

RUSK

Capturing the Momentum of Rehabilitation Medicine
at NYU Langone Medical Center

SPRING/SUMMER 2012



From The Chairman

Inertia (i-'ner-shuh) n. *the tendency of an object to preserve its existing state of rest or motion.*

As a lifelong student of science, I've learned about the laws of nature and how they govern the movement of objects through the universe. But inertia is a concept that is applicable beyond just the physical realm: it speaks to complacency, resting on one's laurels, and an overall resistance to change.

At Rusk, we are challenging the principles of physics.

We've enjoyed decades of unprecedented successes and now, more than ever, we are leaping ahead towards a new future, adapting to this rapidly evolving healthcare environment. Rusk will continue to deliver the highest quality patient care while advancing rehab education and research—via a new, integrated model of accessible, patient-centered care delivered at multiple state-of-the-art facilities.

With this model in mind, Rusk is undergoing a series of strategic relocations as part of NYU Langone Medical Center's campus transformation project, which began with the recent move of our outpatient musculoskeletal practice to the newly opened Center for Musculoskeletal Care (CMC). CMC is an entity unique in the metropolitan New York region: it combines our world-class Departments of Rehabilitation Medicine, Orthopaedic Surgery and Radiology and Divisions of Rheumatology and Pain Medicine — all within one free-standing, state-of-the-art, patient-centered facility.

All other Rusk adult rehabilitation ambulatory services, in addition to administration, education and research divisions, have relocated to NYU Langone's brand new Ambulatory Care Center, just a short distance from CMC. The Ambulatory Care Center is also newly constructed and tailor-made for Rusk, with cutting-edge equipment and comfortable patient care areas providing a physical environment aligned with the extraordinary talents of our therapists, nurses, physicians and support staff. The final stage of our relocations will take place in early 2013, when Rusk inpatient beds currently located in the 34th Street building will move into renovated spaces in NYU Langone's Hospital for Joint Diseases, expanding the services of Rusk at 17th Street.

All of these moves have been designed to centralize and consolidate services around patient needs and comfort, with the goal of improved accessibility and providing the very best patient experience.

You'll learn about some of these exciting changes in this edition of RUSK. We also invite you to read about other innovative programs and initiatives at Rusk, including a new approach to women's health rehabilitation through a collaboration with NYU Langone's Department of Integrative Health; our unique Barrier-Free Design program, which supports our patients' independence upon their return to home; and our exploration of the great potential for rehab in the intensive care unit.

I look forward to sharing more of our progress as we accelerate into our future.

Steven R. Flanagan, MD

The Howard A. Rusk Professor of Rehabilitation Medicine
Chairman, Department of Rehabilitation Medicine
Medical Director, Rusk Institute of Rehabilitation Medicine

Top Five at Rusk

01



Intense Caring Comes Naturally in Rehab: Rusk in the ICU

NYU Langone Medical Center is rich in opportunities to collaborate, conduct research and advance the possibilities for patient care. In an innovative initiative that is already under way, Rusk is seizing all three areas of progress by expanding the role of rehabilitation into the Intensive Care Unit (ICU).

In an ICU, complications related to immobilization can be almost as severe as the trauma for which patients are admitted. The dramatic impact of these injuries has gained notoriety but remains widely unaddressed—and vastly underestimated. Atrophy, a prevalent example, can affect not only muscles but nearly every system in the body

when immobilization is prolonged. Without physical rehabilitation in the ICU, biochemical changes can cause discs in the spine to desiccate; blood lumens can thicken, leading to cardiovascular complications; immobilized joints can fill with connective tissue; and myelin sheaths can degrade.

The transdisciplinary team in the ICU—including a Rusk physiatrist and physical therapist—is committed to minimizing the sequela of secondary immobilization injuries and maximizing function for ICU patients.

With early rehabilitation, many of the complications of prolonged bed rest can be prevented or minimized.

The key is to start immediately and gradually increase the intensity of treatments. The stages of progress in ICU rehabilitation generally include:

- Passive range of motion and frequent repositioning of the patient (usually when the patient is still unconscious)
- Active assistive range of motion as the sedation level drops and the patient becomes more aroused
- Upright posture to facilitate respiration, trunk muscle conditioning, cognitive function and increased tolerance to sitting
- Increased activity under the guidance of the therapists
- Sitting up at the edge of the bed and/or becoming upright with specialized equipment, which are important components in the progression to walking

Research in the field has shown exceptionally positive results, including improved patient functioning, less skin breakdown, and decreased infections and length of stay. Shorter inpatient stays, in turn, improve patient satisfaction, decrease incidence of hospital-acquired infections and, for the institution, translate to greater financial efficiency.

The goal is to expand this program at NYU Langone, increasing the number of Rusk team members in the ICU and tracking patient outcomes. A larger care team can provide the maximum benefit of this transdisciplinary care

approach to all ICU patients; and compiling outcomes data will reinforce its efficacy and pave the way for further efforts.

In addition to this comprehensive clinical care, the team also enlists the support and engagement of the patient's family, in keeping with Rusk's philosophy of family-centered care. Because a great deal can be accomplished when intensivists, physiatrists, nursing, therapists and loved ones are all singularly focused on the optimal outcome of a critical-care patient.

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02



Rusk Revitalized: Q&A with Rusk at 17th Street Site Director, Maria-Cristina Tafurt

As part of a sweeping transformation of new constructions, enhancements, and expansions taking place within NYU Langone Medical Center, select services currently provided at Rusk's 400 East 34th Street location will be transitioned to a fully renovated, state-of-the-art facility located in the Hospital for Joint Diseases (HJD) at 301 East 17th Street. Maria-Cristina Tafurt, site director of Rusk at 17th Street, has been intimately involved in the planning and execution of the transition.

Would you describe the overall plan and some highlights of the renovations?

In 2013, several newly renovated floors in HJD will become the hub for Rusk’s inpatient neurologic rehabilitation, inpatient and outpatient pediatric rehabilitation, and acute medical/surgical bedside therapy. Rusk’s orthopaedic and brain injury rehab had already existed within the walls of HJD, but this really expands and centralizes inpatient rehabilitation services to reside at HJD.

The facility and equipment will all be state-of-the-art, custom-created, and brand new – multiple rehab gyms, quiet therapy rooms, new patient rooms, renovated waiting room and reception areas, and a new 23-bed medical/surgical unit. It’s really going to be a beautiful, comfortable new space.

One of the new pieces of equipment helps patients ambulate with the assistance of tracks mounted to the ceiling; we’ll also have a modern activities of daily living (ADL) room to help people learn to be more independent when they return home. The new ADL area will include a suite with a bedroom, kitchen, dining room, bathroom and even a washer/dryer so that patients can train according to their own needs.

One of the significant changes is that all pediatric rehabilitation—inpatient and outpatient—will now be located at 17th Street. What benefits do you foresee in this area?

HJD already houses the Center for Children (part of the Hassenfeld Pediatric Center), which specializes in pediatric orthopaedics and neuromusculoskeletal conditions, but inpatient rehab for pediatrics wasn’t offered at HJD. Now, we’ll be able to provide completely seamless, comprehensive care for this especially important and vulnerable group of patients, in one location.

Orthopaedics, physiatry services, inpatient rehab through to discharge and outpatient rehab – the full continuum of pediatric musculoskeletal care will be offered at 17th Street.

What will distinguish Rusk at 17th Street from other programs of its kind?

The reorganization essentially eliminates physical communication barriers between care teams, enhancing the focus on delivering healing, patient-centered care to a vulnerable population. I also see a great benefit to research, with our CARF-accredited inpatient stroke and inpatient brain injury rehab programs housed in the same location.

What do all these changes mean for Rusk and rehabilitation at NYU Langone Medical Center?

The tremendous efforts and resources being devoted to these renovations and Rusk relocations are a testament to the importance the Medical Center places on delivering integrated, patient-centered care as well as the importance of Rusk Rehab, as the world-class provider of rehabilitation at NYU Langone. It’s an exciting time for Rusk, and I’m proud to be a part of it.

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**Home is a “Safe Space”:
The Barrier-Free
Design Service**

Empowering individuals with disabilities to live independently is at the core of Rusk’s mission. With the Barrier-Free Design Service, part of Rusk’s Occupational

Therapy department, therapists take an important step beyond treating physical conditions to address the functionality, safety and accessibility of a client’s home environment.

The only program of its kind in the metropolitan area since its inception in 2001, the Barrier-Free Design Service provides an assurance of long-term independence and safety by assessing a person’s home environment in the context of their condition.

The service’s specially trained occupational therapists underscore the need for forward-thinking home modifications that create accessible environments as capabilities change—whether that is the degeneration of a condition such as multiple sclerosis or the maturation of a child with a disability into adolescence. At the heart of the program is an understanding of the need to remove barriers—not only in the transition from outpatient care to community reintegration—but all life-long.

After obtaining a client’s medical/surgical history and evaluating physical function, including an assessment of his or her capability to dress, bathe, toilet, groom and cook, the occupational therapist establishes the best fit between the client, activities of daily living and the home environment. Occupational therapists in the Barrier-Free program are also Certified Aging in Place Specialists (CAPS) and have advanced education in interior design, universal design and space planning. When structural renovations are required, floor plans are drafted for the client, architect and contractor, and specific fixtures and equipment are recommended to meet the client’s needs. Even modest structural or architectural changes—a handrail on a shower wall, an entrance ramp, a bedroom doorway broadened to accommodate a wheelchair—can restore autonomy and peace of mind.

The success of the service is quantifiable—from the program’s formal launch in 2005 to the year 2011, the client base has grown by more than 100%—while its benefits to clients are immeasurable. Without a livable, navigable home environment, an individual with a disability becomes unable to complete tasks of daily living, risks further injury and re-hospitalization, and greatly increases the burden on caregivers. The psychosocial stress, which may affect both patient and caregiver, can manifest in depression and a deteriorating condition.

As with all Rusk programs, research and education are an integral part of understanding impact and producing the best outcomes, as well as sharing knowledge for the benefit of the field. In pursuit of research, a study is currently under way to formally evaluate the service’s impact on quality of life; from the perspective of education, the mentorship program—established three years ago and led by the program’s Clinical Specialist, Megan Rochford, MS, OTR/L, CAPS—trains additional occupational therapists to expand the team’s capacity and reach.

Solidly built in the Rusk tradition of comprehensive care, the Barrier-Free Design Service is drastically improving the physical and psychological well-being of disabled clients and their families by enabling them to live independently without sacrificing safety, comfort or pride.



04



Mind-Body Medicine Meets Women’s Rehab: A New Level of Integrated Care

The line between a complex problem and its solution is seldom straight. Particularly in women’s health rehabilitation, where conditions can be overlooked or underestimated, the connection between pain and relief often takes a more circuitous path than conventional medicine can follow.

“Many of my patients desire options other than medications for pain reduction,” explains Jaclyn H. Bonder, MD, Medical Director of Women’s Health Rehabilitation at Rusk. One option ideally suited to such patients—notably pre- and post-partum women with limited treatment options—is mind-body medicine. Based on the principle that the psyche can prompt physical healing, this approach focuses on the connections between a patient’s mind, brain, body and behavior to affect physical functioning, decrease pain and improve health.

To explore the possibilities of reducing pain with minimal pharmaceutical intervention, the Women’s Health Rehab Program announced a new collaboration with NYU Langone’s Department of Integrative Health Programs.

These two specialties will launch a joint program providing holistic treatments to decrease female patients’ pain and stress and improve overall well-being.

As part of the pilot partnership, women’s health rehabilitation experts, including physical and occupational therapists, social workers, and psychologists, will receive training from the Integrative Health team so that mind-body techniques can be incorporated as a complement to treatment sessions. Modalities offered include meditation, guided imagery, yoga and stress management.

The partnership evolved from a workshop held last winter entitled “Recognizing the Mind-Body Connection in Pelvic Health.” The event, which educated patients about how the mind influences pain and how physical therapy and meditation can decrease pain, was spearheaded by Dr. Bonder and Anita Boeninger, BSW, RYT, an educator in Integrative Health. Participants were enthralled and sought additional opportunities to explore alternative treatments.

Dr. Bonder then approached Diane Rosenstein, MSW, LCSW, Director of the Department of Integrative Health Programs, to begin a more formal collaboration, and together they turned to the NYU Langone Auxiliary to help foster this pilot program.

Thanks to their generous funding, the program will be able to incorporate technologies including the Playaway®, a portable device preloaded with meditative audio programs targeting pain, stress and anxiety for patients who can’t tolerate or take pain medications or to supplement their existing medication regimens. The Playaway® can be used at home and patients will be asked to monitor their pain levels as part of a preliminary research study to determine the effectiveness of integrative health modalities in this population.

“We are very excited by this innovative collaboration,” says Ms. Rosenstein. “We’re confident that advances in integrative health will be of great benefit to our patients.”



05



Building on a Reputation: Rusk Rehab at The Center for Musculoskeletal CareSM

When the first patient came through the doors of NYU Langone's Center for Musculoskeletal Care (CMC) on March 19, 2012, Rusk itself crossed a much-anticipated threshold. By relocating all outpatient musculoskeletal rehabilitation to the brand new, state-of-the-art facility at 333 East 38th Street, Rusk achieved the first milestone in the process of extending rehabilitation to multiple points of service throughout the NYU Langone Medical Center community.

This new era for Rusk marks a progressive approach to consolidated care that's already proving invaluable to patients. **At CMC, musculoskeletal patients have access to more than three hundred orthopaedists, rheumatologists, physiatrists, radiologists, therapists, nurses and support staff—all under one roof.** The facility is composed of 110,000 square feet of space spread across three custom-renovated floors. The spacious

layout, crafted by designers and architects in partnership with the musculoskeletal clinical and operational teams, streamlines multidisciplinary interactivity while centralizing the full spectrum of musculoskeletal care—prevention, diagnosis, treatment and rehabilitation—around patients.

Rusk Rehabilitation forms CMC's third key musculoskeletal discipline, alongside orthopaedics—sports medicine, spine, and joint replacement—and rheumatology, including an infusion center. Rounding out the comprehensive bone and joint services at CMC is diagnostic imaging and pain management.

Occupying the fifth floor of the facility, Rusk's extensively trained staff of physiatrists, physical therapists, occupational therapists and hand therapists specialize in the treatment of orthopaedic and sports-related injuries as well as post-operative care following orthopaedic surgery. Central to Rusk Rehab at CMC is the 7,200-square-foot therapy gym and fitness area, which overlooks the East River and contains state-of-the-art therapeutic and training equipment, including:

- State-of-the-art Cybex™ resistance and cardiovascular equipment
- Alter-G™ anti-gravity treadmill, which “unweights” individuals to reduce impact on lower extremities following injuries or during training
- Chattanooga Triton DTS™ Traction System for cervical and lumbar spine conditions
- Shuttle MVP Pro™ plyometric trainer for those returning to higher-level sports
- Game Ready™ Injury Treatment System combines cryotherapy with compression to effectively reduce swelling
- Real-time ultrasound imaging for neuromuscular re-education
- Cold Laser to treat muscle strains, joint sprains, tendinitis and overuse injuries
- Pilates Reformers that emphasize the core muscles while exercising the extremities

Rusk lends to the CMC its ranking by *U.S. News & World Report* as one of the nation's top 10 rehab programs, and #1 in New York for 23 years running. This prestigious standing, along with NYU Langone's top-ten-ranked Department of Orthopaedic Surgery and Division of Rheumatology, positions NYU Langone to deliver world-class, comprehensive, outpatient bone and joint care with a seamless patient experience in a state-of-the-art environment.

CMC drew more than 16,000 patients in the first month it was open; with 100,000 more anticipated in the next year, Rusk is playing a pivotal role in defining a new standard for delivery of bone and joint care—at NYU Langone Medical Center and beyond.

