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USAID WAR VICTIMS  
ASSESSMENT VISIT

SRI LANKA SITE VISIT

A Report Prepared by PRITECH Consultant:  
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USAID WAR VICTIM ASSESSMENT VISIT  
SRI LANKA: SITE VISIT MAY 11-14, 1992  
TECHNICAL REVIEW BY FREDERICK DOWNS, JR.

At the request of USAID, I was scheduled to review the prosthetic and other humanitarian needs of Vietnam in May 1992. Lloyd Feinberg of USAID Washington, DC, was teamleader and Bill Oldham, M.D., was the other consultant.

When we arrived in Bangkok, we were told at the Embassy that the Vietnamese had delayed our trip for an unspecified time. In order not to waste time, Mr. Feinberg contacted Washington and arranged two other trips while we waited for permission to enter Vietnam.

We went to Cambodia on one trip and when we returned, I was sent to Sri Lanka. I arrived at the airport near Colombo, Sri Lanka, at 2030 hours on May 11, 1992. USAID had a driver waiting who took me to the Oberoi Hotel.

I had called USAID Colombo from Bangkok, Thailand, two days earlier to explain that my original mission to Vietnam had been delayed by that government. This gave me an opportunity to fly over to Sri Lanka if Ms. Baldwin (USAID Project Office, Colombo) thought the two full days I could spend there would be worth it. She had readily agreed and said she would set up an agenda.

I had first visited Colombo one and a half years ago and was scheduled to have had a follow-up visit after the first year. Circumstances had delayed me and so this opportunity was too good to pass up. USAID Washington agreed and gave their permission for me to travel to Sri Lanka.

At 0800 hours May 12th, Thusitha Dharmawardena, Project Officer/USAID NGO Grants Program picked me up and took me to the USAID office for a short meeting with Pamela Baldwin. Projects Office, USAID.

After our meeting, Thusitha Dharmawardena and I got into an USAID vehicle with a driver for a trip to Kandy. We stopped by the Colombo Friends-in-Need Society to pick up their project manager, Jeanne Samuel.

The drive to Kandy on the two lane good condition blacktop surface is approximately 2 1/2 hours. There were a number of Army check points on the road which was not so 1/2 years ago. When we arrived at the workshop, we were met by Father Christopher Ratnayake, Chairman of the Committee Kandy Branch of the Friend-In-Need Society. Two other members of the board were present for our visit. They were excited to tell me good news. The rented cramped space presently used for the workshop will be vacated in June for

a move into a permanent building owned by FINS. An appeal a number of months ago by Father Ratnayake to the President of Sri Lanka for land had been successful. The President had donated two acres of prime ground to the Kandy FINS branch. They had designed and were building their new center on the land.

We drove up the road about a kilometer to look it over. Norway donated funding for the building which is almost completed. USAID provided the money for the workshop equipment and Rotary Club International donated the wiring, plumbing and furnishings.

The building is two story brick. It will accommodate ten men and ten women and children in separate wards. This is a vast improvement over the other building, which was only a small house and could only hold five men with no place for women or children.

A section in the building will be used for vocational training. In answer to my question about what do people do after receiving a limb they answered that: only 1% went to vocational training, young amputees go to school, the older ones go back to their old profession, retire if they have a pension, or start businesses.

There is no social security or government support for the disabled so they must make it on their own. FINS does provide a small one time loan to help amputees start a business.

FINS at Kandy plan to be able to provide vocational training in carpentry, metal work, sewing or TV and radio repair.

I asked why such a small percentage opted to take vocational rehabilitation training, and they replied some amputees chose not to because although it is free, they have no means to support their families while in training. This might be an area where perhaps USAID could supplement the trainees with an allowance during the training.

There are three prosthetic/orthotic workmen at the shop. Plans are to add another when the move into the new building is completed. The new man will help Kandy service the East and Northeastern regions of the country which are unstable due to the war.

The Kandy workmen must go to the Columbo workshop for refresher training and to learn the new techniques utilizing plastics for prosthetics and orthotics. They produce nine limbs a month now because of the limited bed space but they expect to make five limbs per workman at the new facility.

There is no physical therapist available. They are hard to find and to hire because they can demand such a high salary. Consequently, the workmen's production is adversely effected because they must take time out from production to conduct gait

training on their patients. It would seem that in addition to technical training in fabricating limbs, workmen should also receive courses in gait training if a physical therapist is not hired. A more practical solution may be to choose a local amputee and train her as an on-the-job physical therapist trainee.

The Kandy FINS board is thinking of the future and is trying to set up a trust fund to pay the overhead at the center. The Rotary Club and various community leaders are beginning a publicity campaign on this project.

On Wednesday, May 13, I spent the entire day at the Columbo Friends-In-Need workshop. The board of management of the Jaipur Foot program held a luncheon meeting at the Sheridan Hotel which I attended. The support from this group is one of the strengths of the Friends-In-Need Society. When I, as an outsider, see the commitment of these respected people in lending their full support to helping their countrymen, I can fully realize why this 157 year old voluntary organization has succeeded.

Their concern for the future is reflected in their efforts to develop a trust fund which will be a solid base from which to pay their overhead and sustain their programs for the disabled.

They have traditionally always been supported entirely by donations, but the war came along and generated a much larger population of disabled that needed help. When the FINS took on the additional responsibility of providing limbs to the hundreds of new amputees from the war, they became the only organization that was able to successfully produce a good functional limb (The Jaipur limb) in large numbers.

They were not able to meet the high demand because they did not have enough donators, enough money, enough workmen, administrators, physical therapists, materials or supplies. The FINS did a great job nevertheless, and continued to successfully work with what they had. As the war drew into a conflict lasting years, the strain on people donating money became greater.

And of course there was always the ever present routine population of children and civilians crippled by diseases, accidents, and other causes who continued to need wheelchairs, crutches, canes, limbs etc. A steady stream of donations were needed to help these people.

The USAID grant came at a crucial time and has enabled FINS to expand its services for three years. The war does not have an end in sight, but if it did end tomorrow, there would still remain a tremendous need for prosthetics, orthotics, and assistive devices (wheelchairs, canes, etc) for decades to come.

The FINS is one of the major providers of artificial limbs and other assistive devices for the disabled in Sri Lanka. The FINS will likely remain in that position for decades. It is of paramount importance that they are successful in establishing a trust fund to pay overhead and expenses. Their future will be secured and the good work they do will carry on to help thousands of disabled people.

Ms. Jeanne Samuel, Project Manager of the Jaipur Foot Program has done an excellent job of making the program successful. This is due to her excellent administrative skills, her personal commitment, and her diplomatic and political acumen.

She is well respected and is to be commended for her personal involvement in convincing the government to allow FINS to send supplies to their workshop in Jaffna.

During the tour of the Colombo workshop, she showed Ms. Baldwin and myself many of the improvements made since my last visit.

One major area not addressed in my earlier trip was the physical condition of the hostel. It was evident to Ms. Baldwin and myself that the hostel was in dire need of renovation - plumbing, wiring, toilets, wall, ceiling, floor, and water pump. A nest of rodents,

called a Bandicoot (20 times larger than a rat) had burrowed itself under one section of the building undermining the floor, causing it to fall in.

FINS inputs its plastics from Germany but the manufacturer provides it at a price lower than FINS can get it from India.

The plastic from India is also lower in quality and the delivery time is slower than the plastic arriving from Germany.

There has been a long drought bringing down the level of the reservoirs. As a result, the government has had to cut the power four hours during the working day. The rains were starting up again but 90% of the power in Colombo comes from hydrogenation. Because of drought and economic conditions, there may be more power cuts in the future. The workshop needs a generator to keep the shop going during the power outages.

Of the last 700 limbs made, 50% were for the military and 50% were for the civilians. A private sponsor pays for the limbs provided to the soldiers.

The FINS makes temporary limbs for the Army because the Army's limb shop has not yet gotten off the ground.

15 to 20% of the civilians will have a limb provided by a civilian sponsor. 30 to 35% have no sponsor at all and USAID pays for those limbs.

The breakdown was 350 military sponsor.

140 civilian sponsor.

210 - USAID sponsor.

700 Total

Conclusion:

The success of FINS is the result of a complete team effort from the workmen all the way up to the members of the Technical Board. Excellent administration by Jeanne Samuel and strong support by the Board of Management all contributed to this fine program.

I am pleased to report this project is becoming a model of how USAID and the war victims fund can effectively work to help people.

The goals as stated in my earlier report of a year and a half ago are realistic (except for the 600 arms.) Although the first six months of implementation of the original grant were slow, FINS have gotten up to speed and the present routine production indicate that goals are achievable.

I was sincerely pleased to see the success achieved in the year and a half since my last visit. USAID with its three year grant has had a very positive impact on the FINS and Colombo workshop. USAID has been directly responsible for:

- Improving fitting techniques
- Upgrading equipment
- Providing training
- Six new workmen were hired as a result of the grant
- Administrative personnel were hired
- One accountant was hired
- Bob Singer, a Certified prosthetist, was brought in for eight weeks in 1991 as a consultant to train the prosthetists in new production techniques and the use of plastics in the production of lower limbs and orthotic appliances. He also stressed the need for alignment principles.
- The use of temporary prostheses using a plastic bandage and PVC pylon with peg leg and thermoplastic socket was taught to the prosthetists.
- Incorporating the use of a vacuum formed polypropylene socket inserted in the Aluminum shank to give a more comfortable fit was successfully implemented.
- The result has been a wider range of socket choices for the amputee to have depending upon his job and preference.

- FINS was able to provide 61 wheelchairs, 28 tricycles, and 605 crutches in the last six months. Before USAID support, FINS could not have provided these items unless someone made a donation for needy cases.
- The USAID grant has enabled FINS to increase salaries, provide better facilities in the form of a lunchroom for staff and patients, and a workroom for plastics.
- Better food in terms of nutrition for patients staying in the hospital.
- The research and development project led by the Technical Board has carried out reviews on all aspects of the limb, such as the footpiece, joint socket and belt. Several improvements were made:
  - A closer color match of the limb to the patient.
  - A rubber covering for the shank.
- The search, purchase and installation of appropriate machinery to vacuum form polypropylene prostheses.
- The purchase (brought from the U.S. by consultant) of plastizote, pelite, and other materials to facilitate the training in the production of soft liners.
- The installation and testing of an electric oven which had previously been used to vulcanize feet.
- The design and ordering of a large size electric oven to facilitate the production of larger above knee sockets and plastic orthoses.

- The design and ordering of a vertical alignment jig.
- Technical discussions leading to the design and production of modular below knee prosthetic hardware.
- Measurement and evaluation of residual limbs - both BK and AK.
- Teaching casting methods for BK and AK including circumferential, two-stage, and supracondylar casting techniques for BK and both hand casting and IPOS plastic brim casting methods for AK.
- BK and AK plaster cast modification procedures.
- Thermoforming techniques for BK and AK prostheses and orthoses.
- Fabrication of Plastizote Distal End Pads and Pelite Liners.
- Use of BK adjustable modular hardware to achieve correct alignment and good gait.
- Use of heat gun to modify plastic sockets to improve fit.
- Transfer techniques for removal of modular components when laying up definitive fiberglass shank.
- The rationale for introducing new materials and techniques is to produce better fitting more comfortable prostheses utilizing time-saving methods which, in turn, facilitate greater productivity.

- The production manager, workshop foreman, and the physiotherapist were taught the basics of biomechanics, gait, pathological gait, and below knee and above knee prosthetics theory. This information was conveyed in both a didactic sense and through practical demonstrations utilizing the devices and patients.
- The fitting of 600 artificial arms is an unrealistic goal. Although there are undoubtedly more than 600 upper extremity amputees in need of prostheses in Sri Lanka, very few of them ever visit FINS workshops to request these devices. Unless a concerted effort is made to "recruit" these amputees for fitting, there will never be a population of 600 amputees to fit. For the moment, Colombo is the only workshop producing upper extremity devices.

The purpose of the USAID grant was to increase productivity and improve technology.

The Columbo workshop has met these objectives. In 1990, the total limb production was 501 above and below knee limbs. In 1991, the total limb production was 733, an increase in production of 40%.

Before 1990, the workshop made no Ankle Foot Orthosis. A revolution in orthotic care in Sri Lanka took place when polypropylene was introduced by Bob Singer during his training

session on plastics in 1991. The same type of revolution took place in America in the mid-1970s when polypropylene was first used and advocated as a superior method of making simple, light, inexpensive orthoses. This type of plastic is easily formed over a cast, cut to fit into a shoe and is comfortable to wear.

When plastic replaced steel and aluminum, ankle foot orthosis took a giant step forward. Crippled children are probably the most obvious benefactor of the technology.

This was evident in the workshop in Colombo. I saw a number of ankle foot orthoses for children.

The other three workshops, Galle, Kandy, and Jaffna, have not been as successful as Colombo, but events are changing for the good. Kandy is making the most headway and will soon be a mainstay for the disabled population in the middle of the island. The workshop in the south, Galle, I had originally visited a year and a half ago had failed. FINS had recently moved their workshop into a new building. A push is underway to form a local committee of the FINS to establish a branch whose responsibility will be to run the workshop. Everyone seems confident. There are plans to bring the workmen to Colombo for training. An awareness day involving games and other activities for the disabled will be held in Galle as part of the plan to generate support for the Galle workshop.

The workshop in the north, Jaffna, is in the middle of the fighting and has suffered the most. The government has up until recently refused to let FINS resupply their workshop in Jaffna. After long negotiations with the military, Friends-In-Need Society recently received permission to send material to the Jaffna workshop. A large shipment of materials for the disabled was to be shipped on a International Committee of the Red Cross (ICRC) boat. The day I was visiting the Colombo workshops, they were busy loading crutches, canes, wheelchairs, and materials for fabrication of limbs. Welding equipment is not allowed through the lines but the workmen in Jaffna can use rivets to hold the aluminum shank together.

Due to the intensified fighting, it has not been possible for the USAID staff to visit the Jaffna workshop. USAID personnel will travel to the north as soon as conditions permit.

RECOMMENDATIONS:

(1) The USAID Colombo mission should explore the possibility of using local currency generated from PL 480 to support the FINS trust fund. For instance, if Colombo FINS were given a gift of \$500,000 US dollars to start their FINS trust fund, the earnings up to 5% would be used to establish expenses. Earnings over 5% could be used to make the endorsement grow and/or maintain capital under inflation.

(2) USAID should assist in the Renovation of the Colombo Hostel - approximately - \$20,000 in US dollars.

(3) In the event of a negotiated settlement to the war, USAID should consider major investment in the Jaffna FINS programs including the workshop - physical rehabilitation, vocational rehabilitation, employment, etc.

(4) USAID should review ways to assist in subsidizing trainees while attending vocational rehabilitation training.

(5) USAID should review ways to assist the Kandy workshop with their vocational training equipment needs and to provide instructors for vocational rehabilitation.

(6) Robert Singer (the American Prosthetist/Orthotist) should conduct a 5 to 6 week follow-up review and refresher training in prosthetics and orthotics with an emphasis on pediatric orthotics.

(7) Travel funds should be considered for the workshop manager, and a member or two of the Technical Board to attend courses at the Jaipur Foot Institute in India.

(8) USAID should assist in providing funds for holding training sessions in Colombo for the prosthetist/orthotist(s) from Galle, Jaffna, and Kandy.

(9) Reduce the goal of 600 arms fabricated in three years to 50 as a goal.

(10) Frederick Downs should return in a year to review the program's progress at the other three workshops and in Colombo.

RECOMMENDATION FOR EQUIPMENT NEEDS:

- (1) - (1) Trautman Cutter/Router with Accessories including a six month supply of sanding cones in coarse, medium, and fine grits.
- (2) - (1) Belt Sander - upright, industrial quality.
- (3) - (1) Pneumatic Cast Cutter.
- (4) - (1) large commercial oven should be purchased to supplement the two ovens - (one small one large) used in the plastic workshops. This will increase the effectiveness of the shop.
- (5) - A variety of Pneumatic tools for use in workshops and one compressor to power them.
- (6) - (1) Diesel Generator 15 kw (KVA) approx. - \$4000 in US dollars

- (7) - Oxyacetylene welding equipment - \$200 in US dollars
  
- (8) - (1) Industrial Sewing Machine - \$750 in US dollars
  
- (9) - FINS should explore the advantages of using an autoclave to replace their oven in vulcanizing feet.

END SHEET (18)