Each year we challenge ourselves to do better than we were the year before, and I’m proud to say that in 2014, the distinguished scientists and clinicians at MossRehab once again succeeded in meeting that challenge. During the past year, the quality of our rehabilitation and research facilities rose to a new level, as our talented multidisciplinary teams worked harder and more collaboratively to meet the rehabilitation needs of our patients, while strengthening their commitment to advancing the science of rehabilitation.

The integration of innovative translational research and exceptional clinical expertise has never been more critical than during the current era of rapid change and healthcare reform. In 2014, with an unwavering focus on the patient-centered triple aims expressed by the Affordable Care Act, we significantly expanded our leadership role in this area—designing and conducting novel research geared toward improving patient care while using evidence-based research to transform our rehabilitative technology, models of clinical care, and patient safety. We believe our successes in all of these areas are a reflection of our dedication to addressing the values, needs and challenges of our patients.

I invite you to turn the pages of our 2014 Activity Report and discover why former MossRehab patients, as well as their families and caregivers, return again and again to participate in our events, report on their progress, share their experiences and serve as a source of inspiration for our newest patients, who are just beginning their rehabilitative journeys.
MossRehab continues to garner recognition for our groundbreaking research, innovative rehabilitative technology, broad and deep educational efforts and the dedication to bring all that together to achieve the ultimate goal: ongoing improvement in patient outcomes. The celebration of our accomplishments by colleagues, independent parties and our own community says that we are making progress on all these fronts.

**HERE ARE SOME OF THE HONORS WE RECEIVED IN 2014**

**WE WERE RANKED AMONG THE BEST HOSPITALS FOR THE 21ST YEAR**

In 2014 we rose to #8 in the nation in the *U.S. News & World Report* “Best Hospitals” rankings and for the fifth consecutive year, we were the top-ranked rehabilitation provider in Pennsylvania.

**TOP DOCTORS IN PHILADELPHIA**

Four of our physicians were on the 2014 *Philadelphia* magazine list of Top Docs — Alberto Esquenazi, MD; C.R. Sridhara, MD; Nathaniel Mayer, MD; and Thomas Watanabe, MD.

*In addition, the Castle Connolly Guide named Dr. Esquenazi and Dr. Mayer on its roster of the nation’s top physicians.*

**FOR THE FOURTH CONSECUTIVE YEAR, MOSSREHAB IS A TOP WORKPLACE**

*The Philadelphia Inquirer* and the *Philadelphia Daily News* once again named MossRehab one of the Philadelphia area’s Best Workplaces, as gauged by our employees. For the second year in a row, MossRehab was the highest-ranked healthcare provider among organizations with more than 500 employees in the region.

**IN 2014, WE CONTINUED TO HAVE BETTER PATIENT OUTCOMES**

Patient outcomes continue to be an important measure of MossRehab’s success, and ours consistently register better compared with regional and national averages for most groups we treat.

<table>
<thead>
<tr>
<th>INDICATOR/METRIC</th>
<th>MOSSREHAB OUTCOME</th>
<th>NATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge to Home</td>
<td>75.08%</td>
<td>71.56%</td>
</tr>
<tr>
<td>Functional Independence Measure (FIM®) Change</td>
<td>28.04 points</td>
<td>24.99 points</td>
</tr>
<tr>
<td>Average Length of Stay</td>
<td>15.82 days</td>
<td>14.87 days</td>
</tr>
<tr>
<td>FIM® Efficiency</td>
<td>2.34 points per day</td>
<td>2.14 points per day</td>
</tr>
<tr>
<td>Transfer to Acute</td>
<td>11.80%</td>
<td>10.54%</td>
</tr>
<tr>
<td>Case Mix Index</td>
<td>1.3869</td>
<td>1.2979</td>
</tr>
</tbody>
</table>

Source: eRehabData® National Comparison (case mix adjusted)
Calendar Year 2014, Year to Date
Moss Rehabilitation Research Institute (MRRI) is noted for its rich tradition of designing and conducting research with a dedicated focus on improving clinical care. Expertly led by John Whyte, MD, PhD, director of MRRI, our renowned research facilities embrace the patient-centered approaches to research and care that are hallmarks of this era of healthcare reform. At MRRI we also recognize that science is a collaborative effort and pursue groundbreaking research with colleagues around the globe with a steadfast commitment to participating in national and international dialogues on rehabilitation.

An independent non-profit organization, PCORI was established to improve the quality of evidence that patients, caregivers and healthcare providers use to make informed healthcare decisions. Best known for funding comparative effectiveness studies, PCORI also supports efforts to improve research methods. In September 2014, the PCORI methodology committee recognized the scientific merit of MRRI’s “Better Rehabilitation Through Better Characterization of Treatments: Development of the Manual for Rehabilitation Treatment Specification,” as well as its firm commitment to patients.

This grant will support the continuation of collaborative work with colleagues at the Mount Sinai School of Medicine and several other institutions, tackling widely recognized obstacles to comparing and testing rehabilitative treatments. Imprecise treatment descriptions have long hampered comparative research in rehabilitation; with principal investigator Dr. Whyte and colleagues Tessa Hart, PhD, director of MossRehab’s Traumatic Brain Injury Model System, and Marcel Dijkers, PhD, research professor of rehabilitation medicine at Mount Sinai, at the helm, this multidisciplinary project will strive to standardize procedures by which rehabilitation clinicians, educators and researchers may specify rehabilitation treatments according to their targeted effects and mechanisms of action.

Our goal of developing and validating a rehabilitation taxonomy rooted in treatment theory has garnered the support of major U.S. rehabilitation organizations, including the American Congress of Rehabilitation Medicine and the American Speech-Language-Hearing Association. What’s more, our researchers are providing input to the World Health Organization, as it establishes the International Classification of Health Interventions.

At MossRehab, participation is a privilege. In June 2014, our Chief Medical Officer Alberto Esquenazi, MD, gratefully received a plaque by the National Center for Medical Rehabilitation Research at the National Institutes of Health in recognition of six consecutive years as scientific reviewer for the Function, Integration and Rehabilitation Sciences committee.
Our commitment to sponsoring interdisciplinary research that strives to improve human function and adaptation to disability is strongly reflected in our investigation of stroke-related deficits. In just one of these projects, Steven Jax, PhD, director of MossRehab’s Perceptual Motor Control Laboratory, is examining a novel therapy for patients with hemiparesis following stroke, exploring the use of mirrors to increase recruitment of the contralesional brain hemisphere. Picking up where smaller studies of mirror therapy have left off, Dr. Jax is conducting a large-scale National Institutes of Health (NIH) funded study to identify patient characteristics that explain why this therapy is more effective for some individuals than for others. This research is expected to eliminate trial and error when determining patients most likely to benefit from this therapy and also lead to the development of a home-based form of mirror therapy.

Laurel Buxbaum, PsyD, director of the Cognition and Action Laboratory and co-director of the Complex Action Analysis Laboratory at MRRI, is a leader in the study of complex skilled and tool-related actions in patients who have survived stroke. With funding from the NIH, she recently presided over the world’s largest prospective study of apraxia-related lesions, with the goal of paving the way for better treatments of patients affected by this disorder. Using voxel-based lesion-symptom mapping, a powerful statistical tool, Dr. Buxbaum and her colleagues examined data from more than 70 patients with left hemisphere stroke to better understand which regions of the brain are responsible for specific tool-related and imitative behaviors. The study aims to advance understanding of brain localization, elucidate mechanisms by which specific tasks are processed by the brain and improve prediction of patient deficits following stroke.

For more stroke-related research at MossRehab turn to page 7
Thomas Watanabe, MD, the clinical director of our Drucker Brain Injury Center, has developed a sophisticated clinical culture devoted to reevaluating and fine-tuning rehabilitative approaches to brain injury throughout the trajectory of recovery. Under his stewardship a multidisciplinary team continually hones models of care to improve and extend meaningful recovery in patients with penetrating and non-penetrating brain injuries.

A senior editorial member of *PM&R*, Dr. Watanabe brings a significant depth of clinical research experience, with a special focus on neurorehabilitation, to his role as clinical director. His widely sought expertise has led to speaking engagements at prestigious venues on topics including the complications of mild traumatic brain injury (TBI) and the diagnosis and management of sports concussions.

What’s more, Dr. Watanabe leads an outstanding team of physiatrists who are among the very first in the United States to receive certification in a brand-new brain injury medicine subspecialty. Co-sponsored by the American Board of PMR and American Board of Psychiatry and Neurology, the examination for this subspecialty was offered for the first time in October 2014. The certification was awarded to our physiatrists who provide an exceptional level of rehabilitative care for patients with brain injury and their families in hospital and post-acute settings.

**AT THE DRUCKER BRAIN INJURY CENTER WE ARE CONDUCTING GROUNDBREAKING ROBOTIC STUDIES**

MossRehab was the first rehabilitation facility in the United States to offer the *G-EO System Evolution*, a new robot-assisted gait rehabilitation tool that actively responds in real-time to patient capabilities, promoting an increase in walking independence. Now we are the first to conduct clinical trials that are testing the benefit of this new technology in the rehabilitation of patients with TBI.

We also were among the first to conduct a randomized prospective study to determine the benefit of Lokomat in the rehabilitation of patients with TBI. Our study provided evidence that participants with a chronic TBI can experience improvements in gait with Lokomat training.

**THE MOSSREHAB TBI MODEL SYSTEM SUPPORTS ORIGINAL TREATMENT-FOCUSED RESEARCH**

The Moss Rehabilitation Research Institute (MRRI) is home to one of only 16 Traumatic Brain Injury Model Systems (TBIMS) in the United States. Each of these federally designated TBIMS centers provides a multidisciplinary system of rehabilitation care. Funding for these centers supports research that leads to innovative treatments.

Under the leadership of Tessa Hart, PhD, the Model System at MRRI explores complex psychosocial problems and addresses unmet needs in the field of TBI, with the goal of developing well-defined practical treatments that are theory-based.

**THE USE OF TEXT MESSAGING TO ALLEVIATE PSYCHOLOGICAL DISTRESS AFTER BRAIN INJURY.**

In a unique five-year study funded by the National Institute on Disability and Rehabilitation Research, principal investigator Dr. Hart and her colleagues are examining the possibility of using text messaging as a vehicle for bridging the gap between intention and action, ultimately encouraging persons with brain injury to engage in meaningful activities, which in turn may alleviate psychological distress. At the 2014 meeting of the American Congress of Rehabilitation Medicine, Dr. Hart presented promising preliminary findings showing that the text message reminding method was feasible and well-liked by participants.

**THE SELF-MANAGEMENT OF ANGER IN PATIENTS WITH CHRONIC TBI.**

Supported by a five-year NIH grant, Dr. Hart is designing and testing a treatment to address anger and irritability, significant and often persistent clinical problems in patients following TBI. Current treatment options, which include medications, behavioral modification and psychotherapies, lack proven efficacy and often are impractical. Dr. Hart is presiding over a multi-center randomized clinical trial testing Anger Self-Management Training, a novel one-on-one, psycho-educational treatment program for patients with TBI who have significant cognitive impairment. The primary outcome for this study is change in self-reported anger, and secondary outcomes include participant anger as reported by a significant other; emotional distress in domains other than anger/irritability; behavioral functioning; and quality of life. The study is also expected to provide data on the degree to which principles and techniques learned in treatment are used in daily life following treatment.
THE SCIENCE OF RESTORING FUNCTION IS AT THE HEART OF OUR COMPREHENSIVE STROKE REHABILITATION PROGRAM

Exemplary care at the MossRehab Stroke and Neurological Diseases Center has long incorporated evidence-based clinical practice to address the wide range of functional impairments caused by stroke or other neurological disorders. In 2014, we added a new dimension of expertise when Thomas Watanabe, MD, assumed clinical leadership of the center.

Dr. Watanabe has served as clinical director of the Drucker Brain Injury Center since 2006. He brings a wealth of clinical research experience on neurorehabilitation and a firm commitment to maximizing cross-collaboration between our stroke and traumatic brain injury programs. Utilizing the resources of our pioneering gait analysis, motor control analysis and EMG laboratories as well as the increasing robotic technology available at MossRehab, Dr. Watanabe is orchestrating the pursuit of new methods for facilitating rewiring of the brain after injury caused by stroke or trauma.

WE REMAIN LEADERS IN TECHNOLOGY

At the MossRehab Stroke and Neurological Diseases Center, a wide selection of robots are used in conjunction with conventional rehabilitation therapies to lend precision to the frequent and intense repetitive movements that encourage recovery of higher levels of function in our patients.

We were the first in the United States to use the Tyromotion collection, which features robots for specialized training of the arm, hand, fingers and balance (see photos). In addition, our patients have access to Armeo® Power, Armeo® Spring and ReoGo, which we have used successfully to promote neuroplasticity and continue functional gains.

Now we are among the first in the country to evaluate the AlterG™ Bionic Leg in the acute phase of stroke rehabilitation. The Bionic Leg is an advanced biomechanical device designed to support the knee during transfers and walking. It uses pressure sensors to detect and control patient movements, a motor and a computer-controlled motor to help patients regain function through repetitive movements associated with standing, walking and sitting.

WE’RE AMONG THE FIRST IN THE NATION TO ADOPT THE ACCLAIMED COMPREHENSIVE UNIT-BASED SAFETY PROGRAM (CUSP)

At MossRehab, our devotion to safety is reflected in our continual pursuit of opportunities to test new safety strategies. In 2014, our stroke rehabilitation program became one of the first in the United States to adopt the critically acclaimed five-step CUSP program developed by the Johns Hopkins Quality and Safety Research Group. Deployed only to a select group of hospitals, the CUSP program uses heightened teamwork and communication to improve awareness of potential safety problems and leverage staff’s ability to learn from concerns. Tailored to meet the unique needs of MossRehab, our implementation of CUSP has already succeeded in joining executives, physicians and staff in achieving immediate reductions in safety-related errors. In 2015, we will extend our commitment to creating a safer culture at MossRehab by bringing the CUSP program to additional programs and locations within our network.
At the MossRehab Aphasia Center, co-founded by Myrna Schwartz, PhD, and Ruth Fink, MS, CCC-SLP, more than 16 years ago, all research is designed and conducted in a clinical context. Pioneers in the use of neural models to explain, through simulation, the origin of characteristic symptoms of aphasia, Dr. Schwartz and her colleagues have developed a range of nationally and internationally recognized tests and procedures for diagnosing symptoms of aphasia. Patients at MossRehab benefitted first from tools such as the Philadelphia Naming Test, which assesses individuals’ word-retrieval abilities, Mapping Therapy, which addresses disorders of sentence production, SentenceShaper®, a software program that assists patients in assembling their spoken words and phrases into sentences, and MossTalk Words®, a computer-assisted treatment program for aphasia developed by MossRehab clinicians and researchers.

Dr. Schwartz is currently leading a collaborative team of researchers from the University of Pennsylvania, Drexel University and the University of Illinois in an NIH-funded study of new imaging technology with the potential to precisely localize brain lesions responsible for various symptoms of aphasia. In addition, she continues to preside over the Language and Aphasia Laboratory at MRRI and direct the Aphasia Center’s Advanced Clinical Therapy (ACT) program, which conducts in-depth clinical evaluations and treatment protocols developed in research.

The newest members of our team of researchers with a focus in stroke exemplify our devotion to attracting and retaining outstanding new scientists who exhibit the potential to be among the very best.

Erica Middleton, PhD, joined the MRRI faculty in 2014 after completing a postdoctoral fellowship mentored by Dr. Schwartz. Director of MRRI’s Language and Learning Laboratory, Dr. Middleton specializes in the psychology of language, with a focus on the mental representation and production of words. Currently she is the lead investigator of Delineating the Impact of Retrieval Practice in Aphasia, a study supported by a three-year NIH grant exploring how powerful learning mechanisms may rehabilitate aphasia in individuals with acquired language impairment from stroke. This study represents the first systematic effort to translate such psychological principles to neurogenic language disorders, with the goal of maximizing the efficacy and long-term impact of treatments targeting aphasia and other language disorders.

Shailesh S. Kantak, PhD, PT, director of our Neuropasticity and Motor Behavior Laboratory, joined MRRI in 2013, bringing proficiency in transcranial magnetic stimulation (TMS) and transcranial direct current stimulation to his study of motor recovery and motor learning in patients after brain injury. The author of recent articles in Neuroscience and Nature Neuroscience, Dr. Kantak is investigating the process by which healthy individuals and individuals with brain injury acquire motor skills, as well as the brain systems integral to motor performance during various stages of the learning process.
TEAMWORK AND INDIVIDUALIZED TREATMENT OF SPINAL CORD INJURY ARE OUR HALLMARKS

At our Spinal Cord Injury (SCI) System of Care, we pursue a unique interdisciplinary approach to managing the medical and rehabilitation needs of our patients. The highly skilled rehabilitation clinicians in our CARF-accredited programs regularly collaborate to design, test and implement novel methods of restoring function. The enduring mission at all of our SCI clinics, including the highly regarded Eastern Regional Center for Adults with Spina Bifida, is to customize therapy that enhances functional rehabilitation and subsequent restoration of movement in patients with varying degrees of paralysis.

WE’RE AMONG THE FIRST TO TRAIN PATIENTS TO USE THE REWALK™ PERSONAL EXOSKELETON SYSTEM

Sharing in the excitement that surrounded the June 2014 approval of the ReWalk Personal System by the U.S. Food and Drug Administration (FDA) based on research done at MossRehab, we assumed a leadership role in preparing patients to use the newly approved system at home. ReWalk, a wearable robotic exoskeleton, provides powered hip and knee motion that assists patients with spinal cord injury in standing upright and walking. Home use of ReWalk, which previously had FDA clearance only for institutional use, relied heavily on clinical data provided by MossRehab. Subsequently, we became one of the initial six centers in the United States approved to train patients in the home use of this device. As we enthusiastically pursue our commitment to instructing patients on our two new FDA-compliant devices, we’ll also engage in further prospective and systematic assessment of the new system.

With the implementation of this training program, we proudly continue our tradition of enabling patients to benefit from novel rehabilitative devices. Indeed, MossRehab was the exclusive clinical trial site in the United States for ReWalk and played a key role in the regulatory pathway that led to its FDA approval.
WE’RE DEVELOPING A STATE-OF-THE-ART MOBILITY PROGRAM

In 2014, our new clinical director, Wesley Chay, MD, brought a bold new vision to our spinal cord injury (SCI) program. Board certified in SCI and PM & R and the recipient of the 2013 SCI Young Investigators Award, Dr. Chay, along with the three other SCI board-certified physiatrists and the clinical team, have launched a new initiative to improve the continuity of care for all patients with spinal cord injuries. Bringing together MossRehab’s technological expertise and depth of research experience, Dr. Chay is establishing a singular feedback-enhanced framework for bridging gaps between inpatient and outpatient rehabilitation.

Our mobility program will help patients experience a more seamless transition as they gradually progress through our highly intensive individualized training programs. For patients who can benefit from locomotor therapy, for example, we’ll ease the shift from conventional therapy to use of the Lokomat for further gait training with a computer-controlled robotic exoskeleton. As patients gain greater control, some will transition to use the G-EO, which provides body-weight-supported end effector robotic gait training to support the process of relearning to walk and climb steps. Selected patients who are ready to walk will have the opportunity to try ReWalk.

This new initiative will leverage MossRehab’s leadership in bringing novel, clinically applicable first-of-a-kind medical devices to patients. Already leaders in the use of robotics to address brain and spinal cord injury, we will continue to seek and selectively review new devices that will make a difference for our patients.

AT MOSSREHAB, IMPROVING PATIENT OUTCOMES BEGINS WITH A DEDICATION TO SAFETY

MossRehab is a leader in developing and leveraging data from a wide range of unique evidence-based safety projects to create the best possible environments for our patients. In 2014, we adapted the European Medical Early Warning System (MEWS) for use in rehabilitation and launched one of the first pilot studies of this system in our SCI program. Our adaptation of MEWS, a program designed to reduce the rate of unplanned transfers of patients to acute care, already has led to pronounced improvements in the early detection of key warning signs and a marked reduction in patient transfers. This achievement follows on the heels of our remarkable catheter-associated urinary tract infection project, which succeeded in reducing infections by more than 50% in one year, and our successful pressure ulcer prevention initiative, which has resulted in a 53% facility-wide reduction in the incidence of pressure ulcers. Piloted in our SCI program, the ultimate aim of these safety projects is the implementation of corresponding training and competency guidelines in all six MossRehab inpatient locations.

As we design innovative programs, we are eager to engage other leaders and share ideas. It is always our hope that you will contact us if we can be of service on any front.
In 2014, MossRehab Chief Medical Officer Alberto Esquenazi, MD, published “Gait Analysis in Lower-limb Amputation and Prosthetic Rehabilitation” in Physical Medicine and Rehabilitation Clinics of North America on the value of using kinetic and kinematic data to assess variables impacting gait and the results of intervention. Optimization of gait characteristics requires a complex analysis of typical gait deviations so that contributing factors that lead to abnormalities can be identified and appropriate corrective strategies can be developed. To achieve safe and efficient movement, computerized gait analysis is now used for quantification, evaluation and comparison.

Prosthetic functionality and predicting patient response to interventions have long been important areas of inquiry in the field of amputation. Mukul Talaty, PhD, a biomechanist at MossRehab, is currently guiding two research projects targeting these areas.

Working with Bertec Corp., Dr. Talaty and his team are translating the original analog version of the force-line visualization system developed at MossRehab 30 years ago into a digital system that includes an update to improve its accuracy, portability and affordability and increase access to the technology. Under a National Institutes of Health grant, we are combining technology and training to help novice clinicians achieve prosthetic alignment outcomes similar to those of experienced clinicians.

Dr. Talaty and Dr. Esquenazi presented two workshops at the 2014 American Academy of Physical Medicine and Rehabilitation Annual Assembly to demonstrate their findings in the use of force-line visualization to improve prosthetic alignment.

Dr. Talaty also performs computer simulations that synthesize gait in a novel way. A unique neuromusculoskeletal model developed at MossRehab incorporates an understanding of neural control loops, feed-forward and feedback neural control strategies such as reflexes and reciprocal inhibition, mathematical properties of skeletal muscles such as force-length and activation-contraction relationships and basic physics equations that govern how the body moves. It assesses how muscles contract and the force they produce during walking.

Dr. Talaty is using the model to understand properties of human walking, like stability, and to explore how devices such as braces or prosthetic alignment can contribute to walking. One long-term goal is to assess gait correction interventions on subject-specific versions of the model.

The MossRehab Amputation Rehabilitation Center provides services to more persons with amputation than any other facility on the U.S. East Coast. Our highly regarded staff has experience treating persons with all levels of amputation, including the most complex multiple-limb and upper-extremity conditions.

WE'RE LEADERS IN PROVIDING CARE TO PERSONS WITH AMPUTATION

WE'RE BUILDING ON OUR OWN INNOVATIONS

MOSSREHAB IS DESIGNING COMPUTER SIMULATIONS FOR PRECISE ALIGNMENT ANALYSIS
YOUNG ATHLETES RECEIVE OUTSTANDING CARE AT MOSSREHAB

To address growing concerns about injuries associated with school sports today, particularly the long-term effects of concussion, MossRehab Sports and Spine Rehabilitation specialist Jeff North, MD, leads an outreach program to help middle schools, high schools and colleges identify and treat often-overlooked problems associated with sports injuries. MossRehab recognizes that even though schools are required to have certified athletic trainers, these professionals sometimes fail to notice complex and hard-to-identify symptoms and warning signals. Examination by a primary care physician or an emergency department doctor also may miss many of these signs, a problem complicated by natural eagerness to get the player back on the field. Dr. North and his staff have developed a program that encourages visits to our MossRehab and Einstein Sports Medicine physicians, who provide a continuum of care from orthopedic evaluation to a comprehensive plan of therapy for a safe and carefully paced re-introduction to student life.

Dr. North noted the importance of thorough diagnosis at a facility such as MossRehab, where a full range of specialists is available and the student can be fast-tracked to identify symptoms quickly. The sports injury program has a hotline for emergencies and delivers preventive education, offering seminars to students, parents, coaches and trainers on how to avoid injury and how to properly assess injuries.

IN 2014 WE WELCOMED LANVIN TAYLOR, DO, TO MOSSREHAB

Dr. Taylor recently joined MossRehab, where as an attending osteopathic physician he will provide inpatient and outpatient care and perform electrodiagnostics.

Dr. Taylor was a contributing author to the textbook Current Diagnosis and Treatment: Physical Medicine and Rehabilitation, and made a presentation with Daniel Moon, MD, and Arthur Gershkoff, MD, of MossRehab on “The Role of Rehabilitation in Corticobasal Degeneration” at the 2013 Association of Academic Physiatrists Annual Meeting in New Orleans. With a DO degree from the University of Medicine and Dentistry of New Jersey and an undergraduate degree from Cornell, Dr. Taylor completed his residency through the Temple/MossRehab Physical Medicine and Rehabilitation Residency Training Program. He is focused on patient advocacy and the growing understanding of how the body works on a cellular and biochemical level, areas he believes are critical to the development of treatments for inflammatory and age-related diseases.
In February 2014, John Whyte, MD, PhD, director of the Moss Rehabilitation Research Institute (MRRI), presented his work to develop a rehabilitation treatment taxonomy at the International Neuropsychological Society Conference in Seattle. (Read more about this work on page 3). He and Tessa Hart, director of MRRI’s TBI Model System, were also featured at the International Brain Injury Association’s Tenth World Congress in March, where they were invited to present a joint workshop on both pharmacologic and non-pharmacologic clinical trials.

In June 2014, our chief medical officer, Alberto Esquenazi, MD, coordinated all of the educational programming at the World Congress of the International Society for Physical and Rehabilitation Medicine conference held in Cancun, Mexico, where we were also represented by Dr. Whyte and Thomas Watanabe, MD, clinical director of the MossRehab Drucker Brain Injury Center. Dr. Whyte presented on evaluation of the minimally conscious patient, Dr. Watanabe spoke about the evaluation and management in concussion and a full course on management of spasticity was directed by Dr. Esquenazi. Dr. Watanabe also spoke at the meeting of the Yugoslavian society of PM&R.

Throughout the year, Dr. Esquenazi gratefully accepted numerous invitations to share his expertise. These included:

- Keynote addresses on biomechanics at the International Neurorehabilitation Symposium in Zurich and at the Center for Biomechanical Engineering Research at the University of Delaware
- Five lectures at the Philippines Society of Physical Medicine and Rehabilitation conference during the celebration of its 40th anniversary
- Program leader position for the Robotics in Rehabilitation Workshop at the 2014 Rehabilitation and Community Providers Association Technology Conference
- Lecturing on “The Current and Future State of Rehabilitation Medicine” to more than 600 attendees at the Invited Inaugural Conference of the 52nd Congreso de la Sociedad Española de Rehabilitación y Medicina Física in Bilbao, Spain
AT A UNIQUE REHABILITATION WORKSHOP
WE HONORED A RENOWNED FORMER PATIENT

The MossRehab Amputation Rehabilitation Course and Workshop, held in October, welcomed over 60 professionals and 30 patients. The workshop focused on addressing barriers to successful rehabilitation in different populations, training techniques and new technology and documentation. At this event we also presented Daniela Garcia Palomer, MD, with our annual Empowerment Award, which honors former patients who demonstrate remarkable tenacity during the rehabilitation process or who have undertaken advocacy efforts on behalf of individuals with disabilities. Dr. Garcia is the bestselling author of the book *Eligi Vivir (I Choose to Live)*, an autobiographical account of losing her limbs in a train accident, her rehabilitation and her determination to become a pediatric physiatrist. She is a former MossRehab patient and the first person with quadruple amputation to graduate from medical school. Now practicing in her native Chile, Dr. Garcia credits Dr. Esquenazi and the amputation rehabilitation team with inspiring her to accept the challenge and achieve all that she has done. She is a living embodiment of not only the therapeutic expertise at MossRehab, but also the confidence and optimism we inspire in those who come here.

MOSSREHAB EDUCATES PEERS
ABOUT IMPLEMENTATION OF
COGNITIVE REHABILITATION GUIDELINES

The Cognitive Rehabilitation Manual (CRM) is a practical guide for the implementation of evidence-based interventions for impairments of executive functions, memory, attention, hemispatial neglect and social communication. In July 2014, Mary Ferraro, PhD, OTR/L, MossRehab education coordinator for the Drucker Brain Injury Center, and Susan Robinson, MA, CCP/SLP, MBS, assistant program director at Drucker, spoke to professionals about the use of the manual at the Rehabilitation and Community Providers Association Conference. They provided recommendations for employing and enhancing the manual’s recommendations, noting the opportunity to address a diverse range of clinical skills and treatment settings.

WE HOSTED A TRAILBLAZING BRAIN
INJURY CONFERENCE FOR
PATIENTS AND CAREGIVERS

MossRehab’s Traumatic Brain Injury Model System (TBIMS) hosted “New Roads, New Directions: Finding Your Way After Brain Injury” in November 2014. The conference invited persons with brain injury and their caregivers to participate in lectures and workshops, engage in networking opportunities and share resources for coping with TBI. Led by Tessa Hart, director of MossRehab’s TBIMS, the program included sessions on advances in diagnosis and treatment, adjustments at all stages of life, relationships and sexuality, phone apps and services, activism and other topics such as work, nutrition and social networking.

WE ARE HELPING PEOPLE LEARN TO
INTERACT EFFECTIVELY WITH
PERSONS WITH DISABILITIES

It’s common for people to find themselves uncomfortable in the presence of someone with a disability. They often don’t know what to say or how to act. To give some needed guidance in this area, with grant funding from the Albert Einstein Society, MossRehab began the Disability Etiquette Program, an educational program about how to communicate with and about persons with disabilities. The series draws on MossRehab’s long history of leadership in disability etiquette, and MossRehab will disseminate the program to employers, community groups and schools through various channels, filling a long-recognized void in this kind of awareness. Topics include person-first language (“person with a disability” rather than “disabled person”), working with people in wheelchairs, understanding persons with intellectual, cognitive or developmental disabilities, interacting with people who have vision and hearing impairment and other vital advice.
We consider it part of our mission to work with politicians at the local and national level to help shape policy that will have a positive impact on patients and healthcare professionals. MossRehab’s chief operating officer, Ruth Lefton, FACHE, has been diligently addressing such issues for many years. Currently she is focused on two key topics: site-neutral payments and the “60% rule.” Medicare has proposed similar reimbursement to both skilled nursing facilities and inpatient rehabilitation hospitals for certain categories of care, regardless of the expertise level offered for the care. We are working to demonstrate the clear distinction in patient outcomes between the two kinds of institutions. Lefton is also engaged in dialogue about the 60% rule, which mandates that at least 60% of a hospital’s patient population must be diagnosed with one of 13 medical conditions for that hospital to be classified as a rehab facility. There have been proposals to move back to a 75% rule (in force prior to 2006), a standard considered by many to be arbitrary because it fails to take into account individual patients’ needs. MossRehab is helping to make the case that the 60% rule is less damaging to patient access.

In April 2014, we opened the Alice and Herbert Sachs Therapeutic Conservatory, which allows MossRehab to provide a new therapeutic and healing environment for patients and their families. The conservatory’s “work, show and grow” areas offer opportunities for horticultural therapy and contemplation. Patients come here to learn about gardening, to relax and to join with guests in a natural setting. A major benefit of the conservatory is its holistic scope: increasing strength, expanding range of motion and improving balance and fine-motor skills. Patients experience cognitive, physical, psychological, emotional and social benefits. For example, some who could stand for only a few minutes in traditional therapeutic activities find themselves so engaged in projects that they are able to stand much longer when planting, watering and nurturing. This is where real growth happens.

To address the alarming number of young people (under 65) who have strokes, MossRehab instituted the Young Empowerment Stroke Support Group (YESS). The incidence of stroke in this demographic has increased over 60% in the last two decades. At an average age of 46, their therapeutic needs differ significantly from those of older persons with stroke. They are more likely to be in the workforce, caring for children and used to vigorous physical activity. YESS provides community-based services that use a comprehensive multidisciplinary approach to treatment to address driving, working, technology, socialization and more. It brings in a compendium of professionals to help younger survivors gain in physical capability, adapt to life circumstances and access information, technology and activities. Along with OT, PT and other rehab specialties, this program includes information on topics like family relationships and nutrition.
WE ARE THE FIRST IN PHILADELPHIA TO ADOPT A DYNAMIC ACCESSIBILITY ICON

MossRehab and its parent company, Einstein Healthcare Network, became the first healthcare system in Philadelphia to adopt the Accessible Icon across its campuses. The new icon, which features a forward-moving image of a person in a wheelchair, depicts motion and independence. The revised icon was created in 2012 by The Accessible Icon Project to encourage a more positive perception of those with disabilities.

OUR PATIENTS ARE RETURNING TO GIVE BACK

No group can speak to patients as effectively as others who have taken the same journey. That’s why MossRehab participates in the Certified Peer Visitor Program (CPV). Organized by the Amputee Coalition of America, this course trains and certifies former patients and family members to help recent patients with amputation efficiently make their way back to health and reintroduction to a complete life. It teaches them to recognize the elements of recovery and respond with helpful interventions during different phases of adjustment.

In 2014, MossRehab trained 36 people in CPV certification, 12 of whom were former MossRehab patients. A national database helps identify and match those closest in condition and geography to work with and mentor current patients.

MOSSREHAB OFFERS OPPORTUNITIES FOR CREATIVITY, RECREATION AND SKILL-BUILDING

Continuing its award-winning association with the Philadelphia Museum of Art, our Outpatient Art Therapy Program takes patients on a specially adapted tour of the museum’s world-renowned collections and provides opportunities to develop fine motor skills and dexterity by creating their own art.

MossRehab’s unique Camp Independence, in existence for over 40 years, is the only program of its type for adults with disabilities in the Philadelphia area. Each year, campers enjoy a full week of swimming, fishing, archery, basketball and decathlon, as well as theater and arts and crafts.

In October 2014, MossRehab hosted our annual Amputation Recreation Day, during which patients were given a rare opportunity to learn about adapted golf, gardening, running and cycling. They also had the privilege of hearing from a renowned former patient, Daniela Garcia Palomer, MD, of the Gait Laboratory at the Teleton Rehabilitation Institute in Chile (for more background on Dr. Garcia, see page 14).
COMING SPRING 2015, MOSSREHAB.COM WILL BE EASIER TO NAVIGATE, WITH AN ENHANCED EXPERIENCE FOR PROFESSIONALS, PATIENTS AND OUR SUPPORT COMMUNITY.