The *Medical Rehab Connection* provides CARF news and updates from around the world along with information about, upcoming educational events, valuable resources, standards updates, and more. In this issue, we also feature several stories from CARF-accredited programs outside of the United States. In the next issue, articles will highlight members of our International Advisory Council, including the Veterans Administration and Association of Rehabilitation Nurses. Stay tuned!

**CARF’s International Growth and Commitment**

CARF has a long history of working with organizations in different countries to help them prepare for an accreditation survey. CARF accreditation in Canada dates back to 1969. In 2002, the CARF Canada office was opened in Edmonton, Alberta, and a second Canada office was established in Toronto, Ontario in 2011. CARF began accrediting programs and services outside of North America in 1996. The first organization to achieve accreditation was the University of Lund in Lund, Sweden. The organization recently completed its sixth survey! CARF Europe was incorporated in 2008 and opened an office in London in 2014. CARF has added two advisors to assist with our international markets. The first was Paola Lucesoli de Valyi, who is our Latin American advisor. Paola’s energy and passion around quality rehabilitation services have resulted in increasing numbers of Latin American providers seeking accreditation. She has been instrumental in bringing CARF to this part of the world. This past October, we added our European advisor, Veronica Teixeira. She hails from Portugal and will be working with CARF personnel to increase awareness of CARF in Europe and to promote, educate, and assist providers in their quest for quality. Paola and Veronica are also CARF surveyors, so they bring practical, hands-on knowledge of implementing the standards. They also are able to provide consultation and guidance to those seeking accreditation.

CARF has three providers groups that have been developed in Europe, including Sweden, Norway, and the United Kingdom. These groups give providers opportunities to convene, share ideas, and strategize on how to promote quality rehabilitation services. Our sincere appreciation goes to all of them for their efforts and accomplishments.

CARF’s work in international markets has demonstrated that the standards are relevant in a
variety of countries and cultures. Organizations focused on quality, no matter where they are located, are keen to provide person-centered services; good business practices; and dynamic performance measurement, management, and improvement systems. They also are interested in differentiating themselves among their country’s providers. CARF is committed to continuing to work with international communities that embrace quality and demonstrate value for persons served.

The following articles highlight a few of the recently accredited organizations in South America and updates on rehabilitation nursing in China.

**FLENI Rehabilitation Institute—Argentina**

*By Lisandro E. Olmos M.D., medical director*

We are very proud that we have been CARF accredited since 2005. The accreditation helped us to maintain a person-centered approach, not only focusing on patients, but also on employees and stakeholders. Thank you, CARF International, for transforming this long journey into successful outcomes, by achieving high standards of rehabilitation services. Our results are more than we could ever ask for!

The major rehabilitation challenges in our rehabilitation system are now lower, including the incidence and impact of stroke, traumatic brain injury, work accidents, and other causes of disabilities. This mission is achieved through community outreach programs, continued advocacy for improvement in the quality of patient care, and education for both healthcare professionals and the general public.

Fewer than 20 percent of people in Argentina have access to rehabilitation facilities. The lack of chronic care facilities, home care, and equipment providers is a challenge of the Argentinean model. This leads to prolonged stays in rehabilitation facilities lasting up to 100 days.

We are aware that much remains to be done, but we’ve certainly been committed since we began with the design of our Rehabilitation Center in 1998. The CARF accreditation process helped us to raise awareness of accessibility plans, health and safety services, risk management, outcomes and quality of care issues, and focus on the needs of the persons served. The multidisciplinary approach has promoted continuous process improvement. This came about as a result of understanding the meaning of quality and performance improvement.

Accreditation is a learning experience, and FLENI is proud to be accredited by CARF International, pioneering the process in Latin America.

**Lucy Montoro Network—Brazil**

*By Christina May Moran de Brito and Linamara Rizzo Battistella*
After three years of good teamwork and with the consultation of Paola de Valyi (CARF’s Latin America advisor), we managed to put Brazil on CARF’s map. Brazil is Latin America’s biggest and most populated country, with around 204 million inhabitants, and it is known for its regional discrepancies and particularities. Brazil’s health and financial capital is the state of Sao Paulo with a population of 44 million, and the broadest public university-based rehabilitation network in the country called Lucy Montoro, which has 18 units. Four units of Lucy Montoro’s network, the Rehabilitation Service of the Cancer Institute of the State of Sao Paulo (linked to the University of Sao Paulo), and the Rehabilitation Service of the Hospital Sírio-Libanês are now CARF accredited. Brazil has a wide public unified healthcare system, and around 50 million people also have private health insurance. Independent private services are also available. The Lucy Montoro Network and the Cancer Institute are part of the public unified healthcare system, while the Hospital Sírio-Libanês is part of the not-for-profit private healthcare sector. As in many developing countries with the aging of the population, chronic diseases constitute the greatest health burden. Cardiovascular, musculoskeletal diseases, and cancer are the leading causes of disability. Trauma is also a very significant issue in Brazil, as a result of violence and automobile accidents, especially in metropolitan areas.

Brazil’s rehabilitation healthcare has traditionally been mostly composed of outpatient clinics. Only recently has inpatient multiprofessional rehabilitation care grown as an option. At the acute phase, medical rehabilitation and rehabilitation therapies are typically provided in acute care hospitals. Follow-up medical rehabilitation, therapy, and assistive devices are usually provided in rehabilitation centers and single or multiprofessional practices (offices or clinics). The Lucy Montoro Network has inpatient rehabilitation care and outpatient rehabilitation clinics, while the Cancer Institute and the Hospital Sírio-Libanês have only outpatient rehabilitation clinics.

CARF accreditation was particularly helpful in improving patients’ participation due to the greater amount of information shared. It also helped the amelioration of security issues regarding not only the persons served, but also the staff and other providers. Regarding preparation for accreditation, cultural and language barriers were overcome with team effort and pertinent adaptations validated with the help of consultation. Members of the team helped to create a Portuguese translation of the standards manual to improve team
knowledge, collaboration, and participation.

Clínica Universidad de La Sabana in Colombia—Colombia

By Dr. Juan Guillermo Ortíz, chief executive officer

Clínica Universidad de La Sabana is an academic health center of high complexity, committed to the treatment of patients with disabilities, training of health professionals, and biomedical research. On June 18, 2015, CARF International awarded the Clinic with a three-year term of accreditation in interdisciplinary outpatient rehabilitation, which makes the Clinic the first internationally accredited hospital of Colombia in this discipline.

The Clinic is located in the municipality of Chia, 3 kilometers from Bogotá—the capital of Colombia, and 21.5 kilometers from El Dorado International Airport. It is surrounded by the majestic scenery of the Bogotá Plateau and the Western Cordillera. Colombia has become a world-class tourist destination for its diversity of flora and fauna; tropical climate; and the charisma, joy, and passion of its people. In addition to CARF accreditation, the Clinic was granted Health Care Accreditation by the Colombian Institute of Technical Standards and Certification (ICONTEC) in 2013, and has been named one of the best clinics and hospitals of Latin America by América Economia magazine. In the spirit of ongoing external quality reviews, future goals will be to be recognized as a leader in Colombia for the treatment of trauma, and a rehabilitation center of excellence by the country’s review system.

To achieve the goal of being a rehabilitation center of excellence, the Clinic created the Department of Rehabilitation, which has a central focus of ensuring that quality of service is oriented to the individual with disabilities. The department has a main emphasis on children and adults with neurological pathologies, and receives patients from many countries such as Trinidad, Tobago, and Venezuela. The department provides services with two different approaches: outpatient services with a physiatrist, physical therapy, occupational therapy, speech therapy, and psychopedagogy; and outpatient services with the Interdisciplinary Rehabilitation Process (PIR®).

PIR is a rehabilitation intervention characterized by comprehensive care, which approaches
the patient from an emotional and social perspective in addition to physical. It strives for reintegration of patients and their families into society by giving them tools to meet challenges. This is done under an interdisciplinary model in which the patient receives support from several medical specialties (including therapeutic, mental health, and nursing areas) that have direct and constant communication with the patient during all phases of the process. Treatment goals are established according to the needs of patients and family members on an individual basis. 90% of PIR patients comply with their therapeutic goals within 4-5 months, and results show that, on average, patients admitted with a Functional Independence Measure (FIM) of 70 will complete the process with a FIM of 91.

When a patient first enters PIR, an assessment board meets to determine the comprehensive diagnosis, treatment goals, process length, and activities scheduled for the first month of treatment. This information is shared with patients and family members in a joint appointment with the Physical Medicine and Psychology departments. An interdisciplinary team then evaluates patients on a monthly basis. The team follows up on the progress that patients show during the different interventions, and to assess the fulfillment of initial objectives. If needed, the team will define new goals to achieve greater functionality and independence. When the process finishes, an appointment is scheduled to recognize achievements, assess the level of engagement of patients and family members, and define what other activities should be carried out to continue the patients’ rehabilitation in other settings.

Consistent with its strategic objectives for quality of service, the Clinic’s Board of Directors submitted the PIR program to be evaluated by CARF standards. In addition to optimizing care of patients and demonstrating the thoroughness of its work, accreditation also compels the Clinic to continue to be a leader in rehabilitation in Colombia and projects the Clinic internationally. For the Clinic, achieving CARF accreditation is a matter of pride and satisfaction.

**Update on Rehabilitation Nursing In China**

*By Kristen L. Mauk, Ph.D., DNP, RN, GCNS-BC, GNP-BC, CRRN, ACHPN, FAAN professor of nursing, Colorado Christian University president, Senior Care Central/International Consultants, LLC*

With a total population of about 1.4 billion, China has the largest number of elderly persons in the world. Stroke is a leading cause of death and adult disability in China, with traumatic brain injury (TBI) spinal cord injury (SCI) also on the rise. About 85 million people in China have some type of disability, but many cannot access rehabilitative care or afford to privately pay for it. As CARF staff and surveyors have noted, post-acute services, including rehabilitation nursing, are highly underdeveloped in China. The local Chinese government in certain key cities has recognized that rehabilitation nursing must become a priority to promote quality of life for the elderly and those with disabilities in China.

Thanks to the connection efforts of Chris MacDonell, CARF’s managing director of Medical Rehabilitation and International Aging Services and Medical Rehabilitation; Dr. Kristen Mauk, president of International Rehabilitation Consultants, LLC, has been working with healthcare professionals and government officials in China to bring rehabilitation nursing education to a higher level. In collaboration with Dr. Pei Ying Li of RainbowFish...
Rehabilitation, Dr. Mauk has offered several rehabilitation nursing training programs to key nurse leaders in Shanghai and Hangzhou. The goal of these educational programs, delivered in person by Dr. Mauk, was to introduce rehabilitation nursing and associated concepts to Chinese nurses and other health professionals.

Over the past two years, Dr. Mauk and Dr. Li have worked with Chinese universities and government officials to develop and implement several training programs that were offered in May 2014 and March 2015 in China. In addition, a rehabilitation nursing curriculum was developed for Hangzhou Vocational and Technical College, which partnered with Dr. Li to start a rehabilitation nursing school that accepted its first 45 students in September 2015. Dr. Li also spearheaded the building of a freestanding rehabilitation center called RainbowFish Rehabilitation in Hangzhou, China, which serves as an exemplar for the city. Through these efforts, connections with U.S. universities have been developed to promote the exchange of faculty both to teach in the Hangzhou rehabilitation nursing school and to provide clinical consultation to the rehabilitation facility.

The research done by Dr. Mauk’s team examined the effect of her educational programs on the rehabilitation nursing knowledge of health professionals in China. Each of the several educational interventions used a one-group, pre-test and post-test design to measure outcomes. In the initial March 2015 pilot program, total of 83 nurses from 25 hospitals representing 16 different specialties attended a three-day basic rehabilitation nursing training offered in two cities. Content was presented in lecture format with PowerPoint® slides, line-by-line translation by a Chinese nurse translator, group activities, case studies, videos, products/vendors, and hands-on skills demonstration and practice. The effect of the educational intervention was measured using pre- and post-tests for each of six topic areas (rehabilitation, nutrition/dysphagia, bowel/bladder management, skin integrity, mobility, and psychosocial issues).

Results of the pilot showed that the knowledge of Chinese nurses on rehabilitation nursing topics was initially at a low level. This was somewhat expected due to the lack of post-acute care settings and experience of the nurses in this area. Paired samples showed a significant improvement for every program as a result of the educational intervention from pre- to post-test. However, the average post-test scores of 76% (test #1), 80% (test #2) and 63% (test #3) suggest that additional education is needed. Interestingly, although the nurses in the pilot group were highly experienced in their own fields, past nursing experience did not correlate with increased rehabilitation nursing knowledge. This finding supports evidence from a prior pilot study among nurses in the U.S. that showed rehabilitation-specific education is needed to achieve knowledge in this specialty area.

During a second visit to China in May 2015, Dr. Mauk taught another basic rehabilitation nursing course to representative health professionals from six regions in China and Taiwan. She also piloted two-day courses in stroke/TBI and gerontological nursing using similar teaching strategies. Nursing knowledge was again quite low on all pre-tests, below a passing level of acceptance for most American nursing programs. Similar to the pilot group on the first trip, the knowledge of healthcare professionals showed statistically significant improvement after the training. Findings demonstrate that this type of education is effective in increasing rehabilitation nursing knowledge.

Data was also gathered on both trips related to the needs and desires for rehabilitation education among Chinese nurses. Overall, participants felt they would benefit from
additional education on functional assessment, sexuality after disability, bowel and bladder management, basic rehabilitation nursing topics, geriatric assessment tools, and models of care. Findings also suggested that cultural differences in both educational methods, testing, and healthcare delivery systems between the U.S. and China presented challenges to such educational programs, including translation difficulties from English to Chinese. Further research is needed to explore the most reliable methods for both teaching/learning and evaluating outcomes of educational interventions. Tele-education is an area being explored. Dr. Mauk and Dr. Li continue to collaborate on appropriate and novel strategies to enhance rehabilitation nursing knowledge in China.

Note: Sources available on request

What’s New at CARF?

Kelly Silberschlag joined CARF in late January 2015 as the newest Medical Rehabilitation resource specialist. An occupational therapist by trade, Kelly has an extensive background in rehabilitation hospital administration, marketing, clinical management, and insurance contracting and education. She graduated from the University of Wisconsin-Madison in 1981 and has been working in Arizona, primarily Tucson, her entire career. Kelly’s territory includes all of the RehabCare-accredited organizations, the entire east coast from the state of Maine to Florida, and several Midwest states.

On March 1, 2016, Cathy Ellis became the newest resource specialist addition to the Medical Rehabilitation unit. But Cathy is not new to CARF. She served eleven years on CARF’s Board of Directors, including two terms as the Board Chair. Cathy also worked in a CARF-accredited facility, National Rehabilitation Hospital, for more than 29 years and was the program director for its spinal cord system of care. By training she is a physical therapist and recently completed her master’s degree in Public and Community Health. She is a welcome addition to the Medical Rehabilitation unit and will be assigned her own territory of organizations upon completion of her orientation and training.

Continuing Education and Training

Webinars:
2016 brings a vast variety of webinars for Medical Rehabilitation organizations. In addition to the Oncology and Assistive Technology series highlighted below, CARF is also hosting webinars with specialists from the areas of amputation, stroke, and spinal cord dysfunction to add to this great roundup of topics. Browse CARF's webinars webpage under the "Medical Rehabilitation" sub header for a full list of opportunities.

Please take advantage of these great opportunities for your staff to have 90 minutes of continuing education experience without the expense of travel! Note that recordings of webinars are available for purchase after they take place.

Oncology Series
This monthly cancer rehabilitation series focuses on a variety of topics and is organized by Dr. Nicole Stout from the National Institutes of Health and the American Congress of Rehabilitation Medicine Cancer Rehabilitation Networking Group.
April 20, 2016
Developing Your Workforce

May 18, 2016
Considerations for Care Across the Lifespan

June 15, 2016
Integrating Rehab into the Cancer Delivery Continuum

Assistive Technology Series
This series focuses on technology and its valuable influence on the rehabilitation industry. Representatives from the American Technology Association, American Occupational Therapy Association, American Physical Therapy Association, Association of Rehabilitation Nursing, and the American Speech and Hearing Association will be presenting on the current and future use of technology in their fields of practice.

April 13, 2016
Expanding the Reach of Rehabilitation Professionals with Telehealth

April 28, 2016
Computer Technology for Self-Management of Disability and Chronic Conditions

May 05, 2016
The Role of Technology in Speech-Language Pathology Services: Current Practice and Future Directions

May 10, 2016
Assistive Technology Used to Enhance Participation by People with Disabilities

June 14, 2016
Harnessing the Power of Interactive Technology in Rehabilitation

Save the dates! Join us for these upcoming events:
Three regional CARF 101s and a Transforming Outcomes Institute are all coming up this year.

Transforming Outcomes
July 28–30 — Cambridge, MA

CARF 101 Trainings
April 18–19 — Jacksonville, FL
June 27–28 — Dallas, TX
September 29–30 — Grand Rapids, MI

As the ability to be away from work becomes more challenging, CARF is exploring new ways to provide CARF 101 training. Stay tuned for more information on the 2016 training events.
CARF Needs You!

We ask our accredited organizations to seek feedback from their stakeholders, and CARF embraces this same philosophy. We are interested in hearing your thoughts, ideas, and suggestions about this newsletter.

If you are interested in contributing to this newsletter please contact either Chris MacDonell at cmacdonell@carf.org or Kelly Silberschlag at ksilberschlag@carf.org.

If you have feedback or would like to contribute to future newsletters, please contact Kelly Silberschlag.