UMDNJ-New Jersey Medical School
Department of Physical Medicine and Rehabilitation

The University Hospital
Chief of Service Report
July 1, 2012 – June 30, 2013

Patrick M. Foye, M.D.
Interim Chair

John R. Bach, M.D.
Vice Chair

Brian A. DaSilva
Admin. Coordinator
Service Overview:

The Department of Physical Medicine and Rehabilitation (PM&R) includes a faculty of 100 of whom 4 are NJMS FTEs. Included in the department are divisions of physiatry (physician services), occupational therapy, physical therapy, speech-language pathology, therapeutic recreation, and cardiac rehabilitation. Physical medicine and rehabilitation services are designed to restore, improve, or maintain the patient’s optimal level of functioning, self-care, self-responsibility, independence, and quality of life. In addition, the services are designed to minimize symptoms and reduce exacerbations of chronic illnesses, impairments, and disabilities. All interventions respect and facilitate the patient’s ability to make choices, develop and maintain a sense of achievement, maximize independence in activities of daily living, and optimize the ability to take responsibility for medical care and life decisions.

PM&R provides the following services: an inpatient consultation service; a unique program of respiratory muscle facilitation to avert hospitalizations for respiratory impairment to prevent episodes of acute respiratory failure and to extubate and deculate patients who are “unweanable” from ventilatory support so as to spare them tracheotomy and long-term institutionalization; general and specialty outpatient services in the hospital and the DOC; inpatient and outpatient therapy services; phase I, II, and III cardiac rehabilitation. In addition, PM&R provides diagnostic and therapeutic services such as electrodiagnostic studies and epidural injections. Due to New Jersey’s Certificate of Need Law, the University Hospital has no designated inpatient rehabilitation beds. This is a problem for individuals who need rehabilitation but have no payment coverage.

Brief Overview of Clinical Services:

The Center for Noninvasive Mechanical Ventilation Alternatives and Pulmonary Rehabilitation was established in 1992 and cares for patients with neuromuscular weakness and respiratory impairment such as people so long in critical care that they become too weak to breathe without continuous ventilatory support. It is under the direction of John R. Bach, M.D. who also serves as Co-Director for the Muscular Dystrophy Association Clinic. These neuromuscular weakness intervention programs continue to be successful in maintaining the lives of ventilator users at home and without invasive airway tubes rather than in nursing institutions with tracheostomy tubes. An inpatient program for the extubation of patients who are “unweanable” from ventilatory support is provided in coordination with the Departments of Medicine and Pediatrics. The program focuses on extubating/decanulating ventilator users to noninvasive inspiratory and expiratory muscle supports. This greatly reduces institutionalizations and cost, while optimizing quality of life. This is the only program of its kind that satisfies the government’s Olmstead Act for this patient population. This mechanical ventilation alternatives program has successfully extubated over 250 unweanable, intubated patients, most of whom have been transferred to UH after failing extubation at other facilities. There have been 53 patients admitted or transferred to UH for this program from 2012-2013 including patients from Qatar, Hong Kong, Colorado, California, Texas, and South Carolina.

Musculoskeletal and Occupational Medicine involves the non-surgical treatment of musculoskeletal and neurological conditions that cause pain and/or functional difficulties with activities of daily living. Some of these include:

- Arthritis
- Carpal tunnel syndrome
- Neuromuscular diseases
- Neck pain
- Peripheral nerve injuries
- Traumatic brain injury
- Osteoporosis
- Sports injuries
- Extremity & coccyx pain
- Back pain
- Work-related injuries and conditions
The outpatient division is under the joint direction of Todd P. Stitik, M.D., Professor, Director, Occupational/Musculoskeletal Medicine and Acting Director of Sports Medicine, and Patrick M. Foye, M.D., Associate Professor, Interim Chair, and Assistant Director, Occupational/Musculoskeletal Medicine.

**Injured workers** account for about 20% of total office visits. UMDNJ employees at the Newark and Scotch Plains campuses who experience a work-related musculoskeletal injury are generally referred to the Newark PM&R faculty practice, where most are seen within 24 hours. Workers receive treatment aimed at an early return to work and a reduced risk of re-injury. The PM&R faculty has also established agreements with other employers such as University Physician Associates, Rutgers University-Newark and the City of Newark for the care of their employees' injuries. The Injured Workers' Program also includes treatment of injured workers from the city of Newark as well as injured workers under case management from local companies including Active Care-1\textsuperscript{st} MCO, Traveler's, Liberty Mutual, and Corvel.

The Department of Physical Medicine and Rehabilitation has worked in conjunction with University Hospital to expand its current injured workers program as follows:

- A previously developed practice brochure was created and has been distributed to case managers and workers' compensation program administrators in the region.

- Dr. Todd Stitik, representing University Hospital, lectures on pain management to potential outside referral sources.

The PM&R department’s **Coccyx Pain Center** (tailbone pain center) at NJMS and University Hospital has entered its sixth year and has continued to grow in terms of patient volume, catchment area, and the number of interventional injection procedures performed at University Hospital. In 2012, our Coccyx Pain Center continued to provide evaluations for new patients with coccydynia, as well as many more follow-up visits and injections. This Coccyx Pain Center has a national reputation, such that many of these patients fly in from around the country and occasionally from other nations to receive this subspecialty, niche care within the research/publication focus of the Center's director, Dr. Patrick Foye. This brings not only favorable national reputation to UMDNJ/NJMS/UH and soon Rutgers, but creates a truly international catchment area for patients receiving outpatient procedures at University Hospital.

Six subspecialty centers are offered within the DOC faculty practice, reflecting exceptional faculty expertise in research and teaching as well as in clinical practice.

- The **Osteoarthritic Rehabilitation Center**, which utilizes non-surgical approaches such as viscosupplementation in patients with osteoarthritis of the knee.

- The **Interventional Pain Management Center**, which performs spinal injections and major joint injections under fluoroscopic guidance within the on-site procedure suites in DOC 3200 and 3300, as well as in UH's Medical Special Procedures Suite.

- The **Low Back Pain Rehabilitation Center**, specializing in the non-surgical treatment of this common condition. Conditions treated include sprain/strain of muscles and ligaments, spinal arthritis (degenerative joint disease), disc problems, radiculopathy, and painful facet and sacroiliac joints.

- The **Coccyx Pain Center**, specializing in non-surgical treatment of tailbone injuries and tailbone pain.
• The **Musculoskeletal Ultrasound Diagnosis and Treatment Service** (i.e. musculoskeletal-guided injection procedures) is becoming increasingly used in the diagnosis and treatment of musculoskeletal pathology. One of our attending physicians, Dr. Todd Stitik, has been actively expanding his knowledge base and scope of practice using this relatively new musculoskeletal tool. A dedicated ultrasound musculoskeletal medicine clinic has been established on Monday afternoons and the Monday morning knee injection clinic is now conducted with the use of ultrasound guidance. In addition, ultrasound guidance is being used throughout the week for a variety of other non-fluoroscopic guided injection procedures. Further growth in this area is strongly anticipated as Dr. Stitik’s experience increases and his referral sources specifically for this diagnostic/therapeutic modality expand.

• The **Neuromuscular Disease Center** is for comprehensive care of patients with neuromuscular conditions under the umbrella of the Muscular Dystrophy Association.

**General PM&R Clinics** are held daily in the Orthopedic Clinic (Clinic 8) at UH and in Suite 3300 in the DOC. These physiatry clinics provide non-surgical treatment for a variety of musculoskeletal conditions. Conditions treated include sprain/strain of muscles and ligaments, painful joints, spinal arthritis and disc problems, radiculopathy, and sacroiliac joint dysfunction. In the UH Clinic, PM&R sees new referrals for non-operative management of musculoskeletal conditions, from a variety of referral sources including the ER, UMD Care, rheumatology, trauma, orthopedics, and many outside facilities. The physiatrists in this clinic also provide follow-up care for a wide variety of conditions. Currently, new patient waiting time is greater than five months. The clinic could benefit from a physician assistant. Patients with other rehabilitative diagnoses such as stroke, spinal cord injury, neuropathies, and many other disabling conditions are also cared for in these clinics.

**Inpatient consultative services** are provided by PM&R faculty to a diverse inpatient population of patients with neurological or traumatic injuries, including stroke, spinal cord injury, and brain injury and to patients with disabling medical and surgical conditions or complications. Pulmonary consults are also provided to patients in need of non-invasive ventilation to avert tracheostomy. The inpatient consult service working in coordination with the case managers play a key role in facilitating the discharge of patients to post-acute rehabilitation. Their contribution to the health care team is crucial to decreasing length of stay (LOS).

**The Northern New Jersey Spinal Cord Injury System** was founded in 1992 under a grant from the National Institute on Disability and Rehabilitation Research, entitled the “Northern New Jersey Spinal Cord Injury System” (NNJSCIS) at University Hospital and continues to care for SCI patients within a broad 13-county area (This grant has been competitively funded and renewed since 1992). The NNJSCIS is a joint effort among UMDNJ-University Hospital, Kessler Institute for Rehabilitation, and Kessler Foundation Research Center, and is one of 14 federally-funded model systems in the U.S. The University Hospital is the site of the acute care component of the system, while Kessler Institute is the site for the remaining aspects of the system. The last round of this grant cycle was successfully funded in 2011 (these are five-year grants).

**Acquired Brain Injury Services**

Dr. Peter Yonclas, a physiatrist with a secondary appointment in our department, serves as Director of Trauma Rehabilitation at University Hospital. Although lost to our department due to budgetary reductions, he continues to teach PM&R residents and provide PM&R services to the trauma center and works closely with Trauma Surgery and Neurological Surgery to improve the acute care of brain-injured patients and to ensure the success of the New Jersey Trauma Center. Dr. Yonclas also directs an outpatient brain injury clinic to serve the many diverse
needs of this population. University Hospital is a site for the National Institute on Disability and Rehabilitation Research’s (NIDRR) “Model Traumatic Brain Injury (TBI) system”. This grant was successfully renewed in September 2012 amid fierce competition. University Hospital, along with Kessler Institute for Rehabilitation and Kessler Foundation Research Center are one of only seven sites in the country to have both model systems.

The Prosthetics and Orthotics Clinic is offered weekly. Outpatients requiring braces or artificial limbs are referred for evaluation, prescription, and follow-up. Financial support and/or assistance from Social Work Services is required in order to provide assistive devices to our charity care, uninsured and underinsured population (currently provided only through payments directly to the vendor or through donations). We do provide splints and braces to our charity care population, but not prosthetic limbs.

EMGs and Electrodiagnostic Studies
The PM&R Department continues to provide electrodiagnostic testing (EMG and nerve testing) for patients with a wide variety of symptoms and conditions including numbness, pain, weakness, back pain radiating into the legs (radiculopathy/sciatica, etc), neck pain radiating down into the arms (cervical radiculopathy, brachial plexopathy, etc.), carpal tunnel syndrome, ulnar neuropathy and peripheral polyneuropathy.

In FY13, PM&R performed a total of approximately 166 EMG procedures (annualized). The PM&R Department has more physicians credentialed by the American Board of Electrodiagnostic Medicine than any other NJMS department.

Therapy Services

Staffing: Therapy services are fully staffed for the number of budgeted FTEs, except for one Lead Occupational Therapist where active recruiting is currently taking place.

<table>
<thead>
<tr>
<th>POSITION</th>
<th>INPATIENT</th>
<th>OUTPATIENT</th>
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<tbody>
<tr>
<td>1 Practice Manager, 1 Clinical Manager, 1 Assistant Business Manager</td>
<td>(Refer to the right box.....)</td>
<td>1 Exercise Physiologist who also works inpatient Phase I</td>
</tr>
<tr>
<td>Cardiac Rehabilitation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerical</td>
<td>1 Secretary I, 1 patient accounts clerk</td>
<td>3 medical office assistants, 1 billing technician, 1 patient accounts clerk</td>
</tr>
<tr>
<td>Occupational Therapist</td>
<td>Total 6 FTEs; 5 OTs with 1 Lead OT, Lead OT is currently vacant</td>
<td>Total of 2 FTEs; 2 part-time 1 full-time OT</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>Total 10.5 FTEs; 7.5 PTs and 2 PTAs, 1 Lead PT</td>
<td>Total 6 FTEs; 3 PTs, 2 PTAs, and 1 Lead PT</td>
</tr>
<tr>
<td>Rehabilitation Aide</td>
<td>3 Rehab Aides</td>
<td>1 Rehab aide</td>
</tr>
<tr>
<td>Speech-Language Pathology</td>
<td>Total of 2.5 FTEs</td>
<td>Total of 1 FTE, the Lead SLP</td>
</tr>
<tr>
<td>Therapeutic Recreation</td>
<td>3 TRs, no vacancies</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Hours of Operation:
Rehab services are offered 6 days a week and holidays. On Sunday, Occupational Therapy and Speech-Language Pathology offer on-call services. Both Occupational Therapy and Speech-Language Pathology services were reinstated on Saturdays. The contracted Orthotic’s vendor is Allied OP through December 2014.

- Cardiac Rehabilitation Our 1 Exercise Physiologist is employed full-time and offers outpatient services 3 days a week, starting at 7:00 A.M. Two days a week, the Exercise Physiologist...
assists PT with Phase I patients on the cardiothoracic unit and performs Phase II, III and medical fitness evaluations. Though Phase I volume has decreased this year, volume for Phase III and medical fitness has increased and absorbed more of this exercise physiologist’s time.

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<tr>
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<th>2011-12</th>
<th>2012-13 (annualized)</th>
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<tr>
<td>Phase I</td>
<td>840</td>
<td>487</td>
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<tr>
<td>Phase II</td>
<td>995</td>
<td>976</td>
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<td>Phase III</td>
<td>459</td>
<td>544</td>
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<tr>
<td>Medical Fitness</td>
<td>150</td>
<td>168</td>
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- **Dysphagia Program** – Volume for dysphagia and FEES procedure has slightly increased while MBS studies decreased slightly compared with last year’s data. The preferred ordered procedure is the FEES.

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<th></th>
<th>2011-12</th>
<th>2012-13 (annualized)</th>
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<tr>
<td>Clinical Evaluations</td>
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<td>1219</td>
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<tr>
<td>MBS Studies</td>
<td>164</td>
<td>144</td>
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<tr>
<td>FEES</td>
<td>383</td>
<td>470</td>
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</table>

- **MBS**: Modified Barium Swallow  
- **FEES**: Fiber Endoscopic Evaluation of Swallow

**Therapy Volumes**
Visits in both inpatient and outpatient have slightly increased slightly from 2011-12 data, despite a continually low hospital census. Procedures for inpatient were slightly less in 2013 than in 2012. This may be related to changes in reimbursement and the fact that there are fewer procedures that can be billed.

<table>
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<tr>
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<th>2011-12</th>
<th>2012-2013 (annualized)</th>
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<tr>
<td>Inpatient</td>
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<tr>
<td>Visits</td>
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<tr>
<td>Procedures</td>
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<td>54871</td>
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<tr>
<td>Outpatient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visits</td>
<td>17440</td>
<td>18019</td>
</tr>
<tr>
<td>Procedures</td>
<td>29936</td>
<td>29654</td>
</tr>
</tbody>
</table>

**Staff Demographics:**
- Occupational Therapists: 1 Clinical doctorate degree, 4 Master’s degrees, 3 Bachelor’s degrees, and 1 therapist with hand specialty certification
- Exercise Physiologist: Master’s degree
- Physical Therapists: 7 Clinical Doctorate Degrees, 5 Master’s degrees, 1 Bachelor’s degree with athletic certification. The Lead PT is a certified neurological specialist and another has specialty board recognition in orthopedics.
- Speech-Language Pathology: 5 Master’s degrees and 1 specialty board recognition for swallowing.
- Therapeutic Recreation: 3 certified therapists with Bachelor’s degrees.

Marcia Downer is an adjunct instructor at Seton Hall’s School of Physical Therapy and George Gabriel and Emme Milbut are adjunct instructors at the School of Physical Therapy at UMDNJ. Avani Malankar is a lab assistant at UMDNJ School of Physical Therapy.

Lisa Romanetz, Physical Therapist, received the Dean’s Citation Award from the UMDNJ School of Physical Therapy in May 2013.

Ethel Mash, Therapeutic Recreational Specialist, was a nominee for the Alan Pederson Award.

Linda Tucker, Lead Speech-Language Pathologist is President-Elect of the New Jersey Speech and Hearing Association.

Ann Gulyas is a mentor in the mentor program for broad recognition in Swallowing and Swallowing disorders to obtain board certification.

Ann Gulyas travelled with a medical team from Unified for Global Healing to Ghana from November 23 to December 13, 2012. Her role was to provide general rehabilitation services to the underserved in the villages of central Ghana located in west Africa.

Ann Gulyas gave a lecture to the New Jersey Dental School on Speech Development as it related to oral maturation in October, 2012.

Lisa Romanetz is participating in a grant funded study for minimizing delirium in the SICU. She supervises students from the Physical Therapy school that provide the treatment for the study.

Lisa Romanetz and Analiese Crosby are serving on a hospital initiative committee to design and start an early ambulation program.

Marcia Downer taught several nursing units on how and when to get patients out of bed. More so now than ever, Nursing is taking the initiative at attempting to get patients out of bed instead of waiting for Rehab.

Linda Tucker initiated a new program with Oncology in which Speech-Language Pathology treats patients with exercises during chemotherapy and radiation. The therapists attend Oncology clinic once a week.

**UH Clinic Volumes**
The Department provides daily physician staffing in the Orthopaedic Clinic and weekly Clinic staffing at the DOC Suite 3300. The service offered at ACC Neuroscience Clinic (one session per week) by Dr. Mehta was terminated in June of 2012 when he left the University. The Department offers PM&R specialty and subspecialty clinics: general PM&R, Neuromuscular, Orthotics and Prosthetics, and Acquired Brain Injury. As shown below, FY 2013 UH YTD clinic volume of 2300 (2760 annualized) represents a decrease of 16% over FY 2012 volume (3285 visits). The loss of volume results from the closing of the Physiatry service at the ACC and a decrease in the procedure volume at the DOC 3300 suite.
Clinical Faculty and Residency / Fellowship Highlights:

NOTE: Since FY03, the Department of PM&R has gone from 8.5 FTE faculty members to 4 FTE.

Faculty
The Department of Physical Medicine and Rehabilitation consists of 100 faculty members (56MD, 31PhD, 3DO, 4MD/PhD, 3MA/MS, 1 DPT, 1 PsyD, and 1 MD/MA/MPH/MBA) practicing across northern New Jersey. Only four of these faculty positions are based in Newark and are paid by UMDNJ (University Hospital and New Jersey Medical School) soon to be Rutgers, the State University of New Jersey come July 1, 2013.

Collectively this past year, our 100 teaching faculty trained 27 residents, 7 clinical fellows, 8 postdoctoral fellows, 180 fourth year students, 15 foreign medical doctor observers as well as 80 medical students on 113 elective rotations (many students rotate numerous times throughout our department as we offer 13 distinct course titles/rotations), 15 physician observers to our programs at 12 affiliated patient facilities (Kessler Institute for Rehabilitation—West Orange, Saddlebrook, and Chester; New Jersey Sports Medicine/Overlook Hospital; PC Rehab (private practice); the Center for Advanced Pain Management and Rehabilitation (private practice); the Mind Body Center for Complementary Medicine (private practice); Northwest Rehabilitation Associates (private practice); University Hospital/DOC; East Orange VA/Lyons VA; Children’s Specialized Hospital; and the Kessler Foundation Research Center. The distribution of the PM&R faculty by rank is as follows:
Faculty Rank | Total
--- | ---
**Full-Title**
Professor Emeritus | 1
Professor | 11
Associate Professor | 8
Assistant Professor | 20
Instructor | 9
**Total Full Title** | 49

**Modified-Title**
Clinical Professor | 1
Clinical Associate Professor | 3
Clinical Assistant Professor | 40
Clinical Instructor | 3
Adjunct Assistant Professor | 1
Associate | 3
**Total Voluntary** | 51
**PM&R Grand Total** | 100

The affiliated hospitals/facilities in the system include the Kessler Institute for Rehabilitation, NJ Veterans Affairs Health Care System, Children’s Specialized Hospital and Mountainside Hospital.

**Departmental Honors**
The 2013 Kessler Foundation’s Joel A. DeLisa, MD Award for Excellence in Research and Education in the Field of Physical Medicine and Rehabilitation (first introduced in 2010) and presented annually for 20 years to a physician and/or scientist who has demonstrated a significant impact in the field of PM&R, particularly as it relates to the translation of research and education in patient care was awarded to Ross Zafonte, D.O., of Harvard Medical School, who received the annual prize of $50,000. Previous winners include Walter Frontera, M.D., Ph.D., currently of Vanderbilt University, in 2011, and John Whyte, M.D., Ph.D., founding director of Moss Rehabilitation Research Institute, in 2012.

Although Dr. DeLisa retired from his position as Chair in June of 2012, he has since been appointed to the title of Professor Emeritus and is the only Emeritus Professor in the Department of PM&R at NJMS.

This past academic year, NJMS students nominated seven PM&R physicians for Golden Apple Teaching awards including four residents (Drs. Christine Greiss, Victoria Lin, Leroy Lindsay, and Justin Waltrous) and three attendings (Drs. Foye, Malanga, and Stitik).

**PM&R Publications reported by NJMS Salaried Faculty**

<table>
<thead>
<tr>
<th>Year</th>
<th>Peer-Reviewed Manuscripts</th>
<th>Book Chapters</th>
<th>Books</th>
<th>Abstracts</th>
<th>Commentaries/Reviews</th>
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### PM&R Publications reported by Faculty

<table>
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<tr>
<th>Year</th>
<th>Peer-Reviewed Manuscripts</th>
<th>Book Chapters</th>
<th>Books</th>
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<td>0</td>
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<td>35</td>
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### PM&R Publications reported by Residents/Clinical Fellows

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<th>Book Chapters</th>
<th>Case Reports</th>
<th>Abstracts</th>
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### PM&R Publications reported by Post-docs

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<th>Case Reports</th>
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<tr>
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<tr>
<td>2007</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
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(Nota, data from 2010 & 2011 not available.)
We declined 10.8% from last year’s data primarily due to the expected loss of clinical volume from Dr. Foye as he increased his administrative time to satisfy the responsibilities as interim-chair as well as the absence of Dr. Ariz Mehta (both expected). The drastic decline in RVU output from FY08 to FY09 was due to a billing error as one of our billers failed to include inpatient charges for one of our physicians—Dr. Bach—for 14 months including the entire 2010 calendar year. Also, Dr. Yonclas was billed through another department (in previous years he billed through our dept.).

Residency Program
The UMDNJ-NJMS physiatry residency program is considered one of the top two physiatry residencies in the United States and probably the top program on the East Coast. However, the Spaulding/Harvard program is now matching students that previously we would have received. The NYU (Rusk) and the Columbia/Cornell programs have recruited new Chairs in the last few years and with the additional resources added to these programs, are becoming more competitive. The North Shore–Long Island Jewish Health System also added a new chair who is markedly upgrading that program.

Despite the continued loss of University resources (Dr. Garstang the Residency Program Director left September 1, 2009 for the NJ VA Health Care System but the VA has graciously allowed her to continue as the residency program director), the Department in August 2009 was awarded by the ACGME RRC a five-year accreditation with NO Citations and received COMMENDATIONS. Specifically, they stated “The Review Committee commended the program for its demonstrated substantial compliance with the ACGME’s Requirements for Graduate Medical Education without citations. The committee particularly commended the program for their extensive and excellent educational curriculum, use of OSCE for competency assessment, the emphasis on scholarly activity among their faculty (especially among their residency staff), and their outcomes regarding ABPMR Board scores.”

For the most recent Match cycle (Class of 2015), the department received 418 applications for a total of 8 positions. We interviewed 85 and ranked 74. Eleven students from New Jersey Medical School’s graduating Class of 2013 chose PM&R as a specialty; all were able to match in competitive residency programs including two into our program. The other slots were filled by students from Pennsylvania State University, UMDNJ-SOM, UMDNJ RWJ, New York College of Osteopathic Medicine, New York Medical College, Des Moines University. Unlike some residency programs, our department always fills 100% of its positions within the Match.
our candidates have been elected to AOA, have received USMLE scores of above 225, and have authored research publications. Our residents have made 66 academic presentations at national meetings and had at least 14 peer-review publications in the past three years.

The SCI fellowship remains fully ACGME-accredited for five years and in 2011 our Pediatric Rehabilitation Medicine Fellowship with Children’s Specialized Hospital was accredited for the first time. Our residents perform well on both Part I and Part II of the PM&R Board examinations. **We have had a 100% first-time pass rate on the written portion of the Certification Boards since 1989.** Our residents have been awarded the Elkin's Award (highest written Board Exam score in the United States in PM&R) eight times which is more frequently than any other PM&R training program. (The next highest is four).

Our graduating residents have been, and continue to be extremely successful in securing competitive fellowship positions in the specialty of their choice as indicated below (All of our nine graduating residents will be entering competitive fellowships):

**Class of 2013**
- Private practice Kansas City, Kansas
- Children’s National Memorial Hospital, Georgetown (D.C.)- Pediatric Rehabilitation Fellowship
- UMNDJ/Kessler, TBI fellowship
- Baylor College of Medicine, Houston, TX – academic practice
- private practice, Valley Hospital, NJ
- OSS York PA with Dr. Furman, Sports Fellowship
- DOC fellowship
- Mount Sinai, NY, NY – Sports Fellowship

This past year (FY13), the number of trainees in our various postgraduate programs were as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Trainees</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY-2</td>
<td>10</td>
</tr>
<tr>
<td>PGY-3</td>
<td>8</td>
</tr>
<tr>
<td>PGY-4</td>
<td>9</td>
</tr>
<tr>
<td>Clinical Fellows</td>
<td>7</td>
</tr>
<tr>
<td>Postdoctoral Fellows</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Trainees</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>

Of the 28 resident positions currently offered in the department, **only four are paid by UMDNJ-University Hospital.** These four positions represent the number of residents who are on-site in Newark throughout the year. Funding of PM&R residency slots by individual facility is indicated below:

<table>
<thead>
<tr>
<th>Funding Sources of Residency Slots by Year</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Hospital</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Children’s Specialized Hospital</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Kessler Institute for Rehabilitation</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Mountainside Hospital</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
### Funding Sources of Residency Slots by Year

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NJ Veterans Affairs Healthcare System</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>U.S. Army</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Resident Slots</strong></td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>28</td>
<td>27</td>
<td>26</td>
</tr>
</tbody>
</table>

### Fellowship and Post-doctoral Programs

The department offers physician fellowships in seven subspecialty areas. **None of these fellowships are funded by UMDNJ**, but clinical experiences are provided at UMDNJ and its affiliates.

1. Spinal cord injury medicine*
2. Musculoskeletal/pain medicine
3. Traumatic brain injury
4. Stroke
5. Pediatric rehabilitation medicine
6. Research – Neuropsychology & Neuroscience**
7. Research – Medical Rehabilitation Outcomes & Intervention Effectiveness**

*The Spinal Cord Injury Medicine fellowship is one of only 14 in the nation that has been accredited by the ACGME.

**NIDRR and Multiple Sclerosis training grants.

Note that Fellows in Brain Injury, Spinal Cord Injury, and Musculoskeletal/Pain management work in The University Hospital and clinics as well as the DOC, even though neither the hospital nor the Medical School provides their salary support. Rather, they are paid from grants and clinical practice revenues in collaboration with our other teaching sites at which they rotate. All postdoctoral fellows in the department are currently paid and their training supported by federal training grants obtained through Kessler Foundation Research Center.

The 25th Annual Resident, Fellow, and Postdoctoral Fellow Research Day was held on May 23rd, 2013. There were 16 platform presentations.

### Continuing Medical Education

The Department of PM&R put on its 24th annual Board Review Course **April 25 – May 3, 2013**. We had 182 participants (118 full paying, 2 optional session only and 62 speakers). Participants came from 28 states (New Jersey had the greatest number of participants) as well as Portugal, Canada, China, and Hong Kong. It is the largest PM&R Board Review course in the nation.

### Medical School Education

Our department remains actively involved in teaching within all four years of the medical school curriculum. For first-year medical students, we have taught clinical correlations within the Anatomy course (including correlations with musculoskeletal ultrasound). For second-year medical students, we teach within both the lectures and the hands-on workshops for the musculoskeletal physical exam skills as part of the CORE-2 course. This involved having nine to ten PM&R physicians per afternoon to run the musculoskeletal workshops. For third-year medical students, students do elective rotations within our department as well as obtain exposure to our department during their rotations within other departments. For fourth-year medical students, our department has a mandatory two week clerkship. Last year we also had 113 elective clerkships (two to four weeks) focused on the following subspecialties within
PM&R, such as: Pediatrics, Ambulatory Care, Alternative Medicine, Research, Sports Medicine, Neuromuscular and Pulmonary Disease, etc. We have continued our implementation of a check-list that documents each medical student’s competencies in musculoskeletal, physical exam skills. The Medical Student PM&R Club is very active.

**Grants and Research**
The department has no dedicated research space on the Newark campus. However, it has 42,000 square feet at the Kessler Foundation Research Center in West Orange, NJ. There are 20 full-time PhD researchers, two full-time MD researchers, and two part-time MD researchers at the Research Center. The research organization has a total of 68 employees and a $10 million annual budget with approximately $6.2 million annually from external grants.

**Therapy Services Student Affiliations**
- Occupational Therapy- 4 Level I students.
- Physical Therapy services- 21 doctoral level students and 14 physical therapist assistant students.
- Speech Language Pathology – 5 students.
- Therapeutic Recreation – 2 students.
- Department Volunteers - 15

**THERAPY MONITORS**

**Quality Improvement Program:**
Our routine monitors for Risk Management are continued.
Patient Injury during treatment or diagnostic procedure: 0
Patient falls during therapy visit: 0
Medical emergencies occurring during treatment &/or diagnostic procedures: <1%

**Physician Outcome Measures:**
The outcomes of high volume and/or high risk outpatient interventions are being followed for physicians on an ongoing basis with data updates every three months for credentialing purposes. In addition, a high risk physician inpatient intervention is being monitored for QI: the efficacy of successful extubation of patients admitted/transferred to UH specifically for having failed extubation elsewhere.

**Routine monitors:** These measures are monitored for purposes of Medicare, Joint Commission and clinical practice requirements. Annual averages for the measures are documented below:

1. All inpatients are evaluated within the guidelines set by the Department of Health (48 or 72 hrs). – 94.1%
2. Documentation meets standards – 97.6%
3. Improvement in functional mobility following treatment. – 69.4% (target 60%)
4. Improvement in swallowing following treatment. - 48.1% (target 60%)
5. All typically utilized equipment has a safety check – 99.1%

**Progress on 2012-2013 Clinical Goals / Plans / Programs:**

1. Increase outpatient volume and recruit more staff for outpatient- full staffing was achieved by May 2013 and outpatient volume increased by 1,000 visits.
2. Increase Rehab involvement in the Cancer Center – Initiated Speech-Language services in Oncology clinic.
3. Develop one new, formal outpatient program - Cancer Center program; expanded outpatient Speech therapy.
4. Reinitiate Occupational Therapy service on weekends – OT provides Saturday service and Sunday on-call.
5. Therapists to provide lecture series to Physician staff – One lecture provided thusfar.

Clinical Goals / Plans / Programs for 2013-14:

1. Maintain current therapist staffing levels.
2. Redesign some PI monitors.
3. Achieve and maintain new documentation requirements from Medicare.
4. Utilize more objective test measures during the initial evaluation for both in and outpatient services.
5. Make available an objective diagnostic test for each body part.
6. Increase the number of Oncology patients Speech serves.
7. Consider making a plan to establish a health and wellness center.
8. Reevaluate and redefine productivity standards.
9. Maintain strong, healthy, and productive therapy services during the UH separation.

Departmental Goals for 2013-2014:

- Recruit physiatric staff to increase UH clinic volumes to the extent consistent with UH priorities.
- Further expand the injured workers program by increasing volume of outside referrals.
- Increase volume of musculoskeletal diagnostic and therapeutic ultrasound procedures as well as continue growth of the Coccyx Pain Service with additional out-of-state patients for procedures performed throughout the NJMS/UH/Rutgers Biomedical Health Sciences campus.
- UH has traditionally not marketed the Model TBI and Model SCI programs. We are one of only seven sites in the country to have both Model Systems. We recommend that these programs be marketed to bring positive publicity to UH and to the Trauma Program.
- Solicit the Department of Health and Senior Services and other Trenton departments to take advantage of the unique skills of UH physicians to develop a program to extubate permanently ventilator dependent individuals without resort to tracheotomy or long-term institutionalization. This has been estimated to have the potential to save the State of New Jersey over $10 million per year (1,2) and is consistent with Rutgers Health Care goals of creating a statewide consortium for highly specialized medical programs.

[The ability to extubate and decanulate respirator unweanable patients to noninvasive management permits most of them to wean to nocturnal-only use when they otherwise would remain continuously respirator dependent. This permits them to return home at 1/7th to 1/3rd the cost of institutionalization. With administrative support to contact insurers, Medicaid, and other state officials, it is possible to arrange for optimal noninvasive management for these patients at UH at cost savings to taxpayers of over $1 million per patient over the course of a lifetime. The administrative support needs to be made available to organize the education of insurers and]
state officials to support this service which could be a pioneering program for humane and cost effective ventilator management in the U.S.].


**Outstanding Issues:**
- Resolve longstanding space constraints and/or renovate existing space. The department is fragmented with academic and clinical space in three locations: The University Hospital, the Doctors Office Center and the ADMC. This split reduces efficiency. Also, in the DOC, four faculty continue to share three offices and six examination rooms, making this clinical suite extremely congested. The severe shortage of clinical space assigned to PM&R in the DOC limits patient volume and impairs the quality of the teaching experience for residents and medical students. The PM&R clinic in the DOC has notable space challenges. The waiting and registration areas were not designed to accommodate the additional volume.