Department of Physical Medicine and Rehabilitation
Rutgers New Jersey Medical School
and University Hospital

University Hospital
Chief of Service Report
July 1, 2015 – June 30, 2016

Patrick M. Foye, M.D.
Professor, Interim Chair, and Chief of Service

John R. Bach, M.D.
Professor and Vice Chair

Brian A. DaSilva
Admin. Coordinator, Dept. PM&R

Shiow-Huei Tang
Practice Manager, UH Therapy Services
Service Overview:

The Department of Physical Medicine and Rehabilitation (PM&R) includes a faculty of 129. Also, there are also 8 voluntary faculty members throughout the department’s affiliate sites currently in the appointment approval process.

However, only four attendings are NJMS FTEs. One of these (Dr. Homb) is leaving in June 2016. His University Hospital clinic sessions will be covered by a combination of two new musculoskeletal PM&R physician who are being hired. The first of those will begin on or about July 15, 2016, with active interviews well underway for the second new hire.

Included in the department are divisions of physiatry (PM&R 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 or minimize hospitalizations for respiratory impairment and to prevent episodes of acute respiratory failure. The program also extubates and decanulates patients who are “unweanable” from ventilatory support so as to spare them tracheotomy and long-term institutionalization. The department also provides general and specialty outpatient services in the hospital and the Doctor’s Office Center (DOC); inpatient and outpatient therapy services; and phase I, II, and III cardiac rehabilitation. In addition, PM&R provides diagnostic and therapeutic services such as electrodiagnostic studies and pain management interventional therapies such as 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 278 unweanable, intubated patients, out of 280 referred. Most were transferred to UH after failing extubation at other U.S. facilities. Some had been transferred from Qatar, Hong Kong, Iceland, Colorado, California, Texas, South Carolina, and Puerto Rico.
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., Professor, Interim Chair, and Assistant Director, Occupational/Musculoskeletal Medicine.

Injured workers accounted for approximately 8% of office visits in FY16 and 18% of payments. This is down from prior years which accounted for about 20% of total office visits up until December 2014 and included both Rutgers Biomedical and Health Sciences (RBHS) employees at the Newark campus and University Hospital employees who experienced a work-related injury. These patients were generally referred to the Newark PM&R faculty practice, where most were seen within 24 hours. Since December 2014, University Hospital has outsourced this service to off-campus, which has resulted in a loss of clinical care on-campus by our department and others, since these hospital employees are being treated outside the UH system. At the Newark PM&R faculty practice, workers receive treatment aimed at an early return to work and a reduced risk of re-injury. The PM&R faculty also treat injured workers from a variety of off-campus workers compensation referral sources.

Dr. Foye's Coccyx Pain Center (tailbone pain center) at NJMS and University Hospital has entered its tenth year and has continued to grow in terms of patient volume, and its wide catchment area. In FY16, our Coccyx Pain Center continued to provide evaluations for over 175 new patients (annualized) with coccydynia, as well as many more follow-up visits, imaging studies within the University Hospital radiology department, and various pain management 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 Rutgers, but creates a truly international catchment area for patients receiving outpatient care at University Hospital. Among patients traveling here from beyond the northeastern United States, the most common source states are California, Texas, and Florida.

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

- 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 suite in DOC 3200.
- 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
arthritides (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 expertise and scope of practice using this relatively new musculoskeletal tool. A dedicated ultrasound musculoskeletal medicine clinic has been expanded to include four half-day sessions. The hospital-based injection clinic (including viscosupplementation injections) continues to be conducted under ultrasound guidance. In addition, ultrasound guidance is being used throughout the week for a variety of other non-fluoroscopic guided injection procedures. PM&R and Interventional Radiology has recently collaborated to form an ultrasound-based clinic using Tenex (a recent hospital equipment purchase) for the treatment of tendinopathy. 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** sessions were increased in July 2015 with the hire of a PM&R attending (Dr. Homb) who began July 1, 2015. These sessions are held in the Orthopedic Clinic (Clinic 8) at University Hospital and in DOC Suite 3300 (UH PM&R space within the DOC). Recruitment of additional new faculty hires is crucial to satisfy the needs of this clinic population and NJMS’s commitment to UH. Dr. Homb is leaving in June 2016, and one of two new hires who will cover those sessions is scheduled to begin in July 2016. 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. The new patient waiting time is has often been five months or more. 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 and rehabilitation consults and mechanical ventilation are also provided to patients in need of non-invasive ventilation to avert tracheostomy and permit decanulation. 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 University Hospital, Kessler Institute
for Rehabilitation, and Kessler Foundation Research, and is one of 14 federally-funded model systems in the U.S. 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 and a renewal application has been submitted in April 2016.

**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 primarily employed via the Surgery department at NJMS, 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. A renewal application is expected in 2017.

*University Hospital, along with Kessler Institute for Rehabilitation and Kessler Foundation is one of only seven sites in the entire country to have both TBI and SCI 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 FY16 PM&R performed a total of approximately 104 EMG procedures (annualized) an increase of 30 from the prior year due to the addition of a faculty member. The PM&R Department has multiple physicians credentialed by the American Board of Electrodiagnostic Medicine.
## Therapy Services

### Staffing:

<table>
<thead>
<tr>
<th>POSITION</th>
<th>INPATIENT</th>
<th>OUTPATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration:</td>
<td>1 Practice Manager, 1 Assistant Manager (IP and OP) Therapy Services , 1 Assistant Business Manager</td>
<td>1 Exercise Physiologist who also works inpatient Phase I</td>
</tr>
<tr>
<td>Cardiac Rehabilitation</td>
<td>1 Patient Account Clerk</td>
<td>3 Medical Office Assistants, 1 billing technician, 1 Staff assistant</td>
</tr>
<tr>
<td>Clerical</td>
<td>1 Patient Account Clerk</td>
<td>3 Medical Office Assistants, 1 billing technician, 1 Staff assistant</td>
</tr>
<tr>
<td>Occupational Therapist</td>
<td>Total 7 FTEs: 1 COTA (new), 5 staff OT, and 1 Lead OT</td>
<td>Total of 2 FTEs: 2 part-time, 1 full-time OT</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>Total 12.5 FTEs: 9.5 PTs (2 new PT lines added,), 2 PTAs, and 1 Lead PT</td>
<td>Total 6 FTEs: 1 Lead PT 3 PTs, and 2 PTAs</td>
</tr>
<tr>
<td>Rehabilitation Aide</td>
<td>4 Rehab Aides (1 FTE was added)</td>
<td>1 Rehab aide</td>
</tr>
<tr>
<td>Speech-Language Pathology</td>
<td>Total of 2.5 FTEs</td>
<td>Total of 0.5 FTE (new)</td>
</tr>
<tr>
<td>Therapeutic Recreation</td>
<td>3TRs</td>
<td>N/A</td>
</tr>
<tr>
<td>PRN</td>
<td>1 PRN Physical Therapist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 PRN Occupational Therapist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 PRN Speech-Language Pathologist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 PRN Certified Therapeutic Recreation Specialist</td>
<td></td>
</tr>
</tbody>
</table>

Two vacancies (Assistant Managers for IP and OP) in the department were eliminated for FY 2016 before the positions were filled. The department had to submit a Performance Improvement Proposal (PIP) to UH administration to justify for additional staffing support for Inpatient Services. The PIP was supported by increase in therapy referrals, increase in missed visits and increase in wait time to access therapy services exceeded the guidelines of DOH; and management/ supervisory ratio in the department. The department was approved for 5 FTE lines in August of 2015 including 1 Assistant Manager for Therapy Services, 1 COTA, 2 PT, and 1 Rehab Aide (50% of the requested FTEs). The Outpatient was also approved for an additional 0.5 SLP position after the Lead SLP (Linda Tucker) was promoted to the Assistant Manager for Therapy Services and her Lead therapist position has been re-designated as Lead PT due to the PT staff to Lead ratio. All of the new lines were filled by the end of November 2015.

Occupational Therapy had three resignations last September, however, we were able to successfully fill all vacancies in 2-3 months. Currently, we have two IP PT vacancies due to recent resignations; one has been filled with a recent graduate and he is due to start in June. We are working on the recruitment for the OP Lead PT.

### Staff Demographics:
- **Occupational Therapists**: 1 Clinical doctorate degree, 4 Master’s degrees, 2 Bachelor’s degrees, and 1 Bachelor’s degree with hand specialty certification
- **Exercise Physiologist**: 1 Master’s degree
- **Physical Therapists**: All PT staff have Clinical Doctorate Degrees with exception of 3 Master’s degrees, 1 Bachelor’s degree.
• **Speech-Language Pathology:** 3 Master’s degrees and the Manager of Therapy Services is specialty board certified for swallowing and swallowing disorders.
• **Therapeutic Recreation:** 3 certified therapists with Bachelor’s degrees.

George Gabriel continues as an adjunct instructor on Mondays at Rutgers’ Health Related Professions School of Physical Therapy. Emmie Milbut and Avani Malankar continue as lab assistants at Rutgers’ Health Related Professions School of Physical Therapy. Emmie Milbut also serve as a lab assistant to Physical Therapy Program at Seton Hall University. Tiffany Shuster is a guest lecturer at Kean University.

Physical Therapy Division is involved with UH Fall Prevention Initiative, George Gabriel is one of the three Master Balance Trainers and is responsible for training the coaches.

Lisa Romanetz and Analiese Crosby continue to serve on the Early Ambulation committee to design and start an early ambulation program.

**Hours of Operation:**
Inpatient: Physical Therapy offers 7 days a week and holidays. Occupation Therapy and Speech-Language Pathology offer services 6 days of the week and on-call for Sunday. Outpatient: Monday to Friday from 8:00 AM to 4:30PM.

The contract with our Orthotics vendor, Allied OP ended November 30, 2015. The Request For Proposal process was completed and is waiting for Purchasing to award the contract.

**Therapy Volume:**
Overall, the therapy volume increased with increased staffing in FY2016.

<table>
<thead>
<tr>
<th></th>
<th>FY 2015</th>
<th>FY 2016 (annualized)</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inpatient</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visits</td>
<td>52660</td>
<td>54360</td>
<td>3% Increase</td>
</tr>
<tr>
<td>Procedures</td>
<td>58349</td>
<td>61363</td>
<td>5% increase</td>
</tr>
<tr>
<td><strong>Outpatient</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visits</td>
<td>17063</td>
<td>17586</td>
<td>3% Increase</td>
</tr>
<tr>
<td>Procedures</td>
<td>28696</td>
<td>28320</td>
<td>1% Decrease</td>
</tr>
</tbody>
</table>

• **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 the Phase I inpatients on the cardiothoracic unit and performs Phase II new patient evaluations. Phase II volume is unchanged this year. Additionally, the Exercise Physiologist runs 1-2 exercise groups a week on Psychiatry to cover the vacant TR position. Cardiac Rehabilitation received new telemetry monitoring system from FY 2015 Capital Equipment budget and the new system was implemented October 2015.

<table>
<thead>
<tr>
<th></th>
<th>FY 2015</th>
<th>FY 2016 (annualized)</th>
<th>TREND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>224</td>
<td>235</td>
<td>Slight increase</td>
</tr>
<tr>
<td>Phase II</td>
<td>1189</td>
<td>1186</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Phase III</td>
<td>773</td>
<td>755</td>
<td>Slight Decrease</td>
</tr>
</tbody>
</table>
• **Dysphagia Program** – The referrals and MBS (Modified Barium Swallow) studies completed decreased slightly. However, there was a significant decrease in the referrals for FEES (Fiber Endoscopic Evaluation of Swallow). The reason for such decline is unclear, the Speech Therapy division will monitor referrals for MBS and FEES more closely in the coming year.

<table>
<thead>
<tr>
<th></th>
<th>FY2015</th>
<th>2016 (annualized)</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBS* Studies</td>
<td>176</td>
<td>152</td>
<td>Decreased</td>
</tr>
<tr>
<td>FEES*</td>
<td>433</td>
<td>343</td>
<td>Decreased</td>
</tr>
</tbody>
</table>

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

**UH Clinic Volumes**
PMR UH clinic was held on Wednesday and Thursdays in FY 2016. The overall volume for FY 2016 is projected to increase by 211%.

<table>
<thead>
<tr>
<th></th>
<th>FY 2015</th>
<th>FY 2016 (annualized)</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMR DOC/ ACC Clinic</td>
<td>303</td>
<td>403</td>
<td>Increased</td>
</tr>
<tr>
<td>P&amp;O Clinic*</td>
<td>0</td>
<td>0</td>
<td>No clinic</td>
</tr>
<tr>
<td>Acquired Brain Injury</td>
<td>143</td>
<td>122</td>
<td>Decreased</td>
</tr>
<tr>
<td>PMR Daily Clinic</td>
<td>0</td>
<td>865</td>
<td>Increased</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td>446</td>
<td>1390</td>
<td>Increased</td>
</tr>
</tbody>
</table>

*The P&O Clinic often involves obtaining an orthotic or prosthetic from a company for patients without insurance or the ability to purchase one themselves, P&O issues are often also discussed during regular PM&R visits.

**Clinical Faculty and Residency / Fellowship Highlights:**

**NOTE:** Since FY03, the Department of PM&R has gone from 8.5 FTE on-campus faculty members to 4 FTE (which is expected to increase to 5 via additional new hiring in FY17).

**Faculty**
The Department of Physical Medicine and Rehabilitation consists of 129 faculty members practicing across northern New Jersey. Only four of these faculty positions are based in Newark and are paid by Rutgers New Jersey Medical School.

Collectively this past year, our 129 teaching faculty trained 23 residents, 7 clinical fellows, 4 postdoctoral fellows, 165 fourth year students, and a multitude of third year, fourth year, and visiting students on 92 elective rotations (many students rotate numerous times throughout our department as we offer 13 distinct course titles/rotations) at 8 affiliated patient facilities (Kessler...
The distribution of the PM&R faculty by rank is as follows:

<table>
<thead>
<tr>
<th>Faculty Rank</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-Title</strong></td>
<td></td>
</tr>
<tr>
<td>Professor Emeritus</td>
<td>1</td>
</tr>
<tr>
<td>Professor</td>
<td>12</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>8</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>24</td>
</tr>
<tr>
<td>Instructor</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total with Full Titles:</strong></td>
<td><strong>58</strong></td>
</tr>
<tr>
<td><strong>Modified-Title</strong></td>
<td></td>
</tr>
<tr>
<td>Clinical Professor</td>
<td>1</td>
</tr>
<tr>
<td>Clinical Associate Professor</td>
<td>6</td>
</tr>
<tr>
<td>Clinical Assistant Professor</td>
<td>56</td>
</tr>
<tr>
<td>Clinical Instructor</td>
<td>2</td>
</tr>
<tr>
<td>Adjunct Assistant Professor</td>
<td>3</td>
</tr>
<tr>
<td>Associate</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total with Modified Titles:</strong></td>
<td><strong>71</strong></td>
</tr>
<tr>
<td><strong>PM&amp;R Faculty Grand Total</strong></td>
<td><strong>129</strong></td>
</tr>
</tbody>
</table>

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**

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.

Dr. Steven Kirshblum, MD, Medical Director and Director of Spinal Cord Injury Rehabilitation at Kessler Institute for Rehabilitation, is currently President of the Academy of Spinal Cord Injury Professionals (ASCIP) (2011- 2013, 2013 -present) and Chair-elect of the CNS Rehabilitation Council, AAPM&R.

This past academic year, NJMS students nominated 16 PM&R Golden Apple Teaching awards including eight housestaff (Drs. Michelle Didesch, Pavli Demian, Stephen Hampton, Benjamin Seidel, Tory Speert, Adam Bartlett, Ariana Brooks-Jones, and Margaret Jones), six attendings (Drs. Peter Yonclas, JenFu Cheng, John Bach, Patrick Foye, Gautam Malhotra, and Nigel Shenoy) and two administrators (Doreen Muhammad and Brian DaSilva).

Dr. John Bach’s new extubation protocol succeeded in extubating 27 consecutive ventilatory “unweanable” patients all of whom were discharged to the community, thus avoiding LTAC stays for an approximate $2.6 million direct savings to 3rd party payors.
Dr. John Bach was awarded one of three annual American College of Chest Physician’s achievement awards, the Margaret Pfrommer Award, presented to him on October 20, 2015 for excellence in clinical care.

PM&R Faculty are active members in the following reported Honorific Societies:
- American Academy of Physical Medicine and Rehab (AAPM&R)
- Association of Academic Physiatrists (AAP)
- New Jersey Society of Physical Medicine and Rehab (NJSPM&R)
- American Institute of Ultrasound in Medicine (AIUM)
- American Registry for Diagnostic Medical Sonography (ARDMS)
- Institute of Medicine (IOM)
- American Psychological Association APA
- Division 40 of the APA: Society of Neuropsychology since 2005
- Division 22 of the APA: Rehabilitation Psychology since 2005
- American Congress of Rehabilitation Medicine (ACRM)
- Hispanic Neuropsychological Society
- International Society of Biomechanics (ISB)
- American Heart Association (AHA)
- Alpha Omega Alpha (AOA)

NJMS Salaried Faculty Total RVUs FY08 through FY16

![Graph showing RVUs from FY08 to FY16]

In FY16* (annualized), physician RVU’s totaled 10,822, a 27% increase from last year’s data due to the addition of a new faculty member which offset the loss of University Hospital worker’s compensation cases as well as declines in the RVUs associated with electrodiagnostic testing (EMG and nerve studies) and fluoroscopically-guided pain management injections. Specifically, CPT coding and associated RVUs for electrodiagnostic testing was revised nationwide, resulting in groups of nerve studies being "bundled" together and an overall decrease in RVUs generated per patient. Similarly, fluoroscopic guidance (CPT 77003) nationwide has been "bundled" into some of the spinal injection procedures, again resulting in an overall decrease in RVUs generated per patient. Thus, in both of these cases the same amount of physician work is producing less RVUs than previously.
Additional challenges to faculty RVUs include the increased number of insurance plans which are now generally “out of network” for NJMS physicians (including PM&R), such as United, CIGNA, Oxford, Empire BCBS, etc. Many patients either do not have out-of-network benefits, or their out-of-network benefits are substantially more expensive for them, making the patients less eager to come here for their pain management injections and other medical care.

Residency Program

The Rutgers NJMS Physical Medicine & Rehabilitation (PM&R) residency program is considered as one of the top PM&R residencies in the United States. Dr. Monifa Brooks has succeeded Dr. Susan Garstang as Residency Program Director. Dr. Mooyeon Oh-Park has assumed the role of Associate Director. The Department in August 2009 was awarded by the ACGME RRC a five-year accreditation with no citations and received commendations from the RRC. 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.”

The Rutgers NJMS PM&R Residency program fully implemented the Next Accreditation System (NAS) in July 2014. The next regularly scheduled visit is being replaced with a Self-Study Visit in the NAS, which is tentatively scheduled for 8/1/2019.

In 2011, the Pediatric Rehabilitation Fellowship was given Initial Accreditation. In 2014, the RRC conducted a site visit of the Pediatric Rehabilitation Fellowship. The Fellowship was granted Continued Accreditation after this visit. The SCI fellowship remains fully ACGME-accredited as well. Both ACGME accredited fellowships, and the core PM&R Residency program are due to undergo a “Self-Study” accreditation visit next in 2019.

For the most recent Match cycle (Residency Class of 2020), the department received over 400 applications for a total of 9 positions, of which we ranked 83 and filled all nine positions via the Match. Many of our candidates have been elected to AOA, have received USMLE scores of above 225, and have authored research publications. Our residents have made numerous academic presentations at national meetings and have had numerous peer-review publications.

Our residents perform well on both Part I and Part II of the PM&R Board examinations. 100% of our graduates in the past 5 years have passed their written boards on first attempt. We have had a 98% first-time pass rate on the written portion of the Certification Boards since the establishment of our residency in 1989. Our graduating residents have been, and continue to be extremely successful in securing competitive fellowship positions in the specialty of their choice.

This past year (FY16), the number of trainees in our various postgraduate programs was as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Trainees</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY-2</td>
<td>7</td>
</tr>
<tr>
<td>PGY-3</td>
<td>8</td>
</tr>
<tr>
<td>PGY-4</td>
<td>8</td>
</tr>
<tr>
<td>Clinical Fellows</td>
<td>7</td>
</tr>
</tbody>
</table>
Of the 23 resident positions currently offered in the department, 2 positions are sponsored by University Hospital. (Previously University Hospital sponsored 4 residents, but this was decreased to 2 in July 2015.) These two positions represent the number of residents who are on-site in Newark throughout the year. The overall funding of PM&R residency slots by individual facility is indicated below:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></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>2</td>
<td>2</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>
<td>2</td>
</tr>
<tr>
<td>Kessler Institute for Rehabilitation</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Mountainside Hospital</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NJ Veterans Affairs Healthcare System</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total Resident Slots</td>
<td>28</td>
<td>28</td>
<td>27</td>
<td>25</td>
<td>25</td>
<td>23</td>
<td>24</td>
</tr>
</tbody>
</table>

The University Hospital showed continued support for the 2 salary lines of residents for the upcoming years and serves as a key rotation sites for trauma rehabilitation, outpatient musculoskeletal care, and electrodiagnosis.

**Fellowship and Post-doctoral Programs**

*The department offers physician fellowships in seven subspecialty areas.
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**

**Fellowship programs ACGME accredited.** The Spinal Cord Injury Medicine fellowship is one of only 18 in the nation that has been accredited by the ACGME. The Pediatric Rehabilitation Medicine fellowship is one of only 17 in the nation that has been accredited by the ACGME. The TBI fellowship program is one of only 9 in the nation that has been accredited by the ACGME.

**NIDRR and Multiple Sclerosis training grants.**

All postdoctoral fellows in the department are supported by federal training grants obtained through Kessler Foundation.

The 28th Annual Resident, Fellow, and Postdoctoral Fellow Research Day is scheduled for June 9, 2016. There will be a number of platform presentations given by graduating trainees. Dr. Alberto Esquazani, Chair, Department of Physical Medicine and Rehabilitation at MossRehab in
Pennsylvania was selected as our Graduation Speaker and will present a keynote address on prosthetics and amputation rehabilitation.

Continuing Medical Education

In collaboration with the Kessler Institute for Rehabilitation, the Rutgers NJMS Department of PM&R put on its 29th annual Board Review Course on April 1 through April 8, 2016. We had over 100 participants which traveled from 15 states (New Jersey had the greatest number of participants) and Canada. 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 teach clinical correlations within the Anatomy course (including correlations with musculoskeletal ultrasound) as well as both lectures and hands-on workshops for the musculoskeletal physical exam skills as part of the CORE-2 course during this past “transitional year” where these skills will now be taught during first year instead of second year as was done previously. 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 92 elective clerkships (two to four weeks) focused on the following subspecialties within PM&R, such as: Pediatrics, Research, Musculoskeletal Medicine, Interventional Pain, Neuromuscular and Pulmonary Disease, Brain Injury, Spinal Cord Injury 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 Student Interest Group is very active. Many students attend our monthly New Jersey Society of PM&R meetings.

Grants and Research

The department has no dedicated research space on the Newark campus. However, Kessler Foundation, an affiliate, has a 42,000 square foot research center in West Orange, NJ. There are 19 full-time PhD researchers, three full-time MD researchers, one full time MD/PhD and one full time PhD/MPH researcher.

The research organization has a total of 88 employees and a $12 million annual budget with approximately $5.5 million annually from external grants.

Therapy Services Student Affiliations

- Occupational Therapy- 9 students for FY2016.
- **Physical Therapy services- 13 full time and 2 part time students**
- Speech Language Pathology – 8 full time students.
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 along with ongoing peer review for all attending physicians. 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.

Therapy PI monitors

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

1. All inpatients are evaluated within the guidelines set by the Department of Health (48 or 72 hrs) –96.3% for 2015 and 93% for 2016 (Jan to Feb 2016) due to increase referral volume in PT and OT; 50% of OT staff are new hires.
2. 99% of stroke patients received swallow evaluation within 24 hours of referral.
3. Documentation meets standards – 96% we met the 95% goal
4. All typically utilized equipment has a safety check – 99% to 100% for 2015.
5. Contract orthotics vendor delivered the braces within 24 hours: 96.5% we met the 95% goal.
6. DASH is used to determine the effectiveness of occupational therapy intervention for Upper Extremity Fractures (outpatient OT): 75% of patients participated showed significant improvement.

Clinical Goals / Plans / Programs for FY2017

1. In conjunction with the Department of Anesthesia and University Hospital’s Medical Special Procedure’s unit, PM&R is performing geniculate nerve radiofrequency ablation (RFA) for recalcitrant osteoarthritic knee pain who are not candidates for knee replacements.
2. Maintain/improve current therapist staffing levels: The vacancies have been re-filled rather quickly for the past year with the exception of Lead PT position. Even though we gained new lines, the weekend staffing level remained to be less than 40% of weekday’s and the wait time for services still exceeded the guideline set by DOH. Plan to re-assess the staffing needs.
3. Continue the efforts to meet the documentation requirements from Medicare (Functional G-codes and Severity Modifiers –ongoing, less back-end corrections now.
4. All therapy divisions are using templates (Smart text) for the documentation of evaluation and treatment. We discontinued the use of flow sheets.
Departmental / Physician Goals for 2016-2017:

- Finalize recruitment of PM&R physicians (replacement hire plus expansion) to maintain and/or increase UH clinic volumes to the extent consistent with UH priorities.
- Further collaborate with the Department of Neurosurgery to provide physiatrists to attend Neurosurgery Clinics as well as provide PM&R services at other sites.
- Further expand the injured workers program by increasing volume of outside referrals, while maintaining internal referrals.
- Increase volume of musculoskeletal diagnostic and therapeutic ultrasound procedures as well as continue growth of the Coccyx Pain Center with additional out-of-state patients for procedures performed throughout the NJMS/UH/Rutgers Biomedical Health Sciences campus.
- UH traditionally has not done much to market the Model TBI and Model SCI programs. We are one of only seven sites in the entire country to have both Model Systems. We recommend that these programs be marketed to bring positive publicity to UH and to the Trauma Program.

Outstanding Issues:

- **Replacement faculty hire:** Continue recruitment of PM&R faculty to cover the UH PM&R role within the Orthopedic Clinic (Clinic 8) and Neurosurgery clinic. As per NJMS-UH medical service agreement, there is a need for NJMS to continue staffing the eight sessions per week of hospital-based PM&R clinics.
- **Space:** Resolve longstanding space constraints and/or renovate existing space. The department is fragmented with academic and clinical space in three locations: University Hospital, the Doctors Office Center and some storage space within the ADMC. The only storage location for faculty and resident files is currently in the ADMC across campus from the Chair's administrative office. This creates an administrative burden for resident and fellow verifications. The PM&R clinic in DOC 3300 has notable space challenges.
- **Loss of on-campus resident physicians:** The 50% loss of on-campus PM&R resident physicians in recent years will have a profound effect on the department. The loss of the clinical training experiences jeopardizes the resident educational program overall, creating risks for violations in residency accreditation and risks to the national reputation of what has until now been considered one of the most highly regarded PM&R residency programs in the nation. We will continue looking for alternate replacement sites for resident training off campus. Meanwhile, the loss of on-campus residents will also present profound challenges for the ability of PM&R faculty here to maintain their clinical productivity, so we will be investigating creative ways to address these issues.