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Evaluation of the Vietnam Veterans of America Foundation Orthotics Training Project for Vietnam

USAID Leahy War Victims Fund
USAID Leahy

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by

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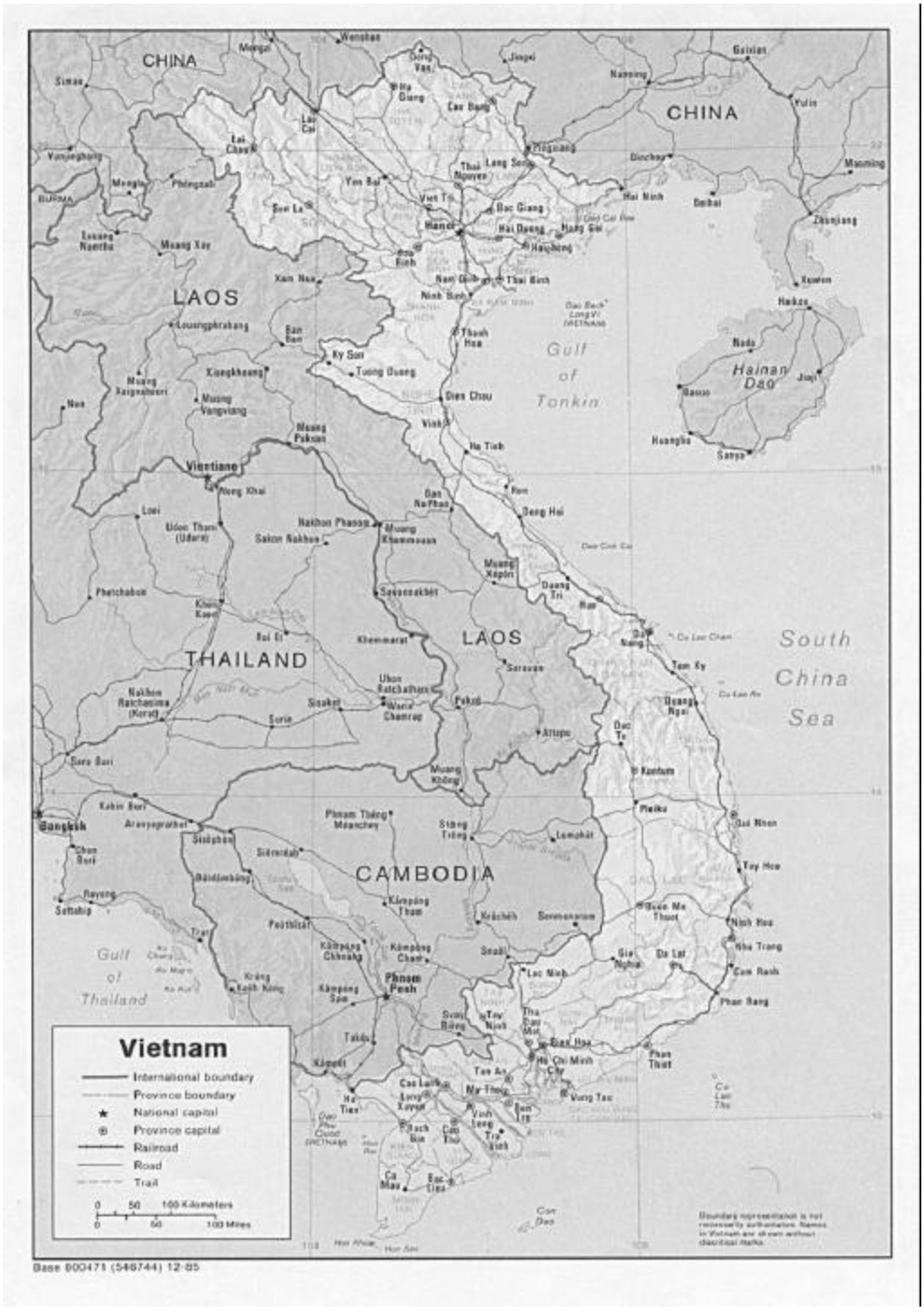
Abbreviations

CBR	community-based rehabilitation
DDH	developmental dysplasia of the hip
IPCH	Institute for the Protection of Children's Health
AFO	ankle foot orthoses
CPO	certified prosthetist/orthotist
GTZ	German Technical Cooperative
HKAFO	hip, knee, ankle, foot orthosis
ICRC	International Committee of the Red Cross
KAFO	knee, ankle, foot orthosis
MOLISA	Ministry of Labor and Social Affairs
P&O	prosthetics and orthotics
SOW	Scope of Work
TLSO	thoracic lumbas sacral orthosis
VNAH	Viet-Nam Assistance for the Handicapped
VIETCOT	Vietnam Center for Orthopedic Technologists
VVAF	Vietnam Veterans of America Foundation
LWVF	Leahy War Victims Fund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National capital
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Summary

Mel Stills, certified prosthetist/orthotist (CPO) and technical advisor to the Leahy War Victims Fund (LWVF), conducted an evaluation of the Vietnam Veterans of America Foundation (VVAF) Orthotic Training Project for Northern Vietnam from January 12 to January 16, 1999. The VVAF program, funded by the LWVF since 1994, trains orthotic technicians and physicians in the fabrication and application of thermoplastic orthotics as a medical treatment for children and young adults disabled because of limb deformity or limb loss.

VVAF has done a good job of establishing itself in the health care community in Vietnam. The deficiencies mentioned in this evaluation primarily pertain to the lack of supervision and training of orthotic technicians and physicians. VVAF is aware of the need to undertake a major overhaul of its Vietnam project in order to meet training obligations to the National Institute of Pediatrics and Bach Mai Hospitals. A focused effort should be undertaken over the next two years to enable Vietnamese personnel to develop the technical skills and leadership necessary to continue orthotic services when this grant ends.

Recommendations

- Given the overwhelming orthotic needs, on-site supervision of orthotic technical staff at both the National Institute of Pediatrics and Bach Mai Hospitals is mandatory. One individual should not supervise the two facilities. Each requires full-time attention at this time.

- A training schedule and curriculum must be developed and followed. The schedule and curriculum should be forwarded to the LWVF Washington office for review prior to implementation.

- Physician staff at both the National Institute of Pediatrics and Bach Mai should be trained in both diagnostic and orthotic prescription rationale.

- A checkout method for each orthotic device should be established to ensure that each meets the design protocol and the functional outcome indicated.

- Specific training should be implemented in the orthotic management of cerebral palsy. The treatment focus has shifted from polio to cerebral palsy and the designs currently used do not meet this diagnostic group's needs.

- A team approach should be discussed. Although a team approach has been discussed, there was no evidence of its existence.

- When VVAF brings in experts, they should ensure all the required disciplines are represented. This will provide a practical demonstration of the team approach.

- Training for the orthotic management of adults should be upgraded for the Bach Mai staff.

- Expatriate staff should be given more oversight. Under the current system, working hours are not verifiable.

- An up-to-date library pertaining to children's disability and orthotic management should be provided.

- A re-evaluation should take place in one year.

Evaluation of the Vietnam Veterans of America Foundation Orthotics Training Project for Vietnam

Background

In September 1994, the Leahy War Victims Fund (LWVF) awarded the Vietnam Veterans of America Foundation (VVAF) a grant to establish orthotic services and provide training for orthotic technicians and physicians in Vietnam. The Institute for the Protection of Children's Health (IPCH) in Olaf Palme Hospital in Hanoi, now known as the National Institute for Pediatrics, was selected for the establishment of the orthotics services and training program.

Orthotic technicians and physicians received primary training in the United States. A non-credentialed Vietnamese-speaking orthotic technician working for Jeff Frederick, who supervised and augmented training programs through periodic visits, was relocated to the National Institute of Pediatrics to provide ongoing technician training. These training methods and supervision did not prove satisfactory.

In March 1998, the USAID/LWVF grant was extended until September 2000, at a total estimated program cost of $1 million. The goals of the project are as follows:

- Strengthen services of the National Institute of Pediatrics clinic and workshop,
- Establish a thermoplastic clinic and workshop at the Bach Mai Hospital, and
- Provide outreach to surrounding provinces.

Questions from the Scope of Work

The program evaluation of the VVAF Vietnam project took place from January 12 to January 16, 1999. The scope of work (SOW) posed the following questions.

Question 1: Does the medical staff diagnose and prescribe correctly for the conditions that they most often face?

Answer: Many of the patients seen by the National Institute of Pediatrics rehabilitation staff have complex disabilities. The staff treat a number of patients with diagnoses not generally associated with rehabilitation-type programs, such as developmental dysplasia of the hip (DDH), clubfoot, and scoliosis. Several patients would not have benefitted from the orthoses prescribed, and the orthotic design provided could not or would not provide the corrections or support required. The physician staff had not recognized these deficiencies. The prescribing physicians had not

requested corrections in orthotic design, which indicates the need for more physician training in prescription rationale and biomechanics.

Question 2: Do the technicians produce devices to an appropriate technical standard?

Answer: The orthotic technicians at the National Institute of Pediatrics have a basic understanding of thermoplastic-forming procedures and lower extremity-bracing design. They seem to follow the procedures they have been taught, such as the Sablich trimline to an ankle foot orthosis, ankle straps, and rigid 90-degree ankle positioning. The Sablich trimline did not include the required lateral pressure point for prevention of a varus movement at the ankle. All orthoses had an ankle strap whether it was indicated or not, and all ankles were at 90 degrees and rigid. Function would have been improved if some of the patients had been braced in dorsiflexion and if the orthoses had not been totally rigid. All orthoses lacked the attention to detail required in finishing the plastic edges.

Question 3: Do the technicians fit the patients in a technically competent manner as called for by the doctor's prescription?

Answer: The technicians are following the prescriptions to the best of their understanding and knowledge. Almost all orthoses are identical. Someone has taught the technicians to flatten the plantar surface of the model (Figure 1). This modification is done every time, resulting in a 90-degree sharp corner on both the medial and lateral sides of the foot section of the orthoses, which increases pressure by reducing the total contact effect, makes the orthoses more difficult to fit to shoes, and requires more effort and time than a proper modification (Figure 2). All the evaluated technicians appeared receptive to suggestions. Although language was a problem, I communicated effectively though the demonstration. The technicians do what they are instructed to do. The quality of their work reflects the lack of supervision and instruction they have received.

Question 4: Do the staff at the hospital work together in a way that maximally benefits the patients?

Answer: I heard the team approach discussed but did not see it exercised. The therapists, technicians, and physicians do not participate as team members to the same degree. It is difficult to participate as a team member if your skills and level of training are limited.

Question 5: Do patients or, when appropriate, their family members receive appropriate information from the hospital staff as to the nature of their condition, the degree to which it can be treated, and the proper use of prescribed devices?

Answer: Some instruction is given to patients and families. Home visits, however, indicated several problems that were not addressed because patients had not returned for checkout or

orthotic device modifications.

Question 6: Is follow-up of the patients appropriate?

Answer: All patients had been given follow-up appointments. One 19-year-old female diagnosed with polio wore an inappropriately designed knee, ankle, foot orthosis (KAFO) for three years (Figure 3). No one identified the problems with that orthotic design in any of her subsequent visits to the clinic. The orthosis strap placement was inappropriate, as noted in the 1996 evaluation of the center, and the ankle system was inappropriate for her functional level. Neither the prescribing staff nor the providing technicians have a good understanding of the potential functional outcomes of appropriately prescribed, fabricated, and fit orthotic systems.

Question 7: Is the laboratory area safe?

Answer: Additional space could be used to provide more clearance area near power equipment. Plaster of paris is now stored in the working area and should be removed to a storage area (Figure 4) .

Question 8: Is production managed in a logical, systematic way to ensure good workflow?

Answer: Yes.

Question 9: Are the components and materials needed for orthotic service readily available?

Answer: There seems to be adequate stock available. The availability of KAFO components will improve when they are locally produced.

Question 10: What materials and components are purchased locally?

Answer: Most components are imported, but VVAF has some KAFO components produced at the Ba Vi facility and is identifying local sources for co-polymer polypropylene. VVAF is working with other NGOs to facilitate bulk purchases of components and materials to reduce the cost of individual orders.

Question 11: Is a training schedule available?

Answer: No. There is no organized schedule or curriculum available. To date, only some patients have been trained, and training is considered unsatisfactory.

Question 13: What kind of outcome studies have been undertaken?

Answer: Protocols developed in the VVAF project in Cambodia are in place for Vietnam.

Questionnaires for patients treated at the National Institute of Pediatrics have been developed, conducted, and reported. Impact indicator forms have also been used.

Question 14: Has the anatomy and biomechanic portion of the technical training been upgraded?

Answer: Training and the principles of floor reaction forces have been conducted in the treatment area. Other training has occurred, but specifics are unavailable.

Question 15: Is there a difference in reporting between the number of orthoses prescribed and the number delivered?

Answer: The staff said approximately 30 percent of patients do not return for prescribed orthoses fitting.

Question 16: Have comparisons been made between the children managed under the community-based rehabilitation (CBR) program and those children managed through the National Institute of Pediatrics clinic?

Answer: CBR has been used to help identify patients and gather data. CBR has not been used to provide primitive-design orthotic services normally associated with CBR.

Question 17: What is the effectiveness of the mobile outreach teams?

Answer: To date, the mobile outreach program is not operational. Uninstalled equipment has caused delays in taking possession of the required vehicles and completing the mobile lab. Trained technical staff are not available.

Question 18: What is the status of the Bach Mai program?

Answer: Construction of the Bach Mai orthotics fabrication area has been delayed and is not expected to be completed for another six weeks. The projected completion date is unrealistic based on the amount of work remaining to be done. The four Bach Mai technicians have completed their initial training, and they are working at the National Institute of Pediatrics Hospital only to continue their advanced training. They are scheduled to receive daily afternoon training, but their attendance is limited and the presence of Mr. Pomatto, CPO, has not been consistent. The Bach Mai technicians are not prepared to begin providing orthotic services when this center becomes operational.

Question 19: What is the working relationship between the VVAF staff and the Vietnamese staff at the National Institute of Pediatrics and Bach Mai?

Answer: The relationships is good, although there are difficulties between Mr. Pomatto and the orthotic technicians at the National Institute of Pediatrics. (I did not observe any difficulties.) The remaining VVAF staff relationships, in particular the relationship of Sarah Pfeiffer, program and monitoring officer, with her Vietnamese counterparts, appear to be very good.

Question 20: What is VVAF's relationship with other NGOs working in orthotics and prosthetics?

Answer: VVAF's relationship with other NGOs is excellent. Ms. Pfeiffer acts as coordinator of the Orthotic/Prosthetic Interest Group. VVAF has taken a leadership role in developing cooperative agreements for better purchasing methods. VVAF and Viet-Nam Assistance for the Handicapped (VNAH) do not appear to coordinate with each other.

National Institute for Pediatrics

The National Institute for Pediatrics, formerly the Institute for the Protection of Children's Health (IPCH), is located within the Olaf Palme Hospital. The 450-bed facility treats all levels of pediatric disorders.

The Rehabilitation Medicine Department under the direction of Dr. Tran Trong Hai treats children with physical disabilities. Dr. Hai has recently assumed responsibilities within the Ministry of Health (MOH). When he is absent from the institute, his vice-head of Rehabilitation Medicine, Dr. Tran Thu Ha, assumes responsibility for the department and the orthotic service. Dr. Trinh Quang Dung serves as orthotic clinic manager.

Mr. Pham Van Ha is head of the orthotic workshop, which was constructed and equipped by VVAF. The funds were received in part from the original grant from USAID/LWVF.

I attended two institute staff meetings: one on January 11, the other on January 15, 1999. In the meetings, conducted by the Vietnamese staff at the National Institute of Pediatrics, staff review patients seen the day before and the patients undergoing treatment. The meetings also serve as an informal educational exchange among the clinic team members. Topics are related to the patients undergoing treatment. The meetings are a good opportunity for the clinical personnel to share knowledge and experiences. The CPO should attend these daily meetings.

General clinical services follow the staff meeting. Most patients in the area received treatment in the physical therapy department, which included electrotherapy. The benefits of this treatment in the management of cerebral palsy are uncertain, but the physician staff indicated that this therapy is commonly requested by the patient's family. Other activity in the physical therapy department seemed appropriate for the patients being treated.

The orthotic fabrication and assessment area has not changed from the original floor plan. The space and the workbenches are beginning to show wear and some consideration should be given to upgrading the area.

The lab was not busy during the week observed, reportedly because of sudden cold weather. Only four orthoses were in production when I arrived and four more were started during the week. Approximately 20 ankle foot orthoses (AFO) were on the shelf awaiting patient delivery (Figure 5). Staff said that approximately 30 percent of the patients do not return. All the unused AFOs require significant modifications prior to definitive fitting.

All the AFOs–no KAFOs were in production–showed that the technicians lacked a thorough understanding of the foot portion modifications, as previously described.

Dr. Dung helped me to understand the center's scope of work. I found it interesting that he manages patients with DDH. I saw one newborn on whom he had applied a hip spica cast, and a four-year old with DDH that he managed first with a hip spica cast and then with a hip, knee, ankle, foot orthosis (HKAFO). He was now ordering an AFO with rotation straps (Figure 6). I am unsure why physical medicine physicians are treating DDH–such treatment would normally be given by an orthopedic specialist. I recommended that the AFO with rotation straps not be ordered and that the patient be observed.

Dr. Dung also treats a number of children with clubfoot deformity who would normally be treated by an orthopedic specialist. The children with clubfeet were first treated with casting and surgery when necessary. Under normal conditions these patients would be treated with a Dennis Brown splint following the casting or surgery. I did not see this procedure demonstrated at the National Institute of Pediatrics. The use of AFOs for clubfoot is not normally necessary.

The majority of patients seen in the clinic have been diagnosed with cerebral palsy. Furthermore, few cases of polio are followed. The diagnosis of "little syndrome" is also used to describe cerebral palsy. The orthoses fabricated for cerebral palsy are the same design as those fabricated for polio or other neurologic disorders. Specific orthotic designs provide better control of the foot in the case of cerebral palsy. The use of a total contact design can have a beneficial effect on physical performance. These CP designs are individualized and would require specialized training. The technicians have the capacity to learn these new techniques.

Two patients who were skeletally mature were treated for scoliosis. Designs associated with dynamic correction were used, although the patients required only immobilization for pain. One male patient had a 42-degree left thoracic curve and the orthosis provided was designed to correct a right thoracic curve (Figure 7). A young lady with a 68-degree T8 curve had been fit with a corrective type spinal device (Figure 8); the young man was recasted for a thoracic lumbus sacral orthosis (TLSO). Neither of these orthoses was effective in treating scoliosis.

Problems with design selection and orthotic fabrication show that more attention to training physician staff in prescription rationale and expected functional outcomes is necessary.

Bach Mai Hospital

Bach Mai Hospital is undergoing major remodeling and new construction. The VVAF/Bach Mai orthotics area remains unfinished (Figure 9). The construction has not been completed because a squatter occupied part of the space needed for expansion. This problem was reportedly resolved on January 15, 1999, and construction has recommenced. Medical staff indicated that they believe that this construction will be completed in six weeks. This projection is optimistic, as a great deal still needs to be done.

Equipment ordered for the Bach Mai Center has not been received. It is reportedly being shipped, but no arrival date has been established. The space set aside for the orthotics fabrication is within a hospital structure developed some 50 years ago and is unique. The structure is round and many of the internal walls are curved. Design of this facility must have been difficult because of the irregular surfaces required. Interviews with Professor Nguyen, Dr. Chuong, and Mr. Robijn revealed a complex variety of adult orthotics needed. Patient population will include cerebral vascular accidents, spinal cord injury, traumatic brain injury, general orthopaedic trauma, polio, and leprosy. Orthotic treatment at this center will be a challenge to even the most experienced and trained orthotists.

Mr. Robijn (a physical therapist working with the Netherlands Leprosy Relief Organization) is responsible for the physical therapy area under construction. He has been in Vietnam since 1985 and has considerable experience in the rehabilitation community and the area's needs. Mr. Robijn has a treatment philosophy that all patients with mobility disability need the opportunity to attempt ambulation, which will present a tremendous challenge when dealing with the profoundly disabled or the spinal-cord-injured patients lacking muscle control beyond the hip joint.

A brief visit was made to the leprosy treatment portion of the hospital, where Mr. Robijn also works, run under the dermatology department (Figure 10). About 30 new leprosy patients are identified per year and treated. We toured the facility and saw 1 young patient admitted. A number of amputees were admitted for surgical treatment. Two of the dermatologists also act as surgeons and perform amputations or reconstructive procedures. The amputations I observed appeared appropriate for prosthetic treatment.

Robijn is happy with a local private prosthetic service that uses the International Committee of the Red Cross (ICRC) design (Figure 11). Robijn is optimistic that the orthotic service has the potential to start off slow (10 to15 patients per month) and grow as experience is gained. He thinks it is important that this service, as a demonstration project, be appropriate.

The four full-time orthotic technicians need full-time supervision and on-the-job training because of the delays in construction and their limited training. Discussions were held with the center director regarding hiring graduates of the Vietnam Center for Orthopedic Technologists (VIETCOT) training program.

Home Visit Evaluations

Patient 1: A three-year-old child diagnosed with cerebral palsy received a bilateral AFO. The patient wears his orthoses eight hours per day, but the orthosis is not ambulatory. The patient would be best served with a standing type frame.

Patient 2: A three-year-old child with left hemiplegia wears an ankle foot orthosis with an articulated ankle joint and posterior stop. The patient has a leg-length discrepancy: the left leg is one centimeter shorter than the right leg. A shoe lift to correct leg length discrepancy was ordered and applied to the wrong side. The patient's gait was not improved by the orthotic design, and he needed modifications to increase the amount of dorsiflexion. The patient was referred to the National Institute of Pediatrics clinic on January 15, 1999, for modifications. The child appeared as scheduled and the corrections were made to switch the shoe lift and correct the orthotic ankle angle. The improvements in gait were demonstrated to the staff.

Patient 3: A nine-year-old child with bilateral clubfoot deformities had undergone three unsuccessful corrective surgeries. As a result of the surgeries, the patient has severe scarring on the medial aspect of both feet resulting in a varus position of the hindfoot and an abducted forefoot. I recommended that this patient's name and condition be noted and that she be presented to the next surgical expert familiar with foot disorders visiting the project.

Patient 4: A child who has cerebral palsy wears bilateral molded plastic AFOs with solid ankles set at 90 degrees and a Sablich trimline to provide varus control at the ankles (Figure 12). No contact was noted proximal to the lateral mallelous and the patient was referred to the Friday clinic for modifications to the orthoses. The corrections were made and the results were demonstrated to the staff.

Patient 5: A three-year old was diagnosed with flat feet and little syndrome. The child wears bilateral ankle foot orthoses with the rigid ankles at 90 degrees. The child appears to be a toe walker, but has full passive range of motion of the ankles. There was no spasticity or tone noted. I am unsure of the benefits of the orthoses and flat foot cannot be treated in a three-year old.

Patient 6: A five-year old with a diagnosis of little syndrome wears bilateral AFOs set rigidly at 90 degrees (Figure 13). The patient had been treated twice with AFOs, but the patient’s mother said the first set was too big. The second set had been recently fit. The mother brought the first set into the room and after inspection it appears that the second set is larger than the first set. The patient was referred to the Friday clinic for adjustments. I made adjustments to modify for the

navicular and to accommodate the sharp edges of the orthoses. These adjustments were demonstrated to the staff.

Patient 7: A 19-year-old female diagnosed with polio wears a molded plastic KAFO. This orthotic design is totally inappropriate. The thigh strap was secured mid-thigh and would have been more effective had it been secured to the proximal edge of the thigh cuff. The calf band was attached at the mid-calf area leaving the knee unsecured to the orthosis. When the patient stood, her knee flexed from 30 to 40 degrees, making this system energy consuming when ambulating and ineffective. Physical examination indicated that the patient has approximately 3 out of 5 muscle strength at the knee but could not extend against resistance. The patient has active normal dorsiflexion of the foot. The orthosis she wears has an articulated ankle, but a 90-degree posterior stop. This stop is not necessary, because the patient has adequate dorsiflexion through normal muscle strength. This patient has no angular deformities of her extremity and it would be very easy to orthotically manage in a KAFO. She has the potential to ambulate with a free offset knee joint, but in this environment the use of a drop lock knee is acceptable. This young lady has the potential to become VVAF's poster child for appropriate orthotic management. I have recommended to Ms. Pfeiffer that the CPO take direct control to ensure that this patient receives maximum benefit. In the three years that this young lady has worn this device, none of the problems were identified. It is time to correct these deficiencies.

Visit to Ha Tay Province

A visit to the Ha Tay Province was undertaken to review the efforts of the CBR program. We visited the Phu Luong Health Station and Mr. Nguyen Van Tien, head of the station. He said the district contains six villages within this district and has a population of 14,752 people. A CBR program was started in February 1992, and three individuals received training at a provincial level. Later, 67 people received a 10-day training course in rehabilitation. The primary use of the CBR program is to identify the health needs of the area. Of the 338 disabled individuals identified, 38 needed physical rehabilitation. We visited patients identified under the CBR. One child we saw is approximately nine years old with a neurologic disorder with an unknown etiology. The child was abandoned by her mother and is now cared for by her elderly grandmother. The child appears to have the capacity to communicate and is happy. Ambulation is not possible under the current conditions. A homemade pair of parallel bars adjacent to the house is part of the CBR development project (Figure 14). This child's disabilities are extremely complex and it was recommended that she be sent to the National Institute of Pediatrics for more detailed assessment by physicians and staff.

We saw a second child diagnosed with cerebral palsy. The child was only nine months old and the parents were anxious to see their child receive treatment. When taken to a health worker the parents were told the child was stupid and would only get stupider. This baby does not exhibit any classic signs of cerebral palsy. The only reason the parents sought advice was that

they had not noted their child turning over. There may be some developmental delays, but at nine months old this child appears normal. We recommended that within the next three months the child be sent to the National Institute for Pediatrics for a more thorough assessment by the medical staff. The CBR programs in this province effectively identify patients and provide referrals to more definitive care.

Visit to Ba Vi Center

We visited the Ba Vi Technical Center to assess the production of orthotic components (Figure 15). The importation of standard knee joints has proven to be costly and impractical. An agreement has been reached between the VVAF and the Ba Vi Center to produce metal knee joints using a design similar to the Becker knee joint used in the United States. The test models produced appear promising with some correction necessary to reduce binding of the joint.

Good quality control measures will need to be put in place to ensure that the metal used in the design is acceptable for function and durability.

VIETCOT/GTZ

A meeting was held with Wilfred Rabb at the VIETCOT school to discuss prosthetics and orthotics (P&O) training. There are currently 15 students enrolled in a three-year course of instruction. A new class of 15 students will start every two years. The goal of training is to achieve a Category II level, a standard recognized by the International Society of Prosthetics and orthotics.

Eighteen students are enrolled in a P&O upgrade training program, which is provided in modules. Eight students are sponsored by World Vision, three by Handicap International, one by VVAF, and six sponsored by the German Technical Cooperative (GTZ). The only USAID/LWVF-funded NGO not supporting a student in the school is VNAH. The student from VVAF is Mr. Pham Van Ha, head technician from the National Institute of Pediatrics. The students in the upgrade training program are all progressing well. The project director would prefer a stronger academic and clinical setting for the school, but at this time must use the spaces available.

Visit to Ford Production Facilities

VVAF staff and I met with Mr. Do Hoai Anh, the external affairs manager, and Mr. Nguyen Hai An, the product development manager, at the Ford production facilities, Hai Duong City on January 15, 1999. The facility is equipped to produce 12 to16 seat minivans, 2 light trucks, and a

four-ton Trader truck.

The mobile outreach vehicle is completed but is awaiting the delivery of P&O equipment (Figure 16). The resident CPO has been working on designs based on those originally submitted by Mr. Nagels of VVAF/Cambodia. The truck has a rollout floor that will double the floor space for production. The placement of equipment on the basic floor has bent the main floor and the rollout section is no longer operational, which will require some re-engineering and redesign. One solution may be to remove one of the two heavy benches that had been mounted in the middle of the floor.

Although all interviewed hoped the outreach vehicle will be able to serve a large disabled population, some opinions differed regarding design, equipment, and mission. There was some discussion about the installation of vacuum systems for prosthetics, but I do not see in the grant where prosthetics were going to be addressed. There is a letter of agreement between VVAF and Ford regarding five outreach trucks and five accompanying vans. The Ford staff that we spoke to were unaware that other vehicles were to be delivered. Ford is in the process of changing their production run and the vehicles needed may not be available in the near future. We discussed whether or not the production trucks should be outfitted differently in order to meet different patient population needs, but these are decisions to be made by VVAF's staff.

Cadillac Plastics

We met with Mr. Sunny Banh, chief representative of Cadillac Plastics. Mr. Banh is interested in supplying sheet polypropylene for P&Os in Vietnam. Currently, sheet plastics are ordered from the States. Cadillac Plastics has storage facilities in Malaysia. Ms. Pfeiffer has been coordinating VVAF's efforts to arrange a joint purchasing agreement between the NGOs working with polypropylene and Cadillac Plastics. Mr. Banh is eager to develop a price structure for this material that will be acceptable to the organizations involved.

Melchers

We met with John Connolly, a former VVAF employee in Cambodia, now the general director of Melchers. Mr. Connolly is exploring the possibility of producing sheet polypropylene within Vietnam. The only trial run to date has been unsuccessful–the sheet size was limited to one-half meter and the material's thickness was not well controlled.

Mr. Connolly is unaware of how to use sheet polypropylene in Vietnam, and I have agreed to help identify some of the uses for this material in the States outside of prosthetics and orthotics. There are plastic extruders in Vietnam, but it has not been determined if and when co-polymer polypropylene can and will be produced in the area. Mr. Connolly will continue to

explore the possibilities of local production.

Meeting with VVAF Staff

Mr. Chuck Searcy is concerned about training of the National Institute of Pediatrics and Bach Mai orthotic technicians. He is unhappy with their progress to date and is disappointed that this activity has not been organized. Delays in construction of the Bach Mai facility were discussed, and I am not sure what could have been done to speed up the process to meet construction estimates. The reasons for delay in shipment of materials and equipment to outfit Bach Mai are difficult to pinpoint. Unrealistic timelines may have been established. I cannot judge the progress made in training since the last USAID/LWVF assessment in 1996.

Over the course of the evaluation I discussed key issues with the CPO, Mr. Craig Pomatto (Figure 17). He is disappointed in the progress that had been made regarding training issues. He identifies the need for a qualified co-instructor and interpreter as his major obstacle. He probably will not stay with VVAF, but he indicated that he wants to continue his volunteer work in Vietnam through involvement with the Ministry of Labor and Social Affairs (MOLISA). Mr. Pomatto expressed the desire to oversee the completion of the Bach Mai facility and the mobile outreach equipment.

I met with Ms. Pfeiffer throughout the week's evaluation. I have gone over with her each and every observation. Ms. Pfeiffer will leave VVAF/Vietnam in March 1999, and plans to continue working with the organization through its Washington office. She demonstrated a great deal of enthusiasm and talent. She has learned to speak and read Vietnamese and has a obvious good relationship with the Vietnamese with whom she has worked. She acts as the coordinator for the P&O secretarial group, which brings together the NGOs working in prosthetics and orthotics in Vietnam.

Ms. Pfeiffer’s only concern regarding the War Victims Fund was related to delays and responses from USAID’s Manila office regarding grant-specific questions. She indicated that she had experienced two-month delays in receiving responses. We discussed the need to establish an orthotic training curriculum for the National Institute of Pediatrics and Bach Mai. Neither center is capable of functioning independently as a Category I prosthetics and orthotics professional center.

I met with Dr. Tran Trong Hai, head of the Rehabilitation Department at the National Institute of Pediatrics. I asked Dr. Hai about his concerns for the center. His only comment was that no training had taken place, none was scheduled, and no plan was in place for training. He is extremely disappointed in this situation. Dr. Hai is confident in his staff's ability, but sees the need for training. He has taken a position within the Ministry of Health and is absent from the National Institute of Pediatrics much of the time.

Figures

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Figures

Figure 1: Inappropriate modifications to plantar surface of cast

Figure 2: Standard AFO/Sabolich trimline is ineffective. Medial/lateral plantar edges do not have total contact with ground

Figure 3a: Improper strap placement at ankle

Figure 3b: Proper strap placement at knee

Figure 4: Fabrication area

Figure 5: Spare orthoses on a shelf

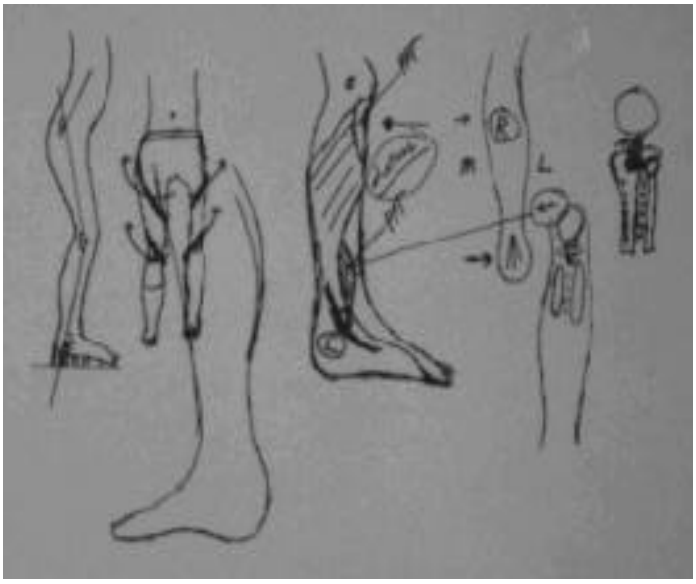

Figure 6: Floor reaction and rotating straps demonstration

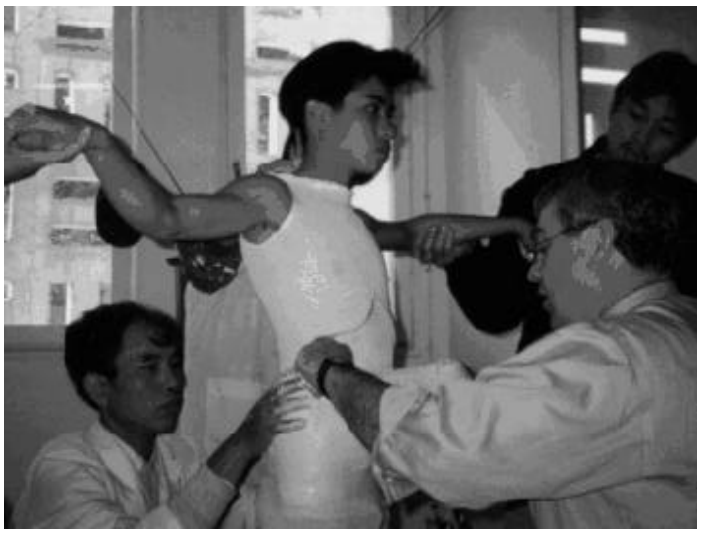

Figure 7: Casting Instruction

Figure 8: Scholiosis patient fit with an orthosis that cannot correct deformity

Figure 9: Consturction on VVAF/Bach Mai orthotics area delayed because of squatters house

Figure 10: Shoe production facility for leprosy patients at Bach Mai

Figure 11: Leprosy patient at Bach Mai Dermatology Department

Figure 12: Patient diagnosed with cerebral palsy wears bilateral molded plastic AFOs

Figure 13: Patient diagnosed with “Little Syndrome” wears bilateral AFOs

Figure 14: Ha Tai Province CBR center parallel bars

Figure 15: Wheelchair production at Ba Va Center

Figure 16: VVAF mobile outreach vehicle


Figure 17: Mr. Craig Pomatto gives KAFO casting instructions to staff

Scope of Work

Contact the Displaced Children and Orphans Fund and War Victims Fundy

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