

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

The University Hospital
Chief of Service Report

July 1, 2007 – June 30, 2008

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Chair

Service Overview:

The Department of Physical Medicine and Rehabilitation (PM&R) includes physiatry (physician services), occupational therapy, physical therapy, speech-language pathology, therapeutic recreation, and cardiac rehabilitation. 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, exacerbation of chronic illnesses, impairments, and disabilities. All interventions respect and encourage the patient's ability to make choices, to develop and maintain a sense of achievement, and to choose to continue or to modify his/her participation in rehabilitation.

PM&R provides an inpatient consultation service, general and specialty outpatient services in the hospital and the DOC, inpatient and outpatient therapy services, phase I, II, and III cardiac rehabilitation, and contract therapy services to Broadway House. In addition, PM&R provides diagnostic and therapeutic services such as electrodiagnostic studies and epidural injections.

Clinical Highlights:

- ★ **The Center for Noninvasive Mechanical Ventilation Alternatives and Pulmonary Rehabilitation** was established in 1992 and cares for patients with neuromuscular weakness and respiratory impairment. Under the direction of John R. Bach, M.D., the outpatient neuromuscular disease intervention program continues to be successful in reducing respiratory morbidity and mortality. Dr. Bach also serves as Co-Director for the Muscular Dystrophy Association Clinic. An inpatient program is provided in coordination with the departments of Medicine and Pediatrics. The program focuses on avoiding tracheostomy by extubating unweanable patients to noninvasive respiratory muscle aids and reducing ICU stays for patients with neuromuscular disease.
- ★ **Musculoskeletal and Occupational Medicine** involves the non-surgical treatment of musculoskeletal and neurological conditions that are causing pain and/or problems 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., Assistant Professor and Co-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 and Rutgers University-Newark for the care of their employees' injuries. As the hours devoted to faculty practice are reduced to cover UH clinics, the referrals to the therapies for this insured population will be reduced resulting in a loss of income to UH.

Four 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 an on-site procedure suite in DOC 3300, as well as in the hospital'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 (such as herniated or "slipped" discs), radiculopathy ("pinched" or irritated nerve roots, which often cause back pain to travel down into the legs), and painful facet and sacroiliac joints.
- **Coccyx Pain Center**, specializing in non-surgical treatment of tailbone injuries and tailbone pain.

★ **General PM&R Clinics** are held daily in the Orthopedic Clinic at UH. Effective August 2007 additional sessions were initiated in 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. Patients with other rehabilitative diagnosis 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. 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 LOS.

★ **The Northern New Jersey Spinal Cord Injury System** Founded in 1990 under a grant from the National Institute on Disability and Rehabilitation Research, the "Northern New Jersey Spinal Cord Injury System" (NNJSCIS) at University Hospital continues to care for SCI patients within a broad 13-county area. The NNJSCIS is a joint effort among UMDNJ-University Hospital, Kessler Institute for Rehabilitation, and Kessler Medical Rehabilitation Research and Education 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. Since 2006, Susan V. Garstang, M.D. has been serving as University Hospital's Clinical Director of the SCI Program.

★ **Acquired Brain Injury Services** Dr. Peter Yonclas serves as Director of Trauma Rehabilitation at University Hospital. He and Dr. Susan Garstang work 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 and Dr. Garstang also co-direct 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 (NIDRR) **Model Traumatic Brain Injury (TBI) system**. University Hospital, along with Kessler Institute for Rehabilitation and Kessler Medical Rehabilitation Research and Education Center are 1 of only 7 sites in the country to have both model systems.

With the budget reduction to the department, Dr. Yonclas will no longer be employed by PM&R effective July 1, 2008. It is unclear at this time how his responsibilities will be covered.

★ The **Prosthetics and Orthotics Clinic** is offered twice per month under the direction of Dr. Peter Yonclas. Outpatients requiring braces or artificial limbs are referred for evaluation, prescription, and follow-up. As noted above, this is another service area that will be impacted by Dr. Yonclas's termination.

Financial support and/or assistance from Social Work Services are 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). This is an area that requires ethical and fiscal review. Opening up the provision of splints and braces to our charity care population would be an extremely costly endeavor.

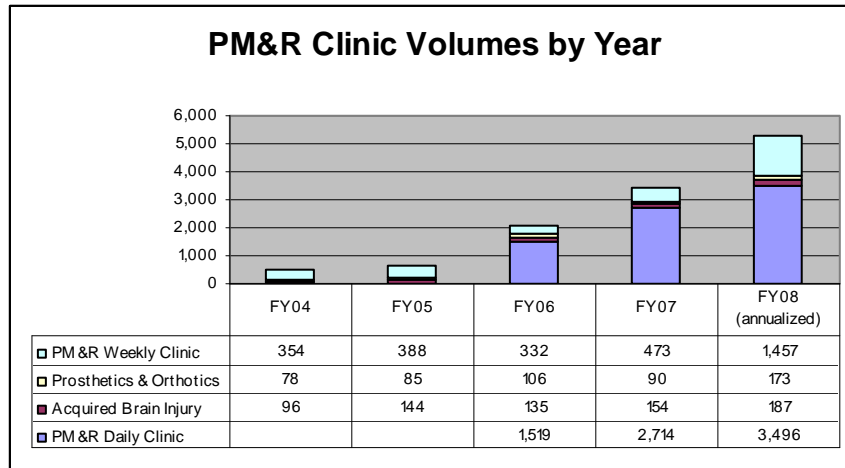
★ **EMGs and Electrodiagnostic Studies** The PM&R Department continues to provide electrodiagnostic testing (EMG and nerve testing) for patients with a wide variety of symptoms and conditions, including numbness, pain, weakness, back pain radiating into the legs (radiculopathy/sciatica, etc), neck pain radiating down into the arms (cervical radiculopathy, brachial plexopathy, etc.), carpal tunnel syndrome, ulnar neuropathy and peripheral polyneuropathy. The PM&R Department has more physicians who are credentialed by the American Board of Electrodiagnostic Medicine than any other NJMS department.

★ **Therapy Services:** The department has 8.25 budgeted occupational therapists, 18 physical therapists / physical therapist assistants, 3.5 speech language pathologists, 2 therapeutic recreation therapists, and 1 exercise physiologist. Support staff includes 5 budgeted aides, 1 secretary, and 8 reception / scheduling / registration staff.

During the course of the year we have averaged approximately 3 vacant occupational therapist lines and 2 vacant physical therapist lines. This has severely limited our ability to provide appropriate therapy services, especially to post-surgical hand cases. As a result the surgeons have been taking elective cases to other facilities resulting in a loss of revenue for UH.

- **Cardiac Rehabilitation:** Cardiac Rehabilitation continues to be run by one Exercise Physiologist. Phase I annualized visits for FY08 is 74 up from 65 in FY07 (1%). Phase II is annualized at 1,320 from 1,420 a 7% decrease; phase III are projected to increase from 1,100 to 1,282 – a 16% increase. And the medical fitness program has declined from 848 to 576 visits; down %. Overall there is a 5% decline from last fiscal year.
- This is our twelfth year of providing **contract services to Broadway House** for Continuing Care, a sub-acute facility in Newark for individuals living with AIDS. PM&R provides part-time occupational, physical and speech therapy services. In June 2007 we temporarily suspended occupational therapy service due to staffing shortages. In FY 2008 we are annualized to provide 1,258 hours of service a 20% decline from FY07 due to continued staffing shortages in occupational therapy.
- Occupational Therapy **/hand rehabilitation** outpatient service continues to be severely limited due to our lack of success in retaining hand certified clinicians. PM&R was approved for one additional outpatient occupational therapist in FY2007 but has not been successful in filling vacancies. Physicians are referring their patients to other facilities and we are seeing primarily the uninsured or underinsured.
- The department initiated a **medical fitness program** in March 2006 for OB/GYN patients to prevent bone loss and improve general fitness and bone density. Annualized volume for FY08 is 576, declined 32% from last year's 848 visits.
- Volume in the **Dysphagia program** totaled 1,208 patients annualized for FY 2008; a decrease of 1% from 2006 – 07 (1,220). Modified barium swallow studies decreased in volume by 17% (239); however, fiberoptic studies increased by 34% (370). All inpatient therapists are trained, independent and could train others on the FEES procedure.

- ★ **UH Clinic Volumes:** The Department provides daily physician staffing in the Orthopaedic Clinic and at the DOC in suite 3300. It also manages three PM&R subspecialty clinics: general PM&R on Mondays, Orthotics and Prosthetics on alternate Thursdays, and Acquired Brain Injury on alternate Fridays. As shown below, overall UH clinic volume has increased by 55% over FY 2007.



- ★ **Therapy Volumes:** Total **therapy procedures** are increased 2% from last fiscal year (114,880 annualized) and **therapy visits** are also increased 2.5% (78,241 annualized). These changes are primarily a result of filling vacancies in physical therapy services.

Clinical Faculty and Residency / Fellowship Highlights:

Faculty

The Department of Physical Medicine and Rehabilitation consists of 101 faculty members practicing across northern New Jersey. Six and one-half of these faculty positions, and after July 1, 2008, five and one-half, are based in Newark and are paid by UMDNJ.

Collectively, our 39 teaching faculty train 27 residents, 6 clinical fellows and 5 postdoctoral fellows at ten affiliated patient facilities. The distribution of the PM&R faculty by rank is as follows:

Faculty Rank	Total
Full-Title	
Professor	9
Associate Professor	7
Assistant Professor	18
Instructor	5
Total Full Title	39
Modified-Title	
Clinical Professor	2
Clinical Associate Professor	3
Clinical Assistant Professor	47
Clinical Instructor	4
Adjunct Assistant Professor	1
Associate	5

Total Voluntary	62
<u>PM&R Grand Total</u>	<u>101</u>

Residency Program

The UMDNJ-NJMS psychiatry residency program is considered one of the top psychiatry residencies in the nation. For the most recent Match cycle (Class of 2012), the department received 34 applications for each vacant slot, and filled all 10 of its slots by going down to number 30 on the rank order list. Unlike some residency programs, our department always fills 100% of its positions within the Match, and 80% of our residents were trained at U.S. medical or osteopathic schools. Many of our candidates have been elected to AOA, have received USMLE scores above 225 and have authored research publications. The residency (and the SCI fellowship) remains fully ACGME-accredited, with our next site visit scheduled for the fall of 2008. Our residents perform well on both Part I and Part II of the PM&R Board examinations. The five year pass rate for first-time takers of both Part I and II is 100%. In the most recent year for which scores are available (2006), 70% of our graduates scored above the national 95th percentile on the written exam, and 100% scored above the national 75th percentile.

As of July 1, 2008, the number of trainees in our various postgraduate programs will be as follows:

Level	Number of Trainees
PGY-2	7
PGY-3	8
PGY-4	10
Clinical Fellows	6
Postdoctoral Fellows	4
Total Trainees	37

Of the 27 resident positions currently offered in the department, **only five are paid by UMDNJ-University Hospital, four after July 2008.** These five 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:

Funding Sources of Residency Slots by Year				
	2005-06	2006-07	2007-08	2008-09
University Hospital	4	5	5	4
Children's Specialized Hospital	2	2	2	2
Kessler Institute for Rehabilitation	10	10	11	11
Mountainside Hospital	1	1	1	1
Overlook Hospital	1	1	1	0
Morristown Memorial Hospital	2	1	0	0
NJ Veterans Affairs Healthcare System	7	7	7	7
Total Resident Slots	27	27	27	25

Our faculty participation in resident education extends beyond our own department. Several of our faculty members have participated in resident lecture series within other departments such as Internal Medicine, Family Medicine, Neurosurgery, ENT, Orthopedic Surgery, Pediatrics, Podiatry, and Trauma.

Therapy Services

Physical therapy had 24 affiliating students in 2007; 15 physical therapist (PT) students and 9 physical therapist assistant (PTA) students. We are pleased to report that of the 15 physical therapist students, 8 of

them were doctorate level affiliations. The program continues to affiliate with 19 schools, two of which have a dual agreement for both PT and PTA (17 PT and 4 PTA).

Occupational therapy trained 1 Level One Physical Disability student, 1 Level One Psychiatry student, and 4 level two students for a total of 6 students in 2007. One new affiliation with Alvernia College was established in 2007. The program now affiliates with 8 schools.

Speech Language Pathology trained 5 students and had 6 observation students. This service contracts with 5 schools.

Therapy programs remain as highly sought after training sites for students. In FY 08 one student affiliate was hired (occupational therapist).

In FY08 2 physical therapists on staff, Marcia Downer and Avani Malankar, taught without additional compensation in the school of Health Related Profession's Physical Therapy program. The areas of focus were the Neurology of movement and Cardiopulmonary lab. They will continue in this role in FY09.

Fellowship 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 20 in the nation that has been accredited by the ACGME.

All clinical and postdoctoral fellows in the department are currently funded through grants and external sources. The research fellowships are supported by federal training grants obtained through KMRREC.

New Programs and Services:

★ **Inpatient Rehabilitation Unit(s):** The PM&R Department agreed to provide a Medical Director, resident coverage and attending physician coverage for a proposed 20-bed inpatient unit for patients and has requested that the hospital apply to the Department of Health for beds.

★ A proposal was submitted for PM&R to assume management of a campus fitness / wellness center; however, after many hours invested and a review of the return on investment (ROI), it was not feasible at a departmental level. The department did play a key role in re-initiating plans to coordinate this program with the Newark YMCA.

★ Ann Gulyas, Manager of Inpatient Therapy Services continues to work with Drs. Bach and Swan, in coordination with the Centers for Disease Control and Prevention on developing protocols and standards of care for managing Duchene's Muscular Dystrophy. It is anticipated that these standards will be published by November 2008.

Quality Improvement Program:

In order to ensure that the department provides Five Star Service, clinically as well as operationally, we have an active performance improvement process that includes a monthly interdisciplinary meeting as well as audits of key processes.

★ **Monitors:**

Risk Management:

- **Patient Injury during treatment or diagnostic procedure:** The one case reviewed in fiscal year 2008 (Nov 2007) did not require corrective action. It involved a patient, whose fall resulted in a contusion to the left knee. The response time, care and follow up were managed appropriately.
- **Patient falls during therapy visit:** The three cases in 2007 resulted in no harm to the patient. There was no mis-management in intervention or issues involving carelessness in the environment.
- **Mortality:** None.
- **Medical Emergencies occurring during treatment &/or diagnostic procedures:** Of the seven reported, each medical emergency stemmed from pre-existing, non therapy related health issues.
- **Complications Following Epidural Injection:** 485 cases were reviewed in 2007, there were no complications reported.
- **100% of PTA notes are co-signed by PTs:** This was a new monitor established in 2007. 468 cases were reviewed over a nine month period. There was an overall rating of 82.48% compliance in PTs signing PTA notes. The first two months of auditing showed 55-59% compliance, which made significant improvement over time. Two months met at 100%.

Outpatient Access: In 2007, we continued to review availability of appointments for priority and non-priority referrals.

- **Priority cases** averaged about 29.4 per month, of which an average of 47% received appointments within 48 hrs. **Non-priority cases** averaged 153 per month with just over 56% receiving an appointment within the two week threshold, an increase of 5% over last fiscal year. Two of the 12 months met at 87%.
- 92% of **Medicare patients on program had a referral for treatment.** Weekly reviews continue to ensure follow up and compliance with referral validity.
- The results of random audits assessing orders for **inpatient services documented on the physician's order sheets** averaged 60% compliance rate, a significant decrease from 2007 at 82%. The department received approval for a physician order sheet that specifies therapy orders. All orders will be generated from this form and that will ensure 100% compliance at all times. Target implementation date is July 2008.
- Physical Medicine and Rehabilitation Physicians wrote **complete prescriptions.**-discontinued, a replacement monitor will be identified in 2008.

Inpatient Therapy Outcomes: We continued to audit and review charts on patients with **Acquired Brain Injury (ABI) to assess if there were any improvements or gains toward goal achievement following intervention** by Occupational Therapy, Physical Therapy or Speech-Language Pathology services. In 2007, a total of 229 cases were reviewed; an overall average of 78% of the cases showed improvement. There was no significant difference among the therapy services. Improvements in mobility following Physical Therapy averaged 78%, improvements in self-care/ADL following Occupational Therapy averaged 80% and improvement in dysphagia following Speech-Language Pathology intervention averaged 78%. In 2007, we conferred with IST and Medical Records to compare and address differences in the reported cases involving ABI admitted under that diagnoses with the number of those same cases referred for therapy intervention. The results documented a significant number of cases not being referred and also cases not being identified because of the coding differences. IST runs a monthly report of rehabilitation therapy procedure codes concurrent

with ICD 9 diagnoses codes that is available for access through E-Print. Additional adjustments have been made to the report parameters to better capture the target population and this effort is ongoing. To ensure increased reviews and reporting, Sovera was approved for installation on clinical desk tops throughout the department. This project was complete by December 2007.

Physician Outcome Measures: each attending physician selected an outcome measure for his/her primary patient population. Data is being collected and reviewed as a part of the department's peer review process. Some of the areas of focus include: effect on pain on patients receiving local anesthetic ganglion injection for coccydynia; control of pain following viscosupplementation injections for knee osteoarthritis; and augmentation of vital capacity to increase cough flows and prolong survival for patients with neurological disorders.

Timeliness of inpatient consultation and initiation of therapy from time of referral will be monitored in 2008-09.

Anticipated Medicare Requirements for Outcome Reporting:

Our goal to revise therapy documentation procedures to include the new Medicare requirement for outcome measures was met in part in 2007. We investigated the tools recommended by participating in two 90 minute audio teleconferences. Most of the tools addressed long term rehabilitative care and SNF, with a high concentration in Physical Therapy assessment intervention. We examined our current method of chart auditing and added components that would address the key concerns presented in the audio-conferences. Staff was inserviced on the findings.

With regard to the status of the regulation, per CMS, we are compliant with the current process used for assessing and documenting therapy outcomes. We propose to continue and further examine the tools recommended. It is our goal to improve both the PM&R therapy quality of care and therapy cost-effectiveness. We will further examine successful therapy protocols, high volume/at-risk populations and potentially problematic aspects of rehabilitation, set indicators to monitor them, and proactively manage the intervention and therapy outcomes.

★ **Participation in Hospital Wide Performance Improvement Teams or Initiatives:**

- The department presented twice to the Hospital Wide QI Meeting (May and September).

Future Clinical Goals / Plans / Programs:

- Expand medical fitness/wellness to include gastric bypass patients and employees with medical conditions limiting function.
- Increase UH clinic volumes to a minimum of the 75th percentile for MGMA per clinic FTE.
- Improve therapist staffing levels: For the fourth year in a row, therapy staff shortages have limited therapy volumes and have hindered clinical growth. In August 2006 we **lost ten lines** due to unfilled vacancies (billing technician, physical therapist, 2 part time occupational therapists, 1 speech-language pathologist, 2 per diem therapists, 2 aides and a nurse). In July 2007 we **re-gained four lines** (occupational therapist, physical therapist, clerk and aide); however, we have not been successful in filling the occupational therapy line. As a result of losing staff and candidates due to salary, the department requested a salary survey. Human Resources reviewed salaries and recommended an equity adjustment; implementation has been on hold due to the current financial constraints. We have 5.5 vacancies: 3.5 occupational therapists and 2 physical therapists.

If we cannot recruit and retain therapists we will be limited in the therapeutic programs that we can support and will continue to reduce the frequency of treatment for inpatients (potentially delaying discharge) and continue to send outpatients to other facilities (loss of revenue).

- Resolve longstanding space constraints and/or renovate existing space. The department continues to work towards resolving longstanding space limitations on the Newark campus.
 - The department is fragmented with academic and clinical space in three locations: *The University Hospital*, the Doctors Office Center and ADMC. This split reduces efficiency.
 - In the DOC, three faculty members, three residents, and a varying number of fellows and medical students continue to share three offices, six examination rooms, and one procedure room, 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 introduction of PM&R clinic in the DOC has created new space challenges. The waiting and registration areas were not designed to accommodate the additional volume.
 - With the exception of acute care psychiatry, 95+% of inpatient therapy is provided at the bedside. With shortened lengths of stay, satellite therapy “gyms” on the nursing units would be more conducive to the provision of timely services and to the fostering of a team approach to care.
 - In our Chief of Service Report three years ago we described plans to relocate outpatient therapy services to the ACC with a promised increase of 1,000 square feet, bringing the total to 10,000 square feet. This relocation was intended to consolidate services, support the growing outpatient volume and free up space in the DOC for physician services. There has been no progress on this project.
 - The orthotics contract for inpatient services will go out for bid.
 - UH has traditionally under-utilized its involvement with the model TBI and model SCI programs. These are both areas that could assist in decreasing LOS and increasing admissions if fully capitalized.
 - In light of the \$320,000 loss in funding from University Hospital the department has eliminated support staff and is in the process of re-assessing / re-engineering department processes to ensure physician services and education are maintained. Research on the Newark campus will be curtailed. The cuts have severely negatively impacted on physician morale. Without clerical support it will be difficult to submit required UH data and reports in a timely fashion.

Compliance with medical record completion requirements:

The department began actively tracking completion of the physicians’ clinic records in the third quarter of FY07. As of the close of May, the department had 37 unsigned outpatient records, of which 6 (16%) were greater than 30 days old.

PM&R provides an inpatient consult service; there are no documented unsigned notes.