Objective: To survey family practice and internal medicine physicians about their understanding of scope of practice of PM&R and the effect it and various demographic variables have on intention to refer to physiatrists. **Design:** Survey-based. **Setting:** U.S; mailing via U.S. Postal Service **Participants:** 1000 internal medicine and family practice physicians with 460 responding. **Interventions:** Not applicable. **Main Outcome Measures:** Intention to refer patients to physiatrists using 13 case scenarios (10 appropriate, 3 inappropriate referrals) and self-reported number of referrals/year associated with understanding of 7 skills of physiatrists analyzed via multiple logistic regression analyses. **Results:** While most respondents were likely to refer to physiatrists, there was wide variation in the types of patients referred. Physicians with a greater understanding of the scope of practice of physiatrists more likely to refer ($P=.003$). Female physicians were more likely to refer than male physicians ($P=.034$). **Conclusions:** There appears to be an association between an understanding of physiatrist practice and primary care practitioners' willingness to refer to PM&R. Primary care physicians should be educated about the benefits of referring patients to physiatrists. **Key Words:** Attitude of health personnel; Consultation; Health care surveys; Referral; Rehabilitation.

Poster 201

Patterns of Inpatient Rehabilitation Discharges to Acute Care Services. Reggie Augusthy, DO (University of Kansas, Kansas City, KS); Lisa McPeak, MD; George Varghese, MD, e-mail: *raugusthy@kumc.edu.*

Disclosure: None.

Objective: To identify medical problems and patterns leading to inpatient rehabilitation discharges to acute care services. **Design:** Retrospective Analysis. **Setting:** Tertiary care hospital inpatient rehabilitation unit. **Participants:** All patients discharged from the inpatient rehabilitation unit over a 2-year period (N= 543). **Interventions:** Not applicable. **Main Outcome Measures:** Discharge to acute care service. **Results:** 10.7% of all inpatient rehabilitation discharges were to an acute care service. 77.5% of all inpatient rehabilitation discharges to acute care services were of 5 main medical issues: (1) mental status change, (2) respiratory failure, (3) surgical complication, (4) cardiac abnormality, and (5) fever. 84.5% of all inpatient rehabilitation discharges to acute care services were of 5 admitting diagnosis: (1) cerebrovascular accident, (2) orthopedic procedure, (3) spinal cord injury, (4) deconditioning, and (5) traumatic brain injury. 77.5% of all inpatient rehabilitation discharges to acute care services were to 3 services: (1) internal medicine, (2) neurosurgery, and (3) orthopedic surgery. **Conclusions:** In order to best care for our inpatient rehabilitation patients, we must limit potential medical complications. By identifying the most common medical issues leading to discharges to acute care services, we can anticipate medical problems, and treat them appropriately. If a pattern is established as to which diagnoses are at highest risk for medical complications, we can better evaluate medical stability prior to admission to an inpatient rehabilitation unit. As residents, we must educate ourselves to such patterns, whereby performing at a higher level in terms of using caution and better judgment in screening candidates for inpatient rehabilitation. If a pattern is identified as to which services these retransfers come from, the rehabilitation team should institute an education program regarding rehab criteria and qualifications, according to the new prospective payment system rules. **Key Words:** Brain injuries; Cerebrovascular accident; Rehabilitation; Spinal cord injuries.

Prosthetics, Orthotics, and Assistive Devices

Poster 202

Evaluating the Effects of Foot Orthotics on Plantar Pressures in the Normal Adult Population: A Pilot Study. Hope S. Hacker, MD (University of Texas Health Science Center, San Antonio, TX); Alaine Walsh; Gordon Bokser, PC, MA; William Rogers, MS; Gail Walden, MPH; Nicolas Walsh, MD, e-mail: *HackerH@uthscsa.edu.*

Disclosure: None.

Objective: To document the efficacy of over-the-counter versus customized foot orthoses. **Design:** A repeated measure within-subjects pilot study to evaluate plantar pressures in a normal population. Trends of comparative differences between orthoses shown by descriptive statistics are analyzed by *t* testing to determine statistical significance. **Setting:** Each subject walked over a level surface at self-selected speed with each of 3 pairs of randomly ordered foot orthoses. **Participants:** 10 normal subjects (20ft) were evaluated using an F-Scan in-shoe pressure system during ambulation to determine the distribution of and peak plantar pressures. Intervention: Subjects were randomized to walk wearing a custom-molded trilaminate foot orthosis (CM), a flat trilaminate noncast orthosis (TRI), and a contoured off-the-shelf foot orthosis made of cellular urethane and plastazote (OTS). **Main Outcome Measures:** A minimum of 15 to 20 steps per orthoses per individual were analyzed for heel, first metatarsal head, and hallux peak plantar pressures. **Results:** A mean $\pm$ SD reduction of 27%$\pm$6.3% ($P<.001$) in lower plantar pressures was found at the heel along with an 19%$\pm$7.1% reduction ($P<.07$) in these pressures at the forefoot for the custom-molded foot orthosis in comparison to the OTS orthosis. An 8.6%$\pm$7.9% reduction ($P=.46$) in lower plantar pressures was found at the heel along with a 10%$\pm$8.4% reduction ($P=.38$) at the forefoot for the TRI in comparison to the OTS orthosis. **Conclusions:** The custom molded and flat trilaminate orthoses reduce plantar pressures at the heel and forefoot in comparison to the OTS orthosis. These results suggest that custom foot orthoses may provide increased protection for patients susceptible to cutaneous foot ulceration such as diabetics. **Key Words:** Gait; Orthotic devices; Pronation; Rehabilitation.

Poster 203

Manual Wheelchair Use by Community-Dwelling and Institutionalized Veterans. Shanti P. Ganesh, MPH (Duke University Medical Center/Durham VAMC, Durham, NC); Helen M. Hoenig, MD, MPH; Anthony J. Hayter, PhD; Phil Kim, MS; Jon A. Sanford, March; Stephen H. Sprigle, PhD, e-mail: *helen.hoenig@med.va.gov.*

Disclosure: None.

Objective: To describe the relationship between patient, environmental, and wheelchair characteristics and wheelchair use. **Design:** Cohort study. **Setting:** 1 Veterans Administration teaching hospital. **Participants:** 99 consecutive cognitively intact veterans newly prescribed a manual wheelchair. **Interventions:** Not applicable. **Main Outcome Measures:** Self-reported and study team measured sociodemographic, health, wheelchair, and environmental characteristics. **Results:** The sample was similar to the veteran population as a whole with an average age of 66, 59% white, and 58% with a high school education. Participants averaged 10 medical conditions and 6 impairments. 68% lived in the community and 32% lived in nursing homes. The top conditions subjects reported contributing to need for a wheelchair were recent surgery (78%), hospitalization (73%), amputation (70%), and joint fusion/replacement (67%). Recent hospitalization was present in 76% of the sample and surgery in 37%. A trend toward increased impairment was seen among institutionalized subjects, among those with difficulty transferring and those with difficulty propelling the wheelchair (3%–15% more had cardiac impairment, 7%–11% more had balance impairment, 7%–17% more had vision impairment). When comparing bathroom mobility methods, significantly more of the wheelers had balance impairment ($P\leq.001$), whereas walkers were more likely to have cardiac impairment ($P=.012$). Community-dwellers were more likely than the institutionalized to have a sling seat without a cushion ($P=.001$) and to have carpeting ($P\leq.001$), and they were less likely to use the wheelchair for bathroom mobility. **Conclusions:** There were some environmental and wheelchair differences among the groups studied; however, medical conditions appear to be a driving force in the provision and use of wheelchairs, as well as in problems with using the device. Cardiac impairment in particular seems to be a key factor adversely affecting use of manual wheelchairs. **Key Words:** Assistive technology; Locomotion; Rehabilitation; Wheelchairs.

Poster 204

Low Back Pain and Disability in Persons With Lower-Extremity Amputation. Erik T. Shaw, DO; Gordon Bosker, CP (UTHSCSA, San Antonio, TX), e-mail: *tabakin@yahoo.com.*

Disclosure: None.

Objectives: To evaluate the extent to which low back pain (LBP) is present in persons with lower-extremity amputations (LEA), the extent to which it interferes with daily living and work, and to determine if certain prosthetic components are associated with LBP. **Design:** Questionnaire. **Setting:** Outpatient prosthetic clinic. **Participants:** Above (AKA) and below (BKA) knee amputees. **Intervention:** Not applicable. **Main Outcome Measures:** Visual analog scale (VAS), Quebec Back Pain Disability Scale, and prosthetic limb components. **Results:** 51% of the 49 respondents had LBP. The average VAS of those with LBP was 4.59, 4.72 in the below the knee amputees (BKA) sample, and 5.23 in the above the knee (AKA) population. The average disability for the entire sample was 34.4. For the LBP subgroup, the average disability was 40.6. In the BKA group, the average disability was also 39.8 and 23.3 in the AKA group. Those who had LBP were more likely to be BKA than AKA and suffered the amputation from disease rather than trauma. 75% of the study population use a SACH foot, and 56.8% of these had LBP. Of the 25% who used a multiaxis foot, 33.3% had LBP. BKA patients had 52.6% rate of LBP, and 54.8% used a SACH foot. In the AKA population, 28.6% had LBP and of those 40% used a SACH foot. Disability was also greater in the LBP group, regardless of amputation level. No suspension was significantly associated with disability or LBP. **Conclusions:** In this limited study, BKA patients were more likely to have LBP and greater disability. No single suspension type was associated with disability or LBP. **Key Words:** Amputation; Low back pain; Gait; Rehabilitation.

Poster 205

The Challenges of Rehabilitating a Blind Amputee: A Case Report. Edward Albert G. Balbas, MD (East Carolina University Brody School of Medicine, Greenville, NC); Paul Sugg, CPO-FAAOP; Daniel P. Moore, MD, e-mail: *docbalbas@aol.com.*

Disclosure: None.

Setting: Tertiary care hospital. **Patient:** A 47-year-old bilaterally blind man with severe type I diabetes mellitus that subsequently had a right below-knee amputation in 2001 and left below-knee amputation in 2002. **Case Description:** The patient was admitted in inpatient rehabilitation for prosthetic fitting and gait training after evaluation in the amputee clinic. Prosthetic components included a bilateral endoskeletal prosthesis-total surface bearing and Endolite senior flexible keel feet (K2 level), which required less energy consumption. He had difficulty donning the silicone liner, due to lack of vision. He was taught to use palpation to locate the seams in front of the silicone liner. An Alpha locking gel liner (shuttle locks have audible click) was utilized to remind the patient that his silicone liner was locked in place in his prosthesis. To distinguish left and right prosthesis, he palpates the shuttle lock on the medial side of each prosthesis. He was taught progressive ambulation from parallel bars to a regular cane. The physical therapist would stand in front of him and give verbal cues and voice to help him mobilize. **Assessment/Results:** He started ambulating 35ft with minimal assistance and advanced to 100ft with contact guard assist by discharge day 15. **Discussion:** The rehabilitation of a blind person with a bilateral lower-extremity amputation as a functional prosthetic candidate is difficult. Visual impairment should not be a contraindication to increase independence if the patient is medically stable and psychologically prepared. Blind amputees must be motivated, and additional time may be necessary due to the need to utilize nonvisual routes to obtain information and independence in the rehabilitation program. **Conclusions:** We present a case of a blind bilateral amputee, who despite his associated medical conditions was able to improve his independence and quality of life. **Key Words:** Amputee; Rehabilitation.

Spinal Cord Injury

Poster 206

Incidence, Etiology, and Risk Factors for Fever Following Acute Spinal Cord Injury. Shane McNamee, MD (Virginia Commonwealth University, Richmond, VA); William McKinley, MD; Michelle Meade, PhD; Katrina Kandra; Nicole Abdul, e-mail: *shanemcnamee@gmail.com.*

Disclosure: None.