project teams consisting of four volunteers made up of two surgeons, an anaesthetist and an operating theatre sister visit a nation for two weeks to provide surgical service and skills transfer as appropriate.

The nations visited by the orthopaedic teams are Vanuatu, Cook Islands, Kiribati and Samoa with yearly visits in the first triennium. Tonga was to be included but is already being serviced by Dr Ian Stratton and a team from Dubbo, NSW. Team leaders for the above nations are:

- Cook Islands – Ron Sekel, Kogarah (NSW)
- Vanuatu – Peter Giblin, Liverpool (NSW)
- Kiribati – Michael Tiller, Murdoch (WA)
- Samoa – Bill Parker, Brisbane (Queensland)

In the first triennium the funding allocation for Tonga was transferred to the F.O.T.P. but no funds are provided to F.O.T.P. in the second triennium. There has been a reduction of one visit a year to the Cook Islands and Samoa in the second triennium.

There is a significant orthopaedic component of P.I.P. in P.N.G. with the funding allocation of eight visits per year which supports the continuation of the P.N.G. orthopaedic training. The first three years of P.I.P. is fully documented in a paper by David E. Theile (Program Chairman) and Richard C. Bennett (Executive P.I.P.).

Conclusion

Primary health care is the clear priority in developing nations. Their administrations see merit of volunteer specialist service programs and the skills transfer component and welcome these. Even these programs have a downside with disruption of routine activities of local staff who are not in harmony with a new set of “mini colonialists”.

Well-informed and constructed service programs (e.g. Interplast) carefully arrange their activities to minimise this. The well-intentioned but less informed single volunteer may disrupt routines and antagonise administration yet be unaware of this because of his enthusiasm as a visitor and the good manners of the hosts.

As nations reach the stage where specialist health services are needed the usual process is for their medical graduates to seek education in developed societies. This has many disadvantages. Firstly, there is the loss of that period of service to their community.

One health official estimated a period of more than 10 years away with a 10% success rate before achieving a specialist qualification: more than 100 years of manpower loss per accredited specialist. Such a process either grossly disrupts family life or is the prerogative of the affluent. The education received is related to the orthopaedic pathology spectrum in the developed nation. In Indonesia most orthopaedic cases are:

- 1) Neglected trauma
- 2) Infection
- 3) Advanced TB of bones & joints (spine, hip, knee)
- 4) Neglected tumour (late presentation)
- 5) Neglected congenital abnormalities (CTEV – torticollis-duplication)
- 6) Post polio
- 7) Leprosy

Education about the quite different pathology spectrum of a developed nation using the sophisticated equipment available does little to prepare the trainee for the workload and facilities back home. Many prefer or attempt not to return home and are discontented if they do so.

“On maternal soil” programs with volunteer educator/service consultants minimises these concerns and adds a skilled specialist. He usually finds he learns more than expected.

Short periods of training and visits to the developed nation enhance the trainee’s experience and establish a mentor situation and relationship with these surgeons.

The F.S.M. upgrade and the distance learning programs will evolve. The developing country trainee will have satellite communication facilities with computer, camera and scanner so that regular teaching and emergency consultation sessions can take place between trainee and mentor.

This will give access to the world’s educational material already superbly organised at the Nepean web site by Eugene Sherry and containing Ron Huckstep’s simple guides which are appropriate to and derived from his extensive experience in the developing world.

Six monthly segments at Royal Newcastle Hospital are invaluable. Cause and effect is that a large number of Newcastle orthopaedists are volunteers. Training and update visits by graduates from Fiji, P.N.G. and hopefully Indonesia will fill this post till approximately 2004.

Recent opinion has changed regarding transmission of medical knowledge in developing countries. It is appropriate to create a group of national specialist teachers by in country training. This is confirmed by the experience in Indonesia.

The transmission of knowledge downward through the medical ranks by these national specialists gives good results. Following a recent nursing program almost all the Fijian nurses on return altered their pre-training positions. This was initially thought to be disappointing but they had moved to positions in which they could share this information even more.

If you give a man a fish you feed him for a day. If you teach a man to fish he feeds himself for a lifetime. But... If you make him a teacher of fishing his society will be fed and your job is done. The basic aim should be to train teachers.

References

1. Barry HC (1983) Orthopaedics in Australia. Bibliography ISBN 0959198903. AOA
2. Fang D (1994) The training of orthopaedic surgeons in western pacific orthopaedic countries [editorial] 5 (2)
3. Reksoprodjo S (1994) The development and problems of orthopaedics in Indonesia. AOA. Bull 15 (2)
4. Beetham R (1994) Precipit of AOA. involvement in the Indonesian orthopaedic training and thereafter. AOA. Bull 15 (2)
5. Beetham R (Personal communication). The early years. J WPOA. Lam SF, Tablin J, Fang D (eds)
6. Theile DC, Bennett RC (1998) The pacific islands project: the first three years. Aust NZ J Surg 68:792–798
7. Vice president’s report. AOA. Bull 15 (2)
8. Visit to Yangon. AOA. Bull 5 (2)