Monitoring Visit Report: Cooperative Orthotic Prosthetic Enterprise (COPE) Comprehensive Orthotic Service Development in Lao PDR
Monitoring Visit Report

Cooperative Orthotic Prosthetic Enterprise (COPE)
Comprehensive Orthotic Service Development in Lao PDR
Under
World Learning Cooperative Agreement (DFD-A-00-08-00260-00)

September 24-28, 2012

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<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFO</td>
<td>Ankle Foot Orthosis</td>
</tr>
<tr>
<td>Cat. I</td>
<td>Category One Prosthetist Orthotist</td>
</tr>
<tr>
<td>Cat. II</td>
<td>Category Two Prosthetist Orthotist</td>
</tr>
<tr>
<td>CMR</td>
<td>Centre for Medical Rehabilitation</td>
</tr>
<tr>
<td>CO (e)</td>
<td>Certified Orthotist (emeritus)</td>
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<tr>
<td>COPE</td>
<td>Cooperative Orthotic Prosthetic Enterprise</td>
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<tr>
<td>CPO</td>
<td>Certified Prosthetist Orthotist</td>
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<tr>
<td>CSPO</td>
<td>Cambodia School of Prosthetics and Orthotics</td>
</tr>
<tr>
<td>CVA</td>
<td>Cerebral Vascular Accident</td>
</tr>
<tr>
<td>DCHA</td>
<td>Bureau for Democracy, Conflict and Humanitarian Assistance</td>
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<tr>
<td>DRG</td>
<td>Center of Excellence for Democracy, Human Rights and Governance</td>
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<tr>
<td>KAFO</td>
<td>Knee Ankle Foot Orthosis</td>
</tr>
<tr>
<td>LSO</td>
<td>Lumbar Sacral Orthosis</td>
</tr>
<tr>
<td>LWVF</td>
<td>Leahy War Victims Fund</td>
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<tr>
<td>OT</td>
<td>Occupational Therapy</td>
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<tr>
<td>PDR</td>
<td>Peoples Democratic Republic</td>
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<tr>
<td>PRC</td>
<td>Provincial Rehabilitation Centre</td>
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<tr>
<td>P&amp;O</td>
<td>Prosthetics and Orthotics</td>
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<td>PT</td>
<td>Physical Therapy</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>VIETCOT</td>
<td>Vietnamese Training Centre for Orthopaedic Technologists</td>
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<tr>
<td>WHO</td>
<td>Wrist Hand Orthosis</td>
</tr>
<tr>
<td>Number</td>
<td>State</td>
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<td>--------</td>
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<td>12</td>
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<td>14</td>
<td>Sekong</td>
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<td>15</td>
<td>Vientiane</td>
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<tr>
<td>16</td>
<td>Vientiane</td>
</tr>
<tr>
<td>17</td>
<td>Xieng Khouang</td>
</tr>
</tbody>
</table>
1. EXECUTIVE SUMMARY

Sue Eitel, PT, senior rehabilitation advisor for the U.S. Agency for International Development’s (USAID) Vulnerable Populations Programs, and Mel Stills CO (e), technical advisor to the USAID’s Leahy War Victims Fund (LWVF) visited the USAID-supported Cooperative Orthotic Prosthetic Enterprise (COPE) “Comprehensive Orthotic Service Development in Lao PDR” project from September 24 – 28, 2012. The two staff visited the Center for Medical Rehabilitation (CMR) in Vientiane on Sept 24 – 25, and Mr. Stills conducted additional site visits to Champasack (Pakxe) PRC and Savannakhet PRC from Sept 26 – 28. See Section 3 for details. The team met with staff from COPE, local partners, as well as USAID/Vientiane.

COPE received a $1,429,568 grant from World Learning through WL’s Grant Solicitation and Management Leader with Associate Agreement with USAID/DCHA/DRG (Cooperative Agreement DFD-A-00-08-00260-00) for their program, “Comprehensive Orthotic Service Development in Lao PDR.” This three-year program (December 1, 2010 through November 30, 2013) aims to further develop comprehensive orthotics services in Lao PDR.

The specific objectives of the program are to:
I. Identify and promote appropriate orthotic components
II. Review/improve current orthotic training and orthotic training materials
III. Engage existing orthopaedic workshops/service centers on increasing skill and activity level for orthotic and prosthetic production

For this project, COPE is working directly with five Lao PDR government rehabilitation facilities:
- Centre for Medical Rehabilitation (CMR) Vientiane;
- Provincial Rehabilitation Centre (PRC) Champasack (Pakse);
- Provincial Rehabilitation Centre (PRC) Savannakhet;
- Provincial Rehabilitation Centre (PRC) Xieng Khuang; and
- Provincial Rehabilitation Centre (PRC) Luang Prabang.

Key findings:
- There are little, if any, follow-up/outcome studies of any of the patient groups treated.
- The outreach program (COPE Connect) is costly.
- Retention of trained P&Os is very poor.
- In spite of mentoring and training, there appears to be little change in practice/behavior for services.
- Reporting on indicators on quarterly progress reports is incomplete.
- Quality of orthotic service delivery is below expectations of graduates of accredited P&O Training Schools.

Recommendations:
- Cope should work closely with government counterparts to strengthen staff retention as well as decision making with treatment choice and quality of services.
- WL/GSM should request COPE to adjust their annual work plan to incorporate key modules on follow-up and impact of treatment interventions on client’s function.
- WL/GSM should provide guidance to COPE on how to complete indicator tables correctly.

2. COUNTRY CONTEXT

2.1. GENERAL
Lao PDR is a landlocked country in South East Asia. Its land mass size is slightly larger than the state of Utah. The Mekong River extends along most of its entire border with Thailand, Vietnam to the East, China and Burma to the North and Northwest, and Cambodia to its South.

Agriculture accounts for half of its gross national product and 80 percent of employment in the country. Only 4.01 percent of the land is tillable. It is believed that Laos is rich in mineral deposits and that potential is being explored. With abundant water Lao PDR is an exporter of hydroelectric power.
Lao PDR has been a country in conflict for much of its modern history. Independence from France was gained in 1955. Internal conflict starting in 1960, then Lao PDR joined with North Vietnam to defeat the Lao National Army, which resulted in its involvement in the Vietnam War. Lao PDR is one of the most bombed countries in the world.

2.2. DISABILITY

It is estimated that more munitions were dropped on Laos than were dropped in all of World War II. Some estimates state that up to 30 percent of those munitions failed to explode at the time they were dropped, and much of the country remains littered with unexploded ordnance (UXO). The incidence of UXO-related injuries is on the decline (2011: 99 people killed/injured, while Jan–Aug 2012 the number is 41). Many of the survivors are left with devastating injuries, including amputations of the hands and arms and severe facial injuries and blindness.

Due to the history of conflict, transportation difficulties, poor economy, and other factors, the health system in Lao PDR is not well developed. Conflict-related injuries, accidental detonation of old war relics, congenital disorders, childhood diseases, stroke, diabetes, and road and industrial accidents all have added to a disabled population estimated by the World Health Organization to be around 990,000, 15 percent of the 6.6 million Lao PDR population. Disability is just one of the conditions a health care system must address. Development of quality rehabilitation services can restore an individual to a functional productive capacity within his/her family and community.

2.3. PROFESSIONAL P&O TRAINING

The College of Health Science, Ministry of Health, and Lao Government are reported to want to start their own P&O training program in November 2012. An intake of 30 students each year for three years is anticipated. The minimum qualification in P&O training is at the Category II Level as recognized by the World Health Organization and the International Society for Prosthetics and Orthotics (ISPO).\(^1\) It is expected that the level of P&O training will be the ISPO Category II level, but this is not confirmed. Locally trained P&Os in only the Lao language may help address the lack of qualified professionals but issues of appropriate compensation will also need to be addressed in order to retain staff. Current payment for an entry-level Cat. II P&O is $62.50 per month, which is the same as for the P&O bench technician who has no clinical/patient involvement.

3. COOPERATIVE ORTHOTIC PROSTHETIC ENTERPRISE (COPE)

COPE was formed in 1997 as an initiative of POWER International with the Ministry of Health of the Government of Lao PDR and several international non-government organizations. COPE is a local not-for-profit organization that works in partnership with the CMR. COPE’s initial focus was the development of prosthetic services to meet the needs of an overwhelming number of amputees in the country. The focus continued on prosthetic services delivery until January 2011, when COPE was awarded a sub-grant through WL/GSM to aid in the development of comprehensive orthotic services. COPE is currently in the second year of their three-year program.

COPE recognizes the importance of providing a model for prosthetic and orthotic (P&O) and physical therapy (PT) services. As a result, throughout its history they have employed a number of well-qualified and competent P&O and PT mentors.

The COPE project under WL has three main objectives:

- Identification and promotion of appropriate orthotic components
- Review / improve current Lao orthotic training and orthotic training materials
- Engagement of existing orthopedic workshops / service centers on increasing skill and activity level for orthotic and or prosthetic production

COPE proposes to establish better practice in orthotics / rehabilitation services by encouraging the systematic use of evidence to inform ongoing improvement of clinical services.

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\(^1\) There are only two recognized levels of technical training for P&O service providers, Category I and Category II with Category II being the lowest recognized level. Cat. II focuses on the lower limb in both prosthetics and orthotics.
They intend to accomplish this goal by 1) educating physicians on appropriate orthotic prescriptions in order to fill service gaps; 2) introducing new orthotic designs, components, and materials with justification based on outcomes; and 3) developing and distributing protocols for the treatment of spinal injury, cerebral palsy, clubfoot, and fracture management to all the COPE partner sites.

3.1. TECHNICAL REVIEW (P&O)

As noted above, the Vientiane CMR was visited Sue Eitel and Mel Stills. A team composed of Mel Stills, Ms. Cody McDonald CPO (COPE Orthotic Mentor); Sybounhouang Sansathit (Cat I P&O COPE prosthetic mentor and COPE liaison with CMR); and Mr. Thonglith Sihabandith (deputy director, CMR, and senior physiotherapist) visited Pakse and Savannakhet Centers.

3.1.1. CMR Vientiane

The CMR Vientiane is a well-established treatment facility located in the capital, Vientiane. The P&O section of the CMR is well developed, equipped, stocked, and staffed. Equipment used in the manufacture of P&O devices shows its age, but all are reported to be operational. Polypropylene is the standard thermoplastic material used in P&O production. Ankle joints to be used in orthotic production are being introduced along with other thermoplastic materials, but were not yet in use during this visit. Fourteen people, including P&OS, technicians, and gait trainers, staff the CMR. There were no finished orthotic devices delivered or observed during this visit, but an intake clinic was observed. Patients included clubfoot, arm flexor tendon laceration (hand involvement), child with brachial plexus injury (there is not a viable orthotic option for this child), upper limb amputation, and transtibial (TT) amputation. Knee Ankle Foot (KAFO), LSO, TT casts had been taken earlier, and models were in various phases of modification. Transfemoral (TF) amputees were observed walking in the parallel bars, and they appeared safe and secure.

The only definitive service observed was a clubfoot casting. The person doing Ponseti clubfoot casting has been trained and is recognized as qualified by those responsible for Ponseti instruction in Laos, Dr. Steve Mannion, Christian Blind Mission, and Dr. Fred Dietz, University of Iowa. The cast padding used is locally made, and its inconsistent thickness results in excessive padding in most areas.

The laboratory and fabrication areas all appeared well kept. The workshop had been closed for three months while new flooring was installed and the walls painted, but is fully operational now.

CMR orthotic production for 2011 included:

<table>
<thead>
<tr>
<th>Orthotic Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knee Ankle Foot Orthoses (KAFO)</td>
<td>20</td>
</tr>
<tr>
<td>Ankle Foot Orthoses (AFO)</td>
<td>106</td>
</tr>
<tr>
<td>Lumbar Sacral Orthosis (LSO)</td>
<td>157</td>
</tr>
<tr>
<td>Wrist Hand Orthoses (WHO)</td>
<td>5</td>
</tr>
<tr>
<td>Abduction boot and bars</td>
<td>49</td>
</tr>
<tr>
<td>Shoe lifts</td>
<td>24</td>
</tr>
<tr>
<td>Orthopaedic shoes</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
</tr>
</tbody>
</table>

3.1.2. PRC Champasack (Pakxe)

The PRC Champasack is located in the far South of Laos, on the Mekong River in the capital of the province, Pakxe. The province has a population of 600,000.

The P&O workshop is small but well maintained and clean. COPE reports that there are equipment issues, but they have been identified and are being addressed. Pakxe PRC is staffed by nine persons, including a Cat. I P&O, Cat. II P&O, and a single discipline Cat. II Prosthetist. It is reported that not all employees are putting in a full day of work or are effective in their work.

The team observed six patients in the clinic. Diagnoses ranged from cerebral palsy, polio, head injury, floppy legs, and low back pain. AFO designs were all solid ankle and generally fit about the foot and ankle, but were not adequate for foot control or to maximize function. When looking at the AFOs for the small child (floppy legs), it was difficult to determine which was left and right due to lack of anatomical definition. A patient with an obvious skull defect was at first wrongly identified as a stroke. Her AFO was a solid ankle design and the fit appeared adequate. Two patients with low back pain had been fit with thermoplastic rigid LSOs. LSO design was not indicated, and design will be inadequate to properly control motion. The design did not meet any of the criteria for
LSO prescription and would not have stayed in the desired position. Pakxe staff requested a better quality cast padding for Ponseti clubfoot casting.

Champasack PRC orthotic production for 2011 included:

<table>
<thead>
<tr>
<th>Orthosis</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAFO</td>
<td>4</td>
</tr>
<tr>
<td>AFO</td>
<td>28</td>
</tr>
<tr>
<td>LSO</td>
<td>7</td>
</tr>
<tr>
<td>TLSO</td>
<td>1</td>
</tr>
<tr>
<td>WHO</td>
<td>1</td>
</tr>
<tr>
<td>Shoe Lift</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
</tbody>
</table>

3.1.3. PRC Savannakhet

Savannakhet province has a population of nearly 824,000 and is the most populated province in the Lao PDR. It is in South Central Laos, along the Mekong River, about midway between the capital and the Cambodian border.

The PRC Savannakhet P&O workshop is small but well kept. Six individuals staff the workshop. The chief of the P&O section is to retire soon and there is one other Cat. II P&O provider on staff. There appear to be questions regarding the technical capacity of both the technician and gait training staff. The team noted that the dust collector appears inoperable and the oven room is quite small. With two ovens there is little space for actual thermoforming. Because the oven room is so small, some consideration should be given to relocating ovens. A possibility is to mount ovens into the outside wall so that the oven front is only in the thermoforming room and the remainder of the oven is on the other side of the wall. This would increase floor space and much of the oven heat would be outside. Care would be needed to ensure that the ovens are not totally exposed to weather. This approach is common in similar situations in other hot countries.

Orthotic patients had been contacted for us to observe. They included a neurologic problem due to a fracture, a cerebral vascular accident (CVA) patient, a non-union femur, and a tibia fracture.

A young boy had undergone an Achilles tendon lengthening for a shortened heel cord due to long-term immobilization in an unknown device for a femur fracture. The boy had been fit with an AFO to maintain the ankle at 90 degrees. The overall fit of the AFO was inadequate, but the system did prevent the return of the shortened heel cord. Two male adult patients were seen with non-union fractures of the femur and tibia. Both orthoses were adequate to control motion, but did not address the non-unions. Improvements in design were discussed with staff. Only a surgical intervention would aid in healing these fractures. Another non-union tibia fracture was seen wearing a tibial gaiter orthosis. Fit was adequate to control bending moments in the tibia, but staff believed it would/could unload the tibia. Unloading is contraindicated and the orthotic design could not possibly unload the tibia.

A 58-year-old male was seen who had sustained a right side CVA two years ago. The patient had been fit with an AFO in April 2012. At the time of this presentation, the patient also had significant gouty deformity on the heel and ankle. The patient’s orthosis had been poorly thermoformed, and overall fit was totally inadequate. Because the AFO bridged the ankle, it did inhibit plantar flexion, but there was one-half to three-quarters of an inch clearance throughout the orthosis. Ideally the orthosis should be in total contact with the foot, ankle, and the calf. This is important for control of the foot in a stroke patient who has instability of the ankle. AFO design was a solid ankle with the foot at 90 degrees. Other options for foot position were discussed. The local staff stated that the orthosis was “good enough” even though they admitted that fit was inadequate and did not meet standards.

Savannakhet PRC orthotic production for 2011 includes:

<table>
<thead>
<tr>
<th>Orthosis</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAFO</td>
<td>1</td>
</tr>
<tr>
<td>TLSO</td>
<td>1</td>
</tr>
<tr>
<td>AFO</td>
<td>7</td>
</tr>
<tr>
<td>LSO</td>
<td>6</td>
</tr>
<tr>
<td>WHO</td>
<td>1</td>
</tr>
<tr>
<td>Clubfoot castings</td>
<td>24</td>
</tr>
</tbody>
</table>

3.1.4. Overview of orthotic service observed

Overall orthotic design, fit, and function were marginal at best in most cases and below standards expected of graduates of accredited P&O training programs. Staff recognize the discrepancies and know the standard of fit and function but failed to recommend change or take action to correct discrepancies. Space, equipment, materials, and technical support are all adequate and appropriate for a quality orthotic services program. Current patient loads and productivity are well below what normally would be expected with this staffing level. Production levels could be significantly increased without stressing current staffing loads. Reporting of services provided is inconsistent between the centers and only general estimates can be made for productivity. It is also unclear who the productive employees
are at any of the centers in that individual productivity is not tracked. The World Health Organization estimates that one well-trained P&O, on average, can manage 250 individual patients per year with proper technical support. In reality those numbers can be easily exceeded when patient loads are not severely complex. Technical staff, possible 7 delivering 344 orthotic devices and 25 clubfoot castings, in the centers visited are only averaging about 53 patient service per year. Seven individuals working in orthotics should be able to deliver, on average, at least 1,750 devices per year.

Motivation and enthusiasm seems to be lacking in some staff. Turnover, P&Os leaving the profession and finding jobs in other non-healthcare areas, is significant. Of the 14 Laotians who have graduated from the Cambodian School of Prosthetics and Orthotics (CSPO), six remain in P&O and with COPE. Currently there are an additional six Laotians out of the country receiving Cat. II P&O training. Not all P&Os working with COPE are clinically productive and the majority of the clinical load is carried by the few. Part of the problem is compensation. There is little incentive to remain in P&O when much better paying jobs are readily available for smart, English speaking, young people.

COPE was given advice prior to our arrival that we wished to see a demonstration of the orthotic services that they had provided. Patients were not to be randomly selected, but they were requested to select those patients they felt had achieved the best treatment results, those cases they were most proud of what had been accomplished, literally their bragging cases. This message was conveyed to each of the service sites to be visited. The fracture cases presented did give an indication of a capacity to address the less-than-standard clinical cases. Their thought process had some sophistication but lacked an understanding of fracture care or what was needed. Clearly more training and/or experience is needed in this area. The most routine of cases requiring a standard AFO design lacked sophistication, imagination, and an understanding of basic AFO design, manufacturing, and fitting principles.

National P&O staff have a capacity to expand orthotic services into a more comprehensive rehabilitation program. Innovative designs were observed particularly when treating lower limb fracture complications. Effectiveness of these systems could have been improved with more attention to the details of design and fit. The more standard AFO designs observed were of a solid ankle at 90 degrees, and overall attention to the design, quality of fit, and functional outcome was severely lacking. When questioned, the staff recognized deficiencies but failed to recognize or report the importance of correcting those deficiencies. They felt that what had been provided was “good enough,” and they did not justify any correction or modification to what had been provided. There is no indication that there is any routine follow-up or scheduled return for any of the service provided. There is no indication that there is any referral for therapeutic services of patients provided P&O devices.

Workload at the three sites visited is not impressive. Little work was noted as being in progress. There is a lack of any significant patient activity. All the workshops visited are located in large population areas, and if disability is as prevalent as reported, there should have been more activity. There is no justification for the continued use of rigid LSOs in the treatment of low back pain. It is unclear how this practice was developed and the motivation to continue, but there is no long-term benefit for its continued use.

National P&O staff has the academic training necessary to deliver an appropriate P&O service. Confidence building and professional motivation are needed so that the individual P&Os desire to accomplish what is best for their patients. Development of a standard check-out procedure/protocol for all orthotic devices carried out by Lao staff and monitored for quality improvement by the orthotic mentor should be undertaken and a focus of final year activity. The development of a team of physicians, therapists, and P&Os who recognize the functional potential of persons with physical disability needs to occur so that individually each has the capacity to function as a “gate keeper” and to raise issues as needed to ensure a quality of rehabilitation services. This will permit the CMR to expand its role effectively and reduce the need for outside resources.

Proper compensation for Lao staff doing good work needs to be investigated and developed or turnover will just continue. Rewarding competency and motivation will aid in the development of the P&O profession in the Lao PDR.

### 3.1.5. Summary findings and recommendations

**Key findings:**
- Staffing levels at project sites visited are able to meet current clinical demand but are well below capacity
- Retention of trained P&Os is very poor
- Turnover of key expatriate COPE staff is significant
- Significantly more attention to manufacturing and fitting details of orthotic devices is required if desired patient/beneficiary functional levels are to be achieved
- In some cases orthotic design and quality of fit were below acceptable standards expected from P&O graduates of accredited training programs
- Resources are being poorly utilized/wasted by attempting to provide an orthotic service for spinal pain/low back pain, when the focus of treatment for this patient group should be physical therapy
- There are little, if any, follow-up/outcome studies of any of the patient groups treated
- Identification of patients who can benefit from rehabilitation services is insufficient
- All project sites visited appeared to have sufficient staff, space, equipment, and access to materials for current patient loads
- All required equipment appeared operational
- The COPE orthotic mentor is fully engaged with Lao National Cat. I and II P&O staff and they appear to have a positive professional relationship
- National P&O staff recognize the deficiency of orthotic design and the quality of fit and function, but have not taken responsibility to correct deficiencies

Key recommendations:
- A detailed checkout of appropriateness of all designs and individual fit and function should be undertaken.
- COPE should continue with its introduction of new designs, components, and materials with emphasis on checkout and follow-up on how these elements improve outcomes.
- All spinal orthotic devices should only be under the leadership of a responsible physician.
- Scoliosis treatment should not be undertaken without an active follow-up program and a complete understanding of limitations and contra-indications.
- Spinal trauma should be the first priority in spinal management, but requires direct oversight by a physician and the orthotic mentor.
- The provision of rigid Lumbar Sacral Orthoses (LSO) for spinal pain/low back pain should be discontinued immediately.
- Follow-up is intended to monitor how well a treatment or device has benefited an individual. Without follow-up we have no idea of the effectiveness of our action, how durable a devise is, if function has improved, if it is being used, or what corrections or changes are needed. These elements are needed if any service delivery approach is to have an element of ongoing quality improvement and sustainable technical services.
- Explore possible method/means to encourage retention of good P&Os.
- Cerebral Palsy treatment training was just undertaken and fracture management is scheduled in the next year of the grant. If these areas are to be included, attention to detail is mandatory. In the case of fractures, the lack of attention to details can result in delayed or non-unions and/or malunions that then can only be addressed by surgical interventions.
- Mentors’ activity should focus on the development of national staffs’ clinical skills, quality improvement, and assessment of outcomes.

3.2. PHYSICAL THERAPY
There are 18 Lao physical therapists associated with the COPE Project (10 in CMR and 2 in each of the Provincial Centers). There are two COPE mentors funded by the project – PT mentor and OT mentor (50 percent adult and 50 percent pediatric). There is also a pediatric PT (funded by AusAid) whose translator is supported through the project.

Statistics from pediatric rehab services Jan-Jun 2012:
- 299 children received care; 223 in CMR (74 percent) and 76 in provincial centers (26 percent).
- 53 assistive devices provided (11 standing frames, 21 corner chairs/tables, 21 walking frames) – 89 percent were provided in Vientiane.
- There were a total of 940 treatment sessions; 428 OT (45 percent) and 512 PT (55 percent).
The type of service provided makes differentiation between OT and PT; there are no national OTs in the COPE Center. There are few, if any, pediatric wheelchairs available for children with cerebral palsy or other neurological disorders.

Due to staff illness and lack of patients during the period available to observe the PT services, no actual treatments were observed during this visit.
**3.3. COPE CONNECT**
COPE Connect is a method of outreach utilized by COPE. It started in 2009 and has reached 10 provinces:
- Xiengkhouang
- Houaphanh
- Oudomxay
- Luangnamtha
- Vientiane Province
- Borikhounxay
- Khammoun
- Champasack
- Sekong
- Attapeu
The strategy entails conducting a two-day introduction workshop for roughly 50 people. The objective is awareness raising in the province to increase referrals to one of the five orthopedic workshops. COPE also identified a district and provincial coordinator. Their role is to conduct a door-to-door survey in their area to identify people needing physical rehabilitation. These people will be informed of a COPE assessment (there has been one per province that continues for two to three days) to identify individuals who can benefit from physical rehabilitation services. These individuals are provided with a written referral to the closest orthopedic workshop.

From 2009–2011, there were 1,371 assessments, 724 referrals, and 205 people received treatment. There is no follow-up (not for those referred who did not come, nor for those who received service to assess the impact).

COPE indicated that the cost per beneficiary for this service is quite costly; though they did not have exact figures, the cost ranged between $250–$300 per client (not including the assistive device).

**3.4. REPORTING**
The COPE quarterly reports are generally well written and easy to follow. There was discussion on the indicator tables and how these could be filled in a more comprehensive manner. To date, the only two rows that are consistently filled are the number of new orthoses and new prostheses.

Recommendations:

**Indicator 1**
- Please provide information on number of repairs that are made to any of the devices.
- For rehabilitation, please enter the number of adults receiving PT through COPE (note that adult PT is also offered through the CMR, but this is not covered by the project and is a separate service).
- Under “other” row, please specify that this is pediatric PT/OT, and fill the number of kids served in the appropriate column.
- In the next Q report, please revise “cumulative to date” to reflect all data missing in previous quarters.

**Indicator 2**
- Data collection, awareness, and coordination is being made through COPE Connect – the numbers for each of these should be reflected – and retro-fit from previous Qs in the “last cumulative reported.”

**Indicator 3**
- PT/OT short courses and should be reflected here.

**3.5. WORK PLAN**
COPE indicated that the fracture management course may not be as relevant as was original thought —this is because most individuals with fractures do not come to the centers, but to other hospitals or clinics. Although COPE feels it is still valuable to review this information with the staff, it does not merit developing a “care pathway.” Together with the visiting technical team, it was agreed that an additional area of focus be added for the coming year: monitoring and functional impact assessment for clients receiving services through the rehabilitation centers. This is not only of keen interest to USAID to understand the impact of investments made, but it is vital to the different centers to know if people have improved function and quality of life as a result of treatment provided through the government centers.

**4. CONCLUSION**
The COPE staff appear to be very committed to the project and to improving the quality and availability of rehabilitative care for people with disabilities. There appear to be a number of challenges with regard to staff retention
(national staff as well as expatriate staff), which leads to reduced continuity of care and work efficiency. Finally, there is an apparent lack of motivation on the part of the staff to achieve a quality and quantity of device production and delivery. In addition to smaller observations within the project, these overarching concerns need close attention if the project hopes to achieve the objectives outlined at the onset.

It seems the incorrect prescription of LSO is a huge issue, and there is a need to change the work plan and really focus on quality.
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