REHAB UPDATE

News from the UPMC Rehabilitation Institute

Spring 2017

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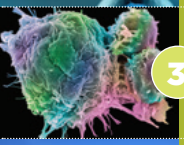
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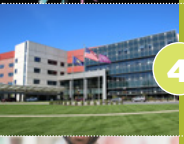
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About the UPMC Rehabilitation Institute

- UPMC is ranked by *U.S. News & World Report* as one of the top hospitals in the country for rehabilitation.
- Stroke rehabilitation at the UPMC Rehabilitation Institute is certified by the Joint Commission.
- Our experts combine extensive clinical experience with advanced technology and research to offer our patients cutting-edge treatments.
- We are one of only seven institutions with both SCI and TBI Model System designations from the NIDRR.

Gwendolyn Sowa, MD, PhD

As the adage goes, spring is the time for new beginnings and signs of change are all around. Our department is undergoing a significant period of growth and expansion in virtually every existing area, and many new ones.

Led by Maryanne J. Henderson, DO, we are developing new models of care in settings we've not traditionally been a part. Individuals with cancer have not consistently been a part of the patient population typically seen by physical medicine and rehabilitation (PM&R) physicians. However, as cancer treatments have progressed, with significant improvements in prognosis and survivorship, our ability to intervene and help restore lost function and preserve quality of life is also on the rise. You can read more about this inside.

We also continue to conduct and promote ground breaking research. One example of this is the work being done by Fabrisia Ambrosio, PhD, MPT, focused on skeletal muscle healing and functional recovery. Showcased inside, this is an intersection of PM&R and regenerative medicine, and the goal? Translate this research into clinical practice to maximize functional outcomes for patients.

Finally, we're expanding our inpatient environment by bringing UPMC Susquehanna (back cover) and UPMC Chautauqua-WCA into the fold. We now have 11 UPMC Rehabilitation Institute locations within acute care hospitals.

While this is certainly not an exhaustive list of our ongoing endeavors, it is a testament to our talented staff and faculty. They are dedicated to influencing and implementing changes that improve the lives of those in our care. And with that, I'm pleased to share with you this issue of Rehab Update.

Sincerely,

Gwendolyn Sowa, MD, PhD
Director, UPMC Rehabilitation Institute
Chair, Department of Physical Medicine and Rehabilitation

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Fabrisia Ambrosio, PhD, MPT

REGENERATIVE REHABILITATION: An Intersection of Disciplines

The burgeoning field of regenerative medicine and related technologies takes many forms and follows various investigational avenues. This research and related technologies are quickly making an impact on clinical practice.

Regenerative rehabilitation, the intersection of physical medicine and rehabilitation (PM&R) and regenerative medicine, combines the strengths of PM&R and its ability to tap into the body's healing capabilities with regenerative medicine technologies. These include tissue engineering, cellular therapies, and biomaterials. The ultimate goal of regenerative rehabilitation is to translate this research into clinical practice to maximize functional outcomes for patients.

A leader in the relatively new, yet expanding field is Fabrisia Ambrosio, PhD, MPT, associate professor of PM&R and recently appointed director of rehabilitation for UPMC International. Dr. Ambrosio holds secondary appointments in the departments of Physical Therapy, Orthopaedic Surgery, Bioengineering, and Microbiology & Molecular Genetics.

Dr. Ambrosio's research is focused on skeletal muscle healing and functional recovery. She pursues this research through multiple channels, looking for ways to restore function through the repair or regeneration of damaged or lost tissues, augmented by rehabilitation protocols that use physical and mechanical means to promote recovery.

"The primary focus of our laboratory is skeletal muscle, and, specifically, investigating the biology underlying declines in regenerative potential with aging and disease. In addition, we're very interested in how mechanical stimulation protocols may be used to prevent or counteract these declines," explains Dr. Ambrosio.

In terms of cellular therapies for the restoration of function after injury or disease, Dr. Ambrosio seeks to understand the possibilities to "rehabilitate" transplanted cells as a means to enhance the survival and engraftment of the donor cells after transplantation, a large challenge with cellular therapeutics in general.

"In this respect, our goal is to use rehabilitation protocols as a way to communicate with the cells even after transplantation and facilitate incorporation into the host tissue in a more functionally relevant manner," says Dr. Ambrosio.

What she and her colleagues have found through the course of several recent and ongoing studies is that in the case of myopathies, as well as very severe muscle injuries, when a rehabilitation protocol is added to stem cell transplant paradigms, it results in better transplantation efficiency. Cellular behavior occurred more in the manner that was intended, migrating throughout the tissue, forming new muscle, and showing the results to be functionally relevant.

Studies of this nature have shown Dr. Ambrosio and her colleagues that the synergies created between cellular therapies and rehabilitation protocols can pull the two fields together.

"The whole is greater than the sum of the parts. Rather than continue to pursue various approaches in a parallel stream, we're interested in merging the two fields as a means of accelerating research and translational progress."

REHABILITATION FOR CANCER PATIENTS: A New Dimension in Patient Care

Cancer patients have not been a consistent part of the patient population typically seen by physical medicine and rehabilitation (PM&R) physicians. However, as cancer treatments have progressed over many years with significant improvements in prognosis and survivorship, the ability of PM&R specialists to intervene and help restore lost function and preserve quality of life in these individuals is also on the rise.

Cancer takes significant physical tolls on a large percentage of those it afflicts. Whether from the cancer itself, or any of the accompanying therapies to treat it, including radiation, chemotherapy, or surgical interventions, many patients suffer deficits in their functional ability and independence during and after treatment.

At the UPMC Rehabilitation Institute, Maryanne J. Henderson, DO, section chief for rehabilitation services at UPMC Shadyside, is leading several new initiatives to expand services and programs for individuals with cancer. Dr. Henderson sees a varied patient population and collaborates with oncologists both at UPMC Shadyside and the UPMC Cancer Center who refer inpatients from clinics. She also works closely with therapists on the outpatient side of the care spectrum with UPMC Centers for Rehab Services (CRS).

Maryanne J. Henderson, DO

"There are a number of therapists at CRS focused on cancer rehabilitation, and they are dealing with conditions such as lymphedema, myofascial release, certain neurological issues, and pelvic floor rehabilitation," says Dr. Henderson. "I work closely with them in the outpatient arena."

.Dr. Henderson currently has a weekly clinic for cancer patients at the UPMC Hillman Cancer Center. She treats breast cancer survivors with restricted range of motion in their shoulders due to surgery, scar tissue, and other complications. There are a number of cases involving individuals with primary or metastatic brain lesions, often exhibiting symptoms similar to those seen in cases of stroke — weakness on one side of the body, and issues with balance.

Dr. Henderson collaborates with a number of physicians from other medical and surgical specialties whose patients benefit from rehabilitative interventions. These areas include head and neck, neurosurgery, surgical oncology, and survivorship oncologists. She is also involved with the management of postsurgical scars and musculoskeletal disorders with oncology patients. The whole idea of rehabilitation for cancer patients is really an emerging field, and UPMC has been ahead of the curve for several years in not only identifying the need, but putting resources behind it. Dr. Henderson chairs the cancer rehab steering committee to help shape policy.

"It's exciting because just five years ago, rehabilitation for cancer patients was on few clinicians' radar," says Dr. Henderson. "Very few people were talking about it, and perhaps less, practicing. Today there are no accredited cancer rehabilitation fellowships, but I think that will change.

"We are seeing recognition that there are benefits individuals can reap in inpatient rehabilitation after an acute care stay for cancer treatment, and in the outpatient spectrum as they continue to seek treatments and recover."

UPMC Rehabilitation Institute's Tenth Location Expands Care to Central Pennsylvania

In October 2016, Susquehanna Health officially joined UPMC and became UPMC Susquehanna, a four-hospital system located in Williamsport, Pa. This acquisition has helped expand health care services in central Pennsylvania and advance quality care in the region. It also means that the UPMC Rehabilitation Institute acquired another inpatient location housed in an acute care hospital.

The 26-bed rehabilitation unit at UPMC Susquehanna is the second largest UPMC Rehabilitation Institute location in the UPMC system, next to UPMC Mercy. It offers rehabilitation services for many conditions, including:

- Amputation
- Brain injury
- Burns
- Generalized debility
- Major trauma
- Neurological disorders
- Orthopaedic disorders
- Spinal cord injury
- Stroke

"Aside from UPMC Mercy, we are the only UPMC Rehabilitation Institute location that provides rehab for a specific condition," says Tom Hoy, DPT, executive director of neuroscience and rehabilitation, UPMC Susquehanna. "Most hospitals provide general rehab, but we provide brain and spinal cord rehab, which allows for cross-programming and more successful outcomes."

UPMC Susquehanna is one of only four organizations in the state to earn the Joint Commission's Gold Seal of Approval® for spinal cord injury rehabilitation.

Along with clinical excellence, UPMC Susquehanna offers patients and their families various amenities including free valet parking. Low to no cost overnight accommodations are available at the Hospitality Inn, for those receiving care at Williamsport Regional Medical Center.

"Historically, we've been the rehab hub in central Pennsylvania so patients can travel more than three hours to have inpatient rehabilitation," says Tom. "Therefore, low cost housing comes in handy for many families."

UPMC Rehabilitation Institute patients can also take advantage of support groups provided by the hospital for four different conditions: muscular dystrophy; stroke and head injury; Parkinson's disease, and multiple sclerosis. If there is a corresponding support group for a patient upon discharge, they are offered the opportunity to participate.

"We're very excited to become part of UPMC and to have the opportunity to advance our clinical operations to mirror theirs," says Tom. "Susquehanna Health was already doing well. We can now take our history of excellence and propel it forward."

To refer patients to the UPMC Rehabilitation Institute at UPMC Susquehanna, call 1-800-321-2602.

Job Opening for Physician Assistant/CRNP

The University of Pittsburgh and UPMC Department of Physical Medicine and Rehabilitation are seeking candidates for a Physician Assistant/CRNP. This position provides patient care services for our growing rehabilitation network, including assessing and managing patients in the outpatient and/or inpatient environment. Primary responsibilities include consultative services on acute inpatients to evaluate appropriateness and readiness for inpatient rehabilitation, transitional rehabilitation, skilled nursing services, and other rehabilitation needs. This position will also assist with patient care in the inpatient rehabilitation unit, in collaboration with an attending physiatrist. Interested individuals should contact Kelsey Shrader, executive assistant for the UPMC Department of Physical Medicine and Rehabilitation, at shraderkm@upmc.edu.