

person for information sharing, but 50% of health workers were unaware of who this person was. Case specific and cross system training with electronic dissemination of information was desired. Training topics and resources used were diverse.

**Conclusions:** Common themes across groups included lack of knowledge of key contacts, lack of efficient information transfer, lack of communication when placement/care changed, and poor understanding of systems outside their own. Curriculum development needs were diverse. Solutions will require improvements in cross system knowledge and communication.

**Keywords:** Pediatric, Foster care, Medically fragile, Child welfare.

## Poster 299

### The Role of Pain in the Lives of Adults with Cerebral Palsy (CP).

David Berbrayer, MD, Bsc (MED), FRCPC, DABPMR (University of Toronto, Toronto, Ontario, ON, Canada).

**Disclosures:** D. Berbrayer, None.

**Objective:** To examine nature and influence of pain in adult cerebral palsy (CP).

**Design:** Cross sectional survey to assess demographics, health, disability, and pain lives and function of adult CP. Survey questions regarding demographics, disability and general health and pain in general. Subjects asked degree pain interferes with daily living, and back pain.

**Setting:** Tertiary care academic fully affiliated university teaching hospital-physiatry clinic.

**Participants:** Adult cerebral palsy in physiatry clinic university teaching hospital.

**Interventions:** Cross sectional survey to assess demographics, health, disability, and pain lives and function of adult CP:

**Main Outcome Measures:** Subjects asked degree pain interferes with daily living, and back pain.

**Results:** 12 surveys. General state of health 6.92/10 (SD = 1.51), degree of life satisfaction 7/10 (SD = 1.91). 2/3 female (n = 8) 1/3 male (n = 4). Average age 33 (range: 18-60 years). 67% Caucasian (n = 8), 8% South Asian 8% East Asian and 8% (n = 1) self-reported "other" ethnicity. 80% completed some high school, 17% completed high school, 17% some university or college training, 42% graduated from college or university, and 8% graduate degree. One individual attended no high school. 75% (n = 9) were working or attending school part-time. 83% 'single'. 50% (n = 6) diplegic 33% (n = 4) quadriplegic. 92% reported > 1 month having pain, 91% weekly. Common pain: legs, lower back, and feet. Mean intensity pain 5.82 (SD = 2.71). Mean worst pain previous 3 months 7.64 (SD = 1.91) mean least pain 1.27 (SD = 2.45). Pain, in general, interfered with daily living. Back pain experienced by 82%; 78% back pain weekly. Average intensity back pain 2.67 (SD = 2.74) Mean worst back pain preceding 3 months 7.67 (SD = 2.40) mean

least back pain 1.00 (SD = 1.58). Back pain interfered with all daily function .

**Conclusions:** 1.) 90% experiencing pain at least once a month. 2.) 55% pain most days of week with average intensity of 6.09, over 3-month period. 3.) 82% Lower back pain. 4.) Leg pain more common (91%).

**Keywords:** Cerebral palsy, Pain, Adult, Activities daily living.

## Poster 300

### Traumatic Spinal Cord Injury in a Pediatric Hockey Player Following Cervical Spine Axial Loading: A Case Report.

Devon Shuchman, MD (University of Michigan, Ann Arbor, MI); Joseph E. Hornyak, MD, PhD.

**Disclosures:** D. Shuchman, None.

**Patients or Programs:** A 14-year-old boy with C4 ASIA C traumatic spinal cord injury.

**Program Description:** The patient is a previously healthy young male participating in a high school hockey competition during which he was hit from behind, resulting in a severe flexion injury when he collided head first into the boards surrounding the rink. At the time of the injury, he reported instantaneous loss of all sensation and motor control below his shoulders, associated with severe neck pain, but without loss of consciousness. The patient was treated at a local hospital with intravenous steroids and hypothermia protocol for a C4-5 sUBLuxation-dislocation and associated spinal cord compression prior to anterior fusion of the cervical spine (C4-C5) and halo placement on day 1 post-injury. He was admitted to an acute inpatient pediatric rehabilitation program on day 10 post-injury, presenting at that time with a C4 ASIA A spinal cord injury.

**Setting:** University tertiary care pediatric hospital.

**Results:** The patient completed an approximately 12-week inpatient rehabilitation course, complicated by hypercalcemia, bilateral shoulder sUBLuxation, and skin breakdown. At the conclusion of his acute inpatient rehabilitation, he was evaluated to have a C5 ASIA C spinal cord injury.

**Discussion:** Although this is not the first reported case of a pediatric patient with traumatic cervical spinal cord injury, sports related injuries of this type are being documented with increased frequency without an increase in reported national incidence. With limited national reporting of catastrophic sports-related spinal cord injuries in the pediatric population it is difficult to appreciate the impact of these injuries on young athletes. A more accurately reported incidence may bring more national and international attention to these injuries, potentially leading to the development of pediatric sports-related spinal cord injury prevention strategies.

**Conclusions:** A national reporting system and database would be beneficial in investigating a more accurate inci-

dence of catastrophic sports-related spinal cord injuries in the pediatric population.

**Keywords:** Rehabilitation, SCI, Pediatric, Sports.

### Poster 301

#### Use of the WeeFIM® for Pediatric Patients with Demyelinating Diseases Requiring Inpatient Rehabilitation.

Richard Drew Davis, MD (The University of Alabama at Birmingham, Birmingham, AL); Connie Cushing, PT; Yolanda Harris, RN, MSN, CRNP; Jayne Ness, MD; Michelle Puckett, OT.

**Disclosures:** R. Davis, None.

**Objective:** Compare outcomes in pediatric patients with demyelinating diseases admitted for inpatient rehabilitation and assessed with the WeeFIM®, a functional outcome tool that assesses competence in self-care, mobility and cognition.

**Design:** Retrospective chart review and descriptive analysis.

**Setting:** Inpatient rehabilitation unit of a Children's Hospital and affiliated outpatient clinic in the United States.

**Participants:** Children with demyelinating diseases admitted to an inpatient rehabilitation unit between 2002 and 2008.

**Interventions:** Not applicable.

**Main Outcome Measures:** Patient demographics, age at presentation, diagnosis, symptoms, length of stay, treatment and outcome as measured by the WeeFIM® collected at admission, discharge and follow-up.

**Results:** Of 111 patients with demyelinating diseases evaluated from 2002-2008, 64% (n = 71) were hospitalized. Inpatient rehabilitation was required for 18% of hospitalized patients (n = 13, age range 4-17 y, mean age 12.7 ± 1.3 y), usually because of spinal cord involvement (SCI, 61%, n = 8) or encephalopathy (ENC, 38%, n = 5). At admission, ENC and SCI patients had similar mobility and self-care scores but ENC patients had significantly lower cognitive scores (11.0 ± 8.9 vs. 30.0 ± 5.0 in SCI patients;  $P < .004$ ). Average rehabilitation stay (10.4 ± 1.7 days) was similar between ENC and SCI groups. Both groups improved self-care and mobility scores by discharge, but ENC patients had significantly lower cognitive scores (19.4 ± 12.1 vs. 31.1 ± 4.0 in SCI patients,  $P < .026$ ). At follow-up 55 ± 14 days later (similar between SCI and ENC), total and subgroup WeeFIM scores were similar between ENC and SCI patients (follow-up total 98.2 ± 27.8 in ENC vs. 91.7 ± 10.4 in SCI patients).

**Conclusions:** Children with demyelinating disorders who require inpatient rehabilitation services have selective deficits in self-care, mobility and cognition related to spinal cord versus encephalopathic symptoms but both groups show improvement over time as quantified by the WeeFIM®.

**Keywords:** Rehabilitation, Central nervous system diseases, Disabled children, Treatment outcome.

### Poster 302

#### Visual Deficits and Cognitive Impairments as the Presenting Symptoms of an Adolescent With Mitochondrial Myopathy, Encephalopathy, Lactic Acidosis, and Stroke (MELAS Syndrome): A Case Report.

Tamar Kessel, MD (New York Presbyterian University Hospital of Columbia and Cornell, New York, NY); Chi-Chang D. Lin, MD.

**Disclosures:** T. Kessel, None.

**Patients or Programs:** A 19-year-old man with mitochondrial myopathy, encephalopathy, lactic acidosis, and stroke (MELAS syndrome).

**Program Description:** A 19-year-old right-handed man with history of MELAS, seizure disorder on phenytoin and phenobarbital, with recent hospitalization for right parietal stroke, presented with headache and blurry vision. Patient presented 1 week prior to admission with left-sided weakness and numbness, found to have right parietal stroke. Patient was not started on aspirin given etiology of MELAS. A few days prior to admission, patient complained of imbalance and unsteadiness. On the day of admission, patient had severe headache, 10/10, with nausea. He then developed blurred vision and left-sided weakness. MRI of the brain revealed new focal acute infarct in the right occipital cortex, stable acute-subacute right frontoparietotemporal infarct, and multiple chronic left hemispheric infarcts. On examination, patient had left homonymous hemianopsia, and mild weakness of left upper and lower extremity 4+/5 with decreased sensation to light touch.

**Setting:** Tertiary care hospital.

**Results:** The patient was given vitamin Q10, riboflavin, and l-carnitine as anti-oxidant therapy for MELAS. 24-hour video EEG revealed nonclinical seizures. Patient was started on topiramate and admitted to acute inpatient rehabilitation. Patient progressed with physical, occupational and speech therapy. Left-sided weakness and sensory impairment resolved, only remaining deficits were left homonymous hemianopsia and cognitive impairment on discharge. Patient was very difficult to arouse from sleep, slow to respond, and aggressive at times.

**Discussion:** Despite the multiple strokes seen on MRI, the patient only exhibited visual and cognitive impairments, although the extent of MRI lesions would suggest physical deficits such as weakness and sensory deficits.

**Conclusions:** Multiple extensive strokes in MELAS may present with more visual spatial and cognitive deficits than strength or sensory deficits. Despite extensive infarcts bilaterally, the patient was discharged home with parental supervision. He was ambulating independently only limited by poor vision.

**Keywords:** Rehabilitation, Stroke, Adolescent.