



**PHYSICAL MEDICINE AND REHABILITATION
SPINAL CORD INJURY MEDICINE FELLOWSHIP
GOALS & OBJECTIVES**

LOCATION:

The Baylor Institute for Rehabilitation/Our Children's House Dallas

SUPERVISING PHYSICIANS ON SITE:

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The Baylor rotation focuses on 1) acute rehabilitation of children and adults with spinal cord injury in a private, free-standing rehabilitation hospital setting and 2) spasticity management of children.

**SPINAL CORD INJURY
OBJECTIVES-FELLOW LEVEL**

Patient Care

The resident (fellow) will be expected to:

- Perform efficient, detailed assessments of children and adults with spinal cord injury admitted for comprehensive rehabilitation. The fellow is responsible for history and physicals, daily progress notes, consultations to other specialties, discharge summaries, orders for medications and supplies, detailed consultations to interdisciplinary team members, and interdisciplinary conference and patient/family conference summaries.

- Diagnose physical, cognitive and psychosocial impairments in children and adult rehabilitation patients with spinal cord injury.
- Create comprehensive medical rehabilitation problem lists and treatment plans for pediatric and adult patients with spinal cord injury.
- Determine appropriate rehabilitation services based on the patient's position in the continuum of care, and direct placement into inpatient rehabilitation, outpatient rehabilitation, long term care, or hospice.
- Write consults to therapists outlining patient history, problems to be addressed, and clearly defined precautions.
- Efficiently evaluate and formulate treatment plans for medical complications in pediatric SCI population. Demonstrate knowledge of preventative strategies to minimize complications for such population.
- Create comprehensive differential diagnoses for abnormal physical examination findings in persons with SCI.
- Provide comprehensive medical and rehabilitation management of spinal cord injury patients who present for follow-up in the outpatient setting.
- Be able to prescribe appropriate equipment needs including seating, orthotics, and assistive technologies..

Procedural Skills:

- Demonstrate proficiency with botulinum neurotoxin and other neuromuscular blockade procedures in the adult spinal cord injury population. Understand safe handling and preparation of the material, indications and contraindications for use.

- Demonstrate proficiency with botulinum neurotoxin and other neuromuscular blockade procedures in the pediatric spinal cord injury population. Understand specific issues related to preparation for procedures in children.
- Demonstrate proficiency with management of patients with intrathecal baclofen pump including the evaluation, dosing, and pump interrogation techniques in children and adult patients who have spinal cord injury and other disorders of tone.
- Participate in inpatient therapy sessions with SCI Physical and Occupational therapists. Be able to outline mobility and self care challenges based on neurologic level of injury.

Medical Knowledge

The SCI Fellow will be expected to:

- Know expected functional independence measure (FIM and Wee-FIM) scores based on neurologic level of injury and ASIA Impairment scale.
- Evaluate patients with non-traumatic myelopathies, and know the differential diagnosis for myelopathy.
- Be able to outline types of congenital spinal cord abnormalities.
- Be able to outline the differences in demographics, clinical course, and most common levels of injury between children and adults with SCI.
- Outline types of pediatric spinal cord injury. Be able to describe SCIWORA in children and adults.
- Describe the problems associated with the dual diagnosis patient (spinal cord injury and brain injury).

- Describe the clinical presentation and management of patients with syringomyelia.
- Assess respiratory dysfunction in spinal cord disorders.
- Identify and describe fundamental basic science concepts pertinent to SCI medicine, including pathophysiology, kinesiology, and neurophysiology.
- Recognize prophylactic and therapeutic strategies for thromboembolic disease in the SCI patient. Use current guidelines for treatment of venous thromboembolism.
- Apply principles of primary care for persons with spinal cord injury.
- Describe women's health challenges after spinal cord injury.
- Participate actively in Wheelchair Seating Clinic. Be able to outline differences in seating principles for manual and power wheelchairs. Be able to outline differences in seating for persons with high tetraplegia, low tetraplegia/high paraplegia and low paraplegia.
- Understand the medical problems associated with pediatric spinal cord injury and their treatment, including but not limited to: bowel, bladder, pulmonary, skin, nutrition, autonomic dysreflexia/hyperreflexia (AD/AH), deep venous thrombosis (DVT)/pulmonary embolism (PE), hypercalcemia, temperature regulation, orthostatic hypotension, latex allergy, spasticity.

Practice-Based Learning and Improvement

The SCI Fellow will be expected to:

- Locate, appraise and assimilate evidence from the scientific literature into daily practice.
- Use the available medical literature to evaluate one's patient care practice. Identify gaps in medical knowledge pertaining to persons with SCI.
- Perform independent, focused medical database searches. Educate residents in this regard.

- Assess appropriateness and cost-effectiveness of diagnostic testing and how it affects patient treatment, outcomes, and overall patient management.
- Understand healthcare utilization issues in relation to diagnostic testing and therapy.
- Present educational topics to medical students, residents, allied health professionals, and the interdisciplinary team. Also facilitate learning within the interdisciplinary environment.
- Identify adverse outcomes from past medical and rehabilitation treatment decisions and alter future treatment where appropriate. Utilize evidence-based guidelines in treatment when feasible.

Interpersonal and communication Skills

The SCI fellow will be expected to:

- Understand psychosocial, educational and vocational issues in pediatric SCI. Interface/communicate effectively with interdisciplinary (IDT) team members and professionals outside the IDT related to these issues.
- Utilizing best evidence regarding outcomes after acute SCI, counsel patients with SCI and their families regarding prognosis. Maintain a balance of compassion and honesty, and respect patient's hopes and spiritual perspectives.
- Communicate clearly and effectively with persons with SCI and their families. Exhibit empathy and understanding.
- Counsel patients with SCI and their families regarding inpatient and outpatient rehabilitation goals.
- Obtain consultation as appropriate and write detailed consult requests which identify relevant issues.

- Be able to plan long-term follow-up including growth problems, scoliosis, educational, vocational training and transition to independent adult life in the community.
- Present mini lectures to residents and or medical students on this rotation.
- Provide effective leadership in interdisciplinary meetings. Guide the team tactfully when it loses focus or becomes excessively time-consuming.
- Utilize effective listening skills in interdisciplinary meetings and one-on-one interactions.

Professionalism

The SCI fellow will be expected to:

- Complete inpatient, outpatient and consult visits and charting in a timely manner. Take responsibility for completion of notes.
- Be sensitive to cultural differences and needs of persons with SCI, their families, and other members of the interdisciplinary team.
- Arrive on time for lectures and rounds.
- Apply sound ethical principles in practice including patient confidentiality, informed consent and provisions of withholding care. Be aware of disability rights perspectives on life-sustaining treatment.
- Exhibit appropriate dress and behavior.
- Perform signout activities with other providers which are focused and prioritized.
- Communicate relevant medical information with other providers for patients moving into different care settings.
- Advocate strongly and effectively for patients. Assist them in their interactions with other health care providers and in other settings in order to optimize health and wellness.

Systems-based Practice

The SCI fellow will be expected to:

- Be aware of the Medicare eligibility requirements for inpatient rehab including the criteria for ongoing inpatient treatment and restrictions on the number of days of hospitalization per year.
- Effectively educate clinicians from other services on the role of SCI medicine and rehabilitation.
- Describe CARF certification requirements.
- Understand the role and functions of an inpatient rehabilitation medical director in a private rehabilitation setting.

Suggested lecture topics for this rotation:

1. Physical therapy for complete spinal cord injury: mobility, transfer techniques
2. Occupational therapy for complete spinal cord injury: self care and ADLs
3. Spasticity management in pediatric populations.

Resources

1. Lin, V. et al Spinal Cord Medicine: Principles and Practice (text)
2. Kirshblum, Spinal Cord Medicine (text)
3. Molnar, Pediatric Rehabilitation, SCI chapter and other chapters as suggested by Dr. McDonald
4. Relevant literature as suggested by Drs. Hamilton and McDonald

End of Document

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