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Building Prosthetics & Orthotics Capacity in the Balkans

The government of Bosnia and Herzegovina (BiH) has been working with the Northwestern University Prosthetics/Orthotics Center in developing the Center for International Rehabilitation’s distance learning program to give formal training to experienced prosthetic technicians since 2003. In January 2006, the program’s first students graduated with an International Society of Prosthetics and Orthotics (ISPO) Category I diploma. The efforts of the CIR have led to the formation of the BH Association of Orthopedic Technology, which is in the process of creating an ISPO regional center.

by Nikola Privolj, Justyna Przyjocka and Dr. William K. Smith [Center for International Rehabilitation]

The 1992–1995 war in BiH left the country heavily contaminated with landmines and unexploded ordnance. During the conflict, landmines and UXO were used to protect the front lines. After the war, these devices were set next to roads and around houses to prevent people from returning to their homes. As a result, BiH is among the most mine-affected countries in the world, with the largest and most complex landmine-contamination problem in Europe.

Unreliable information on minefield locations and a lack of minefield records make this situation extremely dangerous. Since the beginning of the war, there have been 4,921 mine/UXO casualties. Members of the international community and various nongovernmental organizations have responded to this urgent humanitarian problem by initiating a variety of programs, working with the local government to clear landmines, promoting landmine education/enforcement, and offering landmine assistance programs that provide education, employment and rehabilitation services to landmine survivors. There are currently 2,280 men, women and children living in BiH who have suffered the amputation of one or more limbs due to mine/UXO incidents. As a result, there is a tremendous need for specialists who are able to provide high-quality prosthetic services quickly and efficiently. To address the demand for more trained prosthetic practitioners, the Center for International Rehabilitation introduced a Distance-Learning Program in prosthetics in BiH in early 2003. The CIR is establishing a regional hub in Bosnia to provide training upgrades to technicians working in rehabilitation centers throughout the Balkan region.

Implementation of the CIR’s Distance Learning Program

In June 2002, the CIR conducted a program assessment as the first step toward establishing a distance learning program in the Balkans. Based on this assessment, the CIR selected a group of centers to participate in network activities. A few of the activities were distance-learning data collection and reporting, technology development and clinical consultation.

The CIR Distance Learning Program was launched in January 2003 and is headquartered in the Prosthetics Department at the Univerzinski Klinički Centar in Tuša, BiH. A Category I International Society of Prosthetics and Orthotics certified prosthetic educator was hired to develop the capacity of the prosthetics services and staff at the UKC. Four local individuals were employed in support roles as a prosthetics assistant, IT specialist, translator and regional administrator.

The CIR’s program was designed for prosthetic technicians who had three to five years of experience providing prosthetic services but had not received any formal training. This innovative education program stresses collaborative, interactive learning and is designed to be adapted to different cultures, learning styles and technologi- cal resources. The online portion of the program is supplemented with hands-on instruction, periodic evaluations, weekly quizzes, and theoretical and practical examinations. The content incorporates text, graphics, photographs, case presentations, videos and hybrid CD-ROMs. To facilitate online communication and interaction, the CIR initiated a cooperative agreement with WebCT, an enterprise

News Brief

“Helpful Friend” Establishes Eco-friendly Rehab Center

Helpful Friend, an organization working to address the problem of landmines and meet the needs of mine victims in Nepal, is establishing an eco-friendly rehabilitation center outside the capital city of Kathmandu. The center will be based on a property in Kakani village. Construction work will be finished by the end of August and the property open for business in January 2008.

Landmines have been a persistent problem in Nepal since its war with the People’s Republic of China. Hundreds of Nepalese citizens are injured or killed every year. Many of these victims become jobless, and the HF rehabilitation center hopes to provide much-needed assistance.

Initially 20 people will be admitted to the center, where they will produce organic vegetables to make the center self-sustainable and provide meaningful labor to the patients. Traditional Nepali cottages from different ethnic groups will be constructed on-site to cater to local expatriates, tourists and other travelers. The center plans to be an eco-tourist site, expanding its appeal with opportunities for bird-watching and pony-trekking.

Residents will not only work on the organic farm but also take advantage of the center’s fishery. They will produce handicrafts and other products such as pottery, jewelry, bamboo products and handmade Nepali paper for center use and profit. Power at the center will be provided by solar panels and cooking will be done using bio-gas.

For more information on the Helpful Friend rehab center or the organization itself, visit www.helpfulfriend.org or contact info@helpfulfriend.org.
Software and services company serving the education industry, to develop the first ever Sebo-Croatian (Bosnian dialect) language plug-in for WebCT’s Campus Edition 3.8 software. The CIR later switched its online platform to a system called Moodie, an open-source distance-education platform that offers over 50 language packages, offline course-delivery options, and customizable communication and assessment tools.

The CIR’s distance education programs were developed in collaboration with the Northwestern University Prosthetics/Orthotics Center. To date, four courses have been developed: Lower Extremity Prosthetics, Upper Extremity Prosthetics, Lower Extremity Orthotics and Upper Extremity Orthotics. Relevant topics within each course are designed based on module sets, which are comprised of individual modules covering specific topics. For example, the Lower Extremity Prosthetics course is comprised of the transtibial module set, the transfemoral module set, the ischial containment module set and the partial-foot amputation module set. The transtibial prosthetic set is comprised of 12 modules covering topics such as anatomy, casting and evaluation. ISPO Category II curriculum guidelines were used to develop the course content so that students would be able to obtain Category II certification upon completion of their studies.

The first class to participate in the program included 25 prosthetic technicians from 11 different rehabilitation centers located in BiH and one center in the Republic of Slovenia. These students completed the program in approximately three years. In January 2006, 19 graduates of the program took the ISPO Category II Prosthetic Technologist Certification examination, conducted by the Chairman and one member of the ISPO Education Committee. Independent international examiners from Bosnia, Germany and Macedonia also assisted with the evaluation. The exam was comprised of both theoretical and practical components, and students were required to make a case presentation and fabricate a prosthetic device for a patient. Seventeen of the participating students received ISPO Category II Certification in lower extremity prosthetics (transtibial and transfemoral), and the other two students were given the opportunity to successfully complete the exam at a later date. This marked the first time that this certification was awarded to students in the region.

Federal Health and Education in BiH Incorporating the Distance Learning Program

Creation of a learning environment. Since the program’s inception, the CIR has been engaged in a dialogue with the Federal Ministries of Health and Education of the Federation of BiH and the Republica Srpska to facilitate a process for formal government accreditation of prosthetic and orthotic training programs. As a result of these discussions, the Ministry of Education appointed a liaison on the CIR and reviewed its curriculum for possible incorporation into a national curriculum for P&O.

The CIR is working in close collaboration with the University of Ulster and the Norwegian University of Life Sciences to develop and evaluate the curriculum for the ISPO Category II certification. Students in the program will be able to participate in ISPO activities and hold regional conferences. An accreditation with ISPO will give local prosthetists access to ISPO resources, including important professional contacts and networks.

The CIR, in partnership with the UKC, is in the process of developing and implementing a distance learning program for a new generation of prosthetic technicians and an additional orthotic course for the CIR’s recent graduates. When the process is complete, the UKC will be in the position to train local and foreign technicians from neighboring countries. It will charge tuition to recover all costs.

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