

## **AMERICA NEPAL MEDICAL FOUNDATION**

### **Project Category:**

**Project Title: Improving Access to Quality Physiotherapy in Nepal**

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### **Proposal Summary:**

In the Kavre and western districts of Nepal the access to physical rehabilitation is extremely limited. This project aims to rectify that need. The objectives of this project are to:

1. Equip and support patients in a physical therapy rehabilitation unit at Dhulikhel Hospital (DH),
2. Equip and staff 6 of the DH rural community clinics so that outpatient and home care physical therapy can be provided,
3. Provide advanced physiotherapy training to professionals and community health workers.

The project will be based at Dhulikhel Hospital (DH) in Dhulikhel, Nepal. DH provides acute care in a community-based health service delivery approach to patients in central and eastern Nepal. Physical therapy is an integral aspect of the hospital's acute care and outpatient services. However, patients whose conditions require longer rehabilitation are discharged home because short term rehabilitation is not available. Currently, these patients are discharged as soon as the acute care terminates. Continued and follow-up physical therapy care near their homes has been intermittent or absent. The leadership of Kathmandu University (KU) and DH have recognized this lack of services and are promoting this project to assist patients achieve more optimal function.

## **II. Organization Description and History**

Rehab Nepal, Inc. and its president Dr. Patricia Sullivan have been associated with Kathmandu University and Dhulikhel Hospital for the past four years. Initially Dr. Sullivan was asked to work with the physiotherapy faculty to enhance both their academic program and the clinical care provided in the hospital's acute and outpatient units. To that end she presented many workshops on the treatment of patients with stroke, low back pain and how to improve teaching effectiveness. After the earthquakes the focus expanded to provide rehabilitation at the hospital and at the hospital's rural community health centers. Now two years after the earthquakes many victims still require rehabilitation and some will need ongoing care to assist in reducing physical impairments. Dr. Sullivan has worked closely with physiotherapy leadership including Ranjeeta Shijagurumayum PT, MS, the director of the Physiotherapy Program, Govinda Mani Nepal, PT, MS who organizes the neurological physical therapy, Shambhu Prasad Adhikari, PT, PhD a neurological physio expert, Inosha Bimali , PT, MS who coordinates the physio community services, and Bimika Khadgi, PT, MS who is the women's health therapist.

Dr. Ram the Vice Chancellor of Kathmandu University and Dr. Kuko the Medical Director of Dhulikhel Hospital and Dean of the Medical School have provided enthusiastic support of

this project. They both realize the importance of providing rehabilitation at the hospital and at the rural clinics. On my most recent visit I met with them both and discussed the project's implementation. Dr. Kujo has identified space in the hospital where the rehab unit will be located. Dr. Biraj Karmacharya the Director of Community Health Clinics has been in full support of improving and expanding health services at the community clinics.

### **III. Statement of Need**

Many victims of the earthquakes still require physiotherapy care. These patients include those with spinal cord injury, traumatic brain injury, multiple fractures, and amputations who have been discharged home with minimal or no follow-up. They may need stretching of tightened or contracted limbs, ambulation training if walking is possible, and strengthening if they have been sedentary for prolonged periods. Patients who have had a stroke are discharged after their acute hospital stay with no access to rehabilitation or longer term follow-up. During her teaching visits Dr. Sullivan has worked with two patients with stroke: one a professor at KU who needs strengthening of his trunk and legs so he can walk again; the other gentleman is an engineer who works in the rural areas. There is no access to physical therapy near where he lives so he had to move into an apartment in Dhulikhel to receive outpatient care. Many children with developmental delay cannot walk and thus may not be able to attend school. They may have no access to physiotherapy near their home so they can learn how to walk. Children with cerebral palsy need ongoing physical therapy care to maintain their range of motion, strength, and balance, and to teach their family proper care. Women with prolapse do not have access to women's health physiotherapy that can minimize their symptoms. Prolapse is common due to the early age childbearing begins and the multiple pregnancies of many women. In the community there may be no access to physiotherapy to reduce the common neck and low back pain that results from the heavy labor and carrying of heavy objects. All of these people need access to physiotherapy whether in a rehab unit at the hospital for a short term intense program or in their community at the hospital's health clinics. Additionally, many elderly have minimal access to physical therapy to reduce the symptoms of arthritis and to provide exercise classes to reduce the risk of osteoporosis and of falling.

Currently inpatient rehabilitation physiotherapy services at Dhulikhel Hospital are not delivered. Physiotherapy care is provided while the patient is in the hospital's acute care units and outpatient care is given to those who live near the hospital. However, if a patient needs additional physiotherapy after their medical/surgical care is complete the options are minimal or non-existent. Patients may return home with no support, minimal or no family education, and no access to needed equipment or continued therapy. Although DH has an expanded network of 16 rural community centers no regular physiotherapy services are offered there.

The people who will benefit from this project are those patients who require additional or on-going physiotherapy who currently have little to no access for rehabilitation or care near their community. The goal is to establish rehab and community based rehabilitation physiotherapy to maximize these patients' independence and enhance their quality of life.

#### **IV. Project Description**

This project will: 1. provide equipment at Dhulikhel Hospital's new rehab unit and at 6 of the hospital's community centers, 2. supplement the cost of the rehab unit, 3. staff the rural community centers, and 4. provide advanced training for Nepalese physical therapists.

Dr. Kujo has indicated that the hospital has dedicated space for a 12 bed rehab unit and a large physical therapy treatment area. The equipment bought by this project will be put in this treatment area. This equipment will provide the physiotherapists with assistance to strengthen patients in the rehab unit, improve their balance, decrease pain, and assist these patients to walk and return home with the needed family education. Many patients who cannot afford the cost of additional hospitalization will have the minimal charge of staying in the rehab unit subsidized. The hospital has estimated the daily cost to be \$15. This cost might be beyond the financial capability of some patients. Rehab Nepal is aiming to subsidize hospital stay by \$5-10/day.

Dhulikhel Hospital has 16 rural community clinics. At these facilities acute medical and nursing care is provided. Physical therapy is only provided by "camps" which might occur once a year per center. Many patients need care in these rural communities. The diagnoses of these patients include victims of the earthquakes with spinal cord head injuries, and complex fractures, children and adults with neurological conditions, patients with complex orthopaedic fractures with the need to improve ROM, strength, and function, and patients post cardiac event who need therapy and education to manage their recovery.

These new services require additional education for the therapists providing those services. Advanced physical therapy educational programming will be provided to ensure quality care. A training team of physical therapy experts who are familiar with Nepal will provide advanced education and the clinical decision making skills to the Nepalese therapists who will be caring for the patients in the rehab unit and in the community health centers. The 3 person training team all have international educational experience including teaching in Nepal. The team members are: Dr. Patricia Sullivan, Dr. Nancy DeMuth, and Dr. Holly Tanner. Their CVs are attached. They will conduct workshops on providing care to patients with complex neurological, orthopaedic, and women health conditions. At the community centers physios will be providing care with minimal collegial support. Included in the workshops will be the clinical decision making needed to practice autonomously. The training will go beyond the generalist education therapists receive in their professional program to the skills needed to provide rehabilitation care and care in the community settings.

#### **Duration of time:**

The equipment for the rehab unit and community centers are needed as soon as possible. The training team will present two week long sessions one in November 2017, the other in March or April 2018.

## **Goals:**

1. Patients admitted to the Dhulikhel Hospitals rehab unit from the acute care units will receive extended physiotherapy to reduce their impairments, improve their functional outcomes, improve their knowledge of and understand how to manage their condition, and be discharged home with follow up at the community centers. At the unit patients will receive 2-4 hours of therapy; a combination of one-on-one and independent-family assisted exercise. The 12 bed unit will be fully functional by November 1, 2017.
2. The community health centers will be a vibrant environment for improving health and function. At these centers physiotherapy will be provided on an outpatient and homecare basis. Individual one-on-one care will be given as well as group classes where appropriate. Physios will provide education to reduce the symptoms of orthopaedic problems such as how to reduce the strain on neck and back from heavy lifting or farming, and how to improve balance and reduce the risk of falling. Therapists will provide 15 treatments per day on an out-patient basis and up to 7 per day for home care.
3. Advanced educational workshops will be provided to physio staff for the rehab unit and the community centers as well as the whole DH physio team. This team includes faculty at the Kathmandu University Program in Physiotherapy. All physio staff will be able to provide high quality evidence based care. The workshops will be structured so they can be attended by all the physio staff and as many students as possible.

## **How will they be achieved?**

The rehab unit goal will be achieved when all the equipment is purchased and the DH physicians admit patients to the unit. At the hospital's morning meeting during September and October Dr. Kujo and Dr. Ram will announce the new hospital rehab services and the physio leadership will present the advantage to the patients of receiving 2-4 weeks of additional physio treatments. Currently at the morning meeting physicians and nurses report the diagnoses of all newly admitted patients and those undergoing surgery. The therapist attending the meeting will discuss with the medical team those patients who would benefit from rehab and encourage transfer to the rehab unit. In the unit educational sessions will be held for the family members of patients so that better follow through can occur. When patients are discharged from the rehab unit the physio in the community will be notified so a continuum of care can be provided.

In the community the physio will work with the medical and nursing staff to determine the needs of that community. A person to person, maybe home by home survey will be conducted to assess the needs. This type of extensive survey is needed because many people who are home bound or unable to get to the community center may not be recognized as needing care. After the assessment of need the community physio will determine how to meet the individual and community need. Each of the 6 centers may have its distinct atmosphere. In some centers the therapist may work closely with the schools if there are children with disabilities. If there are many people with low back or neck pain typical outpatient one-on-one direct care will be provided. If a community has a large elderly population group exercise classes will be provided to improve the range, strength and balance of these adults.

The advanced education will be achieved by the international experts working with the DH staff and KU faculty. The sustainability of this education will occur in a few ways. One,

educational materials will be given to the faculty so they can include this education when conducting their teaching. Two, the training team members and physio staff will collaborate to develop patient educational materials that are culturally and educationally appropriate. Patients will be co-treated in the rehab unit and in the community centers to assist the physios in providing best practice care.

### **How will you evaluate success or failure?**

The physiotherapy leadership will be the primary group that will oversee the quality of the project. They will continue to monitor the achievement of program goals. The physiotherapy department as well as all departments at the hospital have instituted computerized documentation. Through this mechanism patients can be tracked as they receive care in the rehab unit and at the community health centers. This documentation will allow the leadership to determine if patients are achieving their optimal functional outcomes. All three of the international experts but particularly Dr. Sullivan will provide ongoing professional support to the Dhulikhel Hospital staff to help them achieve the goals.

### **What services you promise to deliver to what populations?**

The financial support provided by the American Nepal Medical Foundation will provide:

- equipment for the rehab unit and community clinics,
- two training workshops by three clinical experts, and
- supplement patient care in the rehab unit.

DH purchasing has determined the best price and vendors for all the equipment. The training team members have a history with KU and DH and will deliver the educational workshops. Rehab Nepal Inc. a 501c3 charitable organization will continue to collaborate with the KU and DH leadership to achieve these outcomes.

### **What results you expect to bring about?**

Patients will have better functional outcomes than they currently have. This may include:

- ✓ improved walking for people s/p stroke, children with CP, or people with complex low extremity fractures,
- ✓ less back and neck pain for farmers or for those who carry heavy objects with head straps,
- ✓ less anxiety for family members who care for someone with a disability because they now have a greater understanding of how to provide that care and they now have support in their community.
- ✓ therapists will be better able to provide these services due to their participation in workshops and the mentoring provided by the expert team.

### **What are the challenges and barriers?**

Fundraising has been a challenge. Nepal is distant in geography and culture for many Americans. There are many “causes” close to home that need to be supported. Many have asked me “Why are you doing this? Why aren’t they raising money for this project themselves?” I have difficulty articulating a brief answer expressing my passion for helping where and when I can. I see Bijay a 17 year old who broke his back 2 years ago falling out of a tree. His family is poor and could not afford rehab after his accident. He lies on the ground all day. His arms and legs are contracted. He has no hope. DH donated a wheelchair for us to try but when we got him into the chair he got dizzy because he has been supine for so long.

He has no one to speak for him. He need the rehab that can be provided in the DH rehab unit so his limbs can be stretched and strengthened, he can adapt to sitting, propel a wheelchair, and return to school.

**What organizations and individuals can be reached for reference regarding your request?**

In Nepal the DH leadership has been instrumental in developing this project. Letters of support from Dr. Ram and Dr. Kujo are attached. The DH purchasing department has worked with the physio leadership to develop the equipment costs. The Dhulikhel Rotary Club is in full agreement with the project. The Rotary Club of Marblehead Harbor (Massachusetts) to which I belong is also championing this initiative. The Rotary Foundation will match approximately 25% of the cost. I, Dr Sullivan, have recently been honoured as a Rotary Paul Harris Fellow awarded for my local and international community service. Money donated to Rehab Nepal Inc. will then be put toward a Rotary grant to receive the 25% matching award.

**V .Project Timeline/Budget Timeline**

Equipment will be purchased and installed beginning September 1.  
 The physio team would like to admit patients to the rehab unit beginning October 15, 2017.  
 The community clinics will be ready to initiate physio care beginning October 15. The community survey may take about 2 weeks and then treatments begun.  
 The Training team visit will be for 10 days in November 2017 and late March or April 2018.

**VI. Budget**

Equipment for the rehab unit and the 6 community centers as indicated by the Nepalese therapists. All facilities: Weights, treatment tables, raised treatment mats, hot and ice units, TENS for pain relief, overhead pulleys for should exercises and neck traction, electrical stimulation machines, balance boards, exercise balls, floor mats.  The rehab unit: parallel bars, treadmill, biofeedback unit, sliding boards.	\$50,250
Training team visits 2 trips for 3 people	\$10,400
Total	\$60,650