

**NAME OF ROTATION:** Pediatric Physical Medicine and Rehabilitation Medicine

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**LOCATION:** CHOA, Children's Rehabilitation Associates  
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**TRAINING LEVEL:** PGY-2

**LENGTH OF ROTATION:** 1 month

**COURSE DISCRIPTION:** The pediatric rehabilitation rotation at Children's Healthcare of Atlanta (CHOA) is a 2-month rotation for PGY-3 or PGY-4 residents focusing on the inpatient rehabilitation of children. In addition to the responsibilities on the inpatient service, the resident may have the opportunity to participate in a variety of outpatient clinics, inpatient consults, and procedures to gain insight into the continuum of care and the special needs of the pediatric patient population. A strong educational component of the service is achieved via one on one time with the attending physicians, organized literature reviews, and conferences. The faculty preceptors on the service have special interest and training in pediatric rehabilitation.

**GOALS, OBJECTIVES AND CORE COMPETENCIES:**

- **GOAL 1-** Prevention, Counseling and Screening (PM&R). Understand the role of the pediatrician in preventing conditions affecting muscular/neurological functions in children, and in counseling and screening individuals at risk for these disorders.

Objective 1.1 Provide routine counseling to all parents and patients about:

1. Prevention of brain and spinal cord injuries through the appropriate use of car restraint systems and protective sports equipment
2. Recognition of activities associated with neurologic injuries, including water sports and trampoline play, and strategies to reduce risk

3. Genetic and familial basis for certain disabling conditions
4. The influence of alcohol on fetal development and its contribution to developmental and behavioral problems
5. Federal and state programs available to provide individualized and appropriate educational services to children of all abilities, in the least restrictive environment

Objective 1.2 Provide counseling to parents and patients with specific conditions about:

1. The rights of the child and family when physical or developmental disabilities are present, including Family Medical Leave Act (FMLA), Individuals with Disabilities Education Act (IDEA), and the Americans with Disabilities Act (ADA)
2. The natural history of cerebral palsy, from infancy to early adulthood, including the impact of illness on the individual, family and community
3. The role of folic acid in preventing neural tube defects and the importance of adequate intake prior to conception in all sexually active females of childbearing age
4. The role of early intervention in conditions affecting muscular/neurological function

**GOAL 2.** Normal Vs. Abnormal (PM&R). Distinguish normal from pathological conditions affecting muscular/neurological functions in children.

Objective 2.1 Differentiate the child with idiopathic toe walking from the child with mild spastic diplegic cerebral palsy through the recognition of obligate vs. nonobligate gait patterns and the signs and symptoms of upper motor neuron disease.

Objective 2.2 Explain the time course for the acquisition and loss of primitive reflexes and the implications of persistence.

Objective 2.3 Identify the spectrum of normal muscle tone and discuss the clinical significance of hypertonicity and hypotonicity.

Objective 2.4 Recognize developmental variations in growing preterm infants and distinguish normal variations from early signs of cerebral palsy.

Objective 2.5 Assess motor strength in children of all ages and distinguish those children with normal strength from those with proximal, distal and global weakness.

Objective 2.6 Recall the clinical uses and side effects of commonly used medications to improve muscular/neurological function in children within disabling conditions (e.g., baclofen, intrathecal baclofen, botox, etc.).

**GOAL 3-** Undifferentiated Signs and Symptoms (PM&R). Evaluate, treat and/or refer children with presenting signs and symptoms that may indicate conditions affecting muscular/neurological functions.

Objective 3.1-Create a strategy to determine which of the following signs and symptoms would be improved through PM&R interventions and refer these children.

1. Abnormality of tone
2. Alterations in strength
3. Asymmetrical use of extremities
4. Loss of range of motion
5. Failure to thrive
6. Dysphagia and feeding difficulties
7. Recurrent respiratory illnesses
8. Hip asymmetry
9. Recurrent urinary tract infections
10. Developmental delays

**GOAL 4-** Common Conditions Not Referred (PM&R). Diagnose and manage patients with conditions affecting muscular/neurological function that generally do not require referral.

Objective 4.1-Diagnose, explain and manage the following PM&R conditions:

1. Chronic constipation
2. Post-traumatic epilepsy
3. Gastroesophageal reflux
4. Autonomic dysreflexia following spinal cord injuries
5. Impulsivity and attention deficits following traumatic brain injuries
6. Gastrostomy tube related issues (dislodgement, granulomas, leakage, local infections, participation in activities)
7. Decubitus ulcers, grades 1 and 2
8. Bladder colonization vs. infection in children with neurogenic bladder dysfunction

Objective 4.2-School failures in children with chronic or disabling conditions

**GOAL 5-** Conditions Generally Referred (PM&R). Recognize and initiate management of children with conditions affecting muscular/neurological function that generally require referral.

Objective 5.1-Identify, explain, initially manage and refer the following conditions affecting muscular/neurological function:

1. Cerebral palsy
2. Spina bifida
3. Brachial plexopathies

4. Spinal cord injuries
5. Strokes
6. Congenital syndromes affecting development and function
7. Post-traumatic brain syndrome
8. Neuromuscular disorders
9. Limb deficiencies
10. Post-acute burn rehabilitation

Objective 5.2- Identify the role and general scope of practice of PM&R; recognize situations where children benefit from the skills of specialists trained in caring for children; and work effectively with these professionals to care for children with neuromuscular disorders

**GOAL 6-**Case Management (PM&R). Understand the general pediatrician's role in providing case management and coordination of services for children with common chronic conditions.

Objective 6.1-Develop and implement a case management plan for the following chronic conditions with functional limitations:

1. Cerebral palsy
2. Spina bifida
3. Limb deficiencies
4. Post-traumatic brain syndrome

Objective 6.2-Provide counseling and support to the family of a child with physical limitations who needs additional care coordination and access to community resources.

**COMPETENCIES:** Pediatric Competencies in Brief (Subspecialty Rotation). Demonstrate high standards of professional competence while working with patients under the care of a subspecialist. [For details see Pediatric Competencies.]

**Competency 1: Patient Care.** Provide family-centered patient care that is development- and age-appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.

1. Use a logical and appropriate clinical approach to the care of patients presenting for specialty care, applying principles of evidence-based decision-making and problem-solving.
2. Describe general indications for subspecialty procedures and interpret results for families.

**Competency 2: Medical Knowledge.** Understand the scope of established and evolving biomedical, clinical, epidemiological and social-behavioral knowledge needed by a pediatrician; demonstrate the ability to acquire, critically interpret and apply this knowledge in patient care.

1. Acquire, interpret and apply the knowledge appropriate for the generalist regarding the core content of this subspecialty area.

2. Critically evaluate current medical information and scientific evidence related to this subspecialty area and modify your knowledge base accordingly.

**Competency 3: Interpersonal Skills and Communication.** Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families and professional associates.

1. Provide effective patient education, including reassurance, for a condition(s) common to this subspecialty area.
2. Communicate effectively with primary care and other physicians, other health professionals, and health-related agencies to create and sustain information exchange and teamwork for patient care.
3. Maintain accurate, legible, timely and legally appropriate medical records, including referral forms and letters, for subspecialty patients in the outpatient and inpatient setting.

**Competency 4: Practice-based Learning and Improvement.** Demonstrate knowledge, skills and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate, and improve one's patient care practice.

1. Identify standardized guidelines for diagnosis and treatment of conditions common to this subspecialty area and adapt them to the individual needs of specific patients.
2. Identify personal learning needs related to this subspecialty; systematically organize relevant information resources for future reference; and plan for continuing acquisition of knowledge and skills.

**Competency 5: Professionalism.** Demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

1. Demonstrate personal accountability to the well-being of patients (e.g., following up on lab results, writing comprehensive notes, and seeking answers to patient care questions).
2. Demonstrate a commitment to carrying out professional responsibilities.
3. Adhere to ethical and legal principles, and be sensitive to diversity.

**Competency 6: Systems-based Practice.** Understand how to practice high-quality health care and advocate for patients within the context of the health care system.

1. Identify key aspects of health care systems as they apply to specialty care, including the referral process, and differentiate between consultation and referral.
2. Demonstrate sensitivity to the costs of clinical care in this subspecialty setting, and take steps to minimize costs without compromising quality.
3. Recognize and advocate for families who need assistance to deal with systems complexities, such as the referral process, lack of insurance, multiple medication refills, multiple appointments with long transport times, or inconvenient hours of service.
4. Recognize one's limits and those of the system; take steps to avoid medical errors.

**PROCEDURES:**

**Technical and therapeutic procedures.** Describe the following procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.

- Gastrostomy tube replacement
- Tracheostomy tube: replacement

**Diagnostic and screening procedures.** Describe the following tests or procedures, including how they work and when they should be used; competently perform those commonly used by the pediatrician in practice.

- Developmental screening test
- Hearing screening
- Vision screening

**SCHEDULE: (Sample)**

	MORNING	AFTERNOON
MONDAY	Inpatient rounds Consults	1300-1600 Rehab Clinic – Dr. Johnston Inpatient admissions and consults
TUESDAY	0700 CRM Education Inpatient rounds 0830 ECH Consult Rounds 1100 CIRU Admissions Meeting 1200-1400 Red/Green CIRU Staffing	Inpatient admissions and consults PA covers Day Rehab Program
WEDNESDAY	Inpatient rounds 0830-1130 Rehab Clinic - Dr. Sholas/Dr. Vova 1200-1400 Blue/Purple CIRU Staffing	1300 Spasticity Clinic (2 <sup>nd</sup> & 4 <sup>th</sup> ) Inpatient admissions and consults PA Covers Day Rehab Program 1600-1700 Interdisciplinary Round Table Discussion (Journal Club)
THURSDAY	0700 CRM Education 1000 Consult Rounds TBA (ECH/SR)	1300-1600 Rehab Clinic – Dr. Johnston Inpatient admissions and consults PA covers Day Rehab Program
FRIDAY	Inpatient rounds 0930 CP Clinic (1 <sup>st</sup> )	Inpatient admissions and consults Procedure Block 1200-1600

This schedule is subject to change based on Attending availability and scheduled procedures, lectures and events. Practice Meetings are typically the second and fourth Mondays of each month at noon. See details below in “Resident Orientation”.

Residents will attend weekly assigned continuity clinic. Residents are required to attend all Grand Rounds, weekly didactic lectures, resident meetings, and participate in the regularly scheduled calls.

**DIDACTIC SESSIONS:** To be determined by attendings.

**EVALUATION:** The preceptor and resident will complete evaluation forms on the six core competencies via electronic evaluation form.

**REFERENCES:**

1. Pediatric Rehabilitation; Molnar, G. and Alexander, M.; 1998; Hanley & Belfus.
2. Practice of Pediatric Orthopedics; Staheli; 2001; Lippincott Williams & Wilkins
3. Harriet Lane Handbook: A Manual for Pediatric House Officers (Paperback); by Johns Hopkins Hospital. Children's Medical and Surgical Center (Corporate Author), [Veronica L., M.D. Gunn](#) (Editor), [Christian, M.D. Nechyba](#) (Editor), [Michael A., M.D. Barone](#) (Editor); 2005; C.V.Mosby.
4. Orthopedic Physical Assessment, 5<sup>th</sup> Edition; Magee, David; 2007; Saunders.
5. Kaufman, BA. Neural tube defects. *Pediatric Clinics of North America*. Vol 51, No 2, April 2004.
6. Roach, ES. Stroke in Children. *Current Treatment Options in Neurology* 2000, 2:295-302.
7. Consortium for Spinal Cord Medicine Clinical Practice Guidelines. Prevention of Thromboembolism in Spinal Cord Injury. *2nd ed.* Paralyzed Veterans of America;1999.
8. Albright, L. Neurosurgical Treatment of Spasticity and Other Pediatric Movement Disorders. *J Child Neurol.*2003; 18: S67-S78.

**RESIDENT ORIENTATION:**

**In Pediatric Rehabilitation Medicine, one cares for children with acquired or congenital disabilities as well as able-bodied or disabled child athletes. The spectrum of patients includes those with mild temporary limitations through those with catastrophic life-long impairments. Our services are provided in a culturally sensitive way that is collaborative, multi-disciplinary and responsive, and that acknowledges that children are an integral part of the family unit, which resides in a local community.**

**Competencies:**

1. Performance of an age-appropriate history and physical exam.
2. Review normal pediatric development and identify developmental delays.
3. Determine impairment and disability, and use these findings to create an appropriate treatment plan.

**Preparation for the rotation:**

1. Training to use EPIC, the CHOA electronic medical record, must be completed prior to starting the rotation. Resident must have EPIC access for the first day of the rotation.
2. The CHOA Residency Coordinator will assist the resident in obtaining a CHOA ID/access badge, and parking access

**General Rules:**

The resident is expected to pre-round and complete notes by 1030 on Monday, Wednesday and Friday. On Tuesday and Thursday, arrival is after the morning educational activity at Emory. Generally, the resident is expected to stay until at least 1630, and to stay for admissions that are

expected to arrive by 1730. The service is aware the rotating residents will have call responsibilities at other hospitals during this rotation. The schedule for call days should be provided in writing to the faculty preceptor at the start of the rotation. On the day of call, the resident will be allowed to be available to receive sign out from the outside institution at 1600. On the day following call, the resident is expected to be in compliance with ACGME regulations. Any exceptions to the above require the agreement of the faculty preceptor.

- The family and age/cognitively appropriate patient will be included in decision-making in all phases of rehabilitation program and interventions
- Examine patients in appropriate area and not in “safe zones” or public areas
- Respect the child’s and the family’s privacy
- No “routine” labs are performed. Every test must have a justification
- Remember that parents must sign a consent for procedures to be performed on the patient
- Consider if sedation will be required prior to testing to ensure patient cooperation (BAER, CT scan, MRI)
- Attempt to avoid interrupting a child’s play-time or sleep time
- Use the minimum number and amount of medications
- School and learning is important, so identify which children require hospital-school programs
- Children in the custody of the state or in protective custody may have visitor restriction and/or require consent be given by governmental agency or representative
- Coordinate and value the input of all health professionals, the patient, and family members involved in the care team
- Read references, articles and research topics needed to expand your fund of knowledge in Pediatric Rehabilitation Medicine
- Participate in didactic curriculum taught by Faculty and a self-directed learning program to gain competence in the expected learning goals

**Inpatient Pediatric Rehabilitation Expectations:**

- Responsible for up to 12 patients
- Complete appropriate documentation for each patient
  - Admission
    - H & P on Epic template, or may dictate. Assessment section should address codable problems
    - Review history, findings, images, assessment, plan and orders with attending
    - Complete problem list on Epic
    - Notify PCP of patient’s rehab admission
  - Daily Documentation
    - Time orders
    - Assess/document pertinent Review-of-Systems (minimum: feeding tolerance or eating, elimination, sleep, pain)
    - Update physical exam to reflect current day’s exam

- Include all active problems in Assessment/Plan. Be sure A & P reflect current day's management
- Review any need for updated labs at least weekly. Discuss with attending before ordering labs
- Review medications daily
- Keep problem list current
- Imaging orders (including OPMS, aka: MBS) need reason for exam: symptoms, signs, or diagnosis (can't do R/O)
- Discharge
  - Notify appropriate consultants of discharge plan, and determine with whom and when patient needs to follow up
  - Call PCP to update them on patient's status and plan
  - Discharge prescriptions should be prepared in advance of discharge whenever possible to allow pharmacies in patient's local community to prepare
  - Complete discharge orders one day prior to DC
  - Dictate or Epic document discharge summary on or before day of DC
  - Very Important: CC discharge summary to all appropriate non-CHOA doctors, especially PCP
- Complete consents and pre-procedural screening on all patients scheduled to undergo invasive procedure
- Make certain that all assessments and plans are consistent with the expectations and preferences of the physician of record.
- Document notes and procedures in a manner that is consistent with the service requirements that meet the rules of the institutional site.
- Act at the discretion of Attending physician of record for the patients on service

**Pediatric Rehabilitation Consult Expectations:**

- Keep an updated list of the patients being followed
- Respond to request for consult at the earliest possible juncture: all consults must be seen within 1 business day of request
- Perform a complete History and Physical with a comprehensive plan
- Document whether the consult is one time only, continued follow-up, or admission to the rehab unit (CIRU) is being pursued
- Allied Health recommendations for patient
- Orthotic/Prosthetic recommendations for patient
- Make certain that all assessments and plans are consistent with the expectations and preferences of the consult Attending physician
- Notify the consulting physician of our recommendations
- Document notes and procedures in a manner that is consistent with the service requirements that meet the rules of the institutional site
- Act at the discretion of the consult Attending physician for the patients

**Outpatient Pediatric Rehabilitation Expectations:**

- Attend clinics staffed by Pediatric Rehabilitation Attending
- Attend appropriate clinics staffed by Orthopedics, Surgery, Neurology, Neurosurgery
- Perform appropriate New Patient evaluation or follow-up evaluation on patients
- Make certain that all assessments and plans are consistent with the expectations and preferences of the physician of record
- Document notes and procedures in a manner that is consistent with the service requirements that meet the rules of the institutional site
- Act at the discretion of Attending physician of record for the patients

**Expectations for Procedures on Pediatric Rehabilitation:**

- Prepare for the case in advance by reviewing the appropriate procedural techniques, relevant anatomy, and patient information
- Verify that informed consent has been obtained from the patient's family or the authorized guardian
- Verify that the appropriate logistical arrangements have been completed for the scheduled procedure (medications, room reservations, equipment needed, etc)
- Document the procedure with an operative/procedure report as the circumstances dictate
- NOTE: Operative reports must be completed for every case done in the operating room. This required completion of the brief OP note, dictating an operative report for the case (stat), and performing a post OP check within 3 hours of completion of the case. Hospital policy required that the operative report be transcribed and available within 24 hours of operation completion. The report should specify the procedure, indications, pre-OP diagnosis, Post OP diagnosis, surgeon present, assistants present, consent completion, type of anesthesia, estimated blood loss, complications (or the absence thereof), and a narrative of the procedure. The narrative must detail the equipment used, the technique for the procedure and the verification that the planned interventions were completed at the appropriate site. The final portion of the note should detail PACU plans for pain control and the activity level and time frame to reintroduce activity following the procedure
- Procedures done outside of the operating room require similar documentation, except a brief OP note and a post OP check are usually not required. The dictation does not have to be transcribed within 24 hours, but it should contain an assessment and plan that provides follow up instructions and observation time (if any) allowed after procedure completion

**Expected Learning Goals:**

- Normal growth and development
- Application, efficacy and selection of Ped Rehab assessment tools
- Identification & management of common pediatric rehabilitation medical issues
- Principles and techniques for general pediatric rehabilitative therapeutic management
- Evaluation and prescription for orthotics, prosthetics, and assistive devices

- Principles and techniques of Ped Rehab procedures
- Rehabilitation management of patients with skeletal disorders and trauma
- Rehabilitation management of patients with cerebral palsy
- Rehabilitation management of patients with myelomeningocele
- Rehabilitation management of patients with spinal cord injury
- Rehabilitation management of patients with acquired brain injury
- Rehabilitation management of patients with limb deficiency or amputation
- Rehabilitation management of patients with neuromuscular diseases
- Rehabilitation management of patients with joint diseases
- Rehabilitation management of patients with burns
- Rehabilitation management of patients with peripheral nerve injuries
- Concept of evidence-based interventions
- Administrative issues related to children with disabilities
- Professionalism
- Ethics

The Pediatric Rehabilitation Medicine Rotation orientation handout was provided and the undersigned agree that it outlines the concepts crucial to and expected during the rotation.

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Signature of Resident

Date

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Signature of Attending

Date

**OPERATIVE REPORT:**

Must be dictated within 24 hours of the procedure. It should contain the following elements:

1. Surgeon(s) [this is the attending for the case]
2. Assistant(s) [other attendings and/or residents, students present]
3. Pre-Op Diagnosis [relevant to the procedure]
4. Post-Op Diagnosis [can say "same"]
5. Procedure
6. Indications
7. Consent [indicate that informed consent was signed by someone and filed on the chart or with the appropriate agency]
8. Anesthesia Type
9. Estimated Blood Loss
10. Specimens
11. Findings/Technique - narrative of the procedure
  - a. Indicate patient position
  - b. Indicate the approach or localization technique
  - c. Indicate the needle caliber and length as well as equipment used
  - d. Specify the method of confirmation that the procedure was complete
  - e. State that the attending was present for the entire procedure
12. Complications (or lack thereof)
13. Post Op plans [indicate post OP pain control, resumption of therapies, etc]

**HISTORY & PHYSICAL NOTE (Templates in EPIC start ... PRMHHP or ...PRMCONSULT, or PRMprog)**

This format is useful for new evaluations and initial consults. All Items covered in the assessment and plan should be supported by historical and collected information in the history and exam portions. Electronic notes and dictation should meet the criteria for the highest level of comprehensive billing.

1. Patient name, medical record number, and date of service
2. Referring MD
3. Present illness:
  - include reason for admission, referring hospital, dates of surgeries;
  - for patients with TBI:
    - include as many markers of severity as available:
      - Glasgow score at the scene,
      - duration of intubation,
      - Glasgow score after extubation.
    - include initial head CT scan findings, and pertinent f/u scans
4. Current Medications
5. Past Medical History
  - a. Allergies
  - b. Immunizations
  - c. Past Surgical History

- d. Birth History
6. Developmental History
7. Family History
8. Social History
  - a. Include hobbies and interests
  - b. School and/or work status
9. ROS  
include review by systems of function and problems prior to present illness with special attention to:
  - vision and hearing,
  - learning problems,
  - behavior problems
10. Examination
  - a. Vital Signs
  - b. General Appearance
  - c. HEENT
  - d. Neck
  - e. Chest
  - f. Cardiovascular
  - g. Abdominal
  - h. Back/Extremities
  - i. Skin
  - j. Neurological
    - i. Mental status
    - ii. Cranial nerves
    - iii. Sensation
    - iv. Motor & Coordination
11. Assessment and Plan

**DISCHARGE SUMMARY: (Templates in EPIC start ...PRMDC)**

These can be dictated or done in Epic

1. Identifying data for patient, Attending, and dictator.
2. Referring physician
3. Date of Admission
4. Date of Discharge
5. Final Diagnoses
6. Procedures
7. Complications
8. Consultants
9. Present Illness
10. Admission exam
11. Laboratory and Radiology results
12. Hospital Course (include pertinent DC exam, DC function, equipment, diet)
13. Discharge Medications
14. Discharge Condition (Usually "Good" or "Fair", never "stable")

15. Follow Up Appointments
  - a. Physician follow up appointments
  - b. Therapy referrals
  - c. Any nursing visits, i.e. Private Duty Nursing, Home Health Nurse
  - d. Lab or radiology follow-up
16. Copy (CC) persons (Primary Care Provider, non-CHOA providers at referring hospital)

**CHOA Dictation System:**

Dial: 404-785-3770 Outside of Hospital  
53770 Inside of Hospital

Physician ID Number (Use that of the Supervising Attending)  
Sholas 30277 Johnston 828 Vova 30389

Medical Record Number (Available on patient sticker)

Work Type (select one)

1. Pre-admit H & P
2. H & P
3. Consult
4. Op/Procedure Note
5. Neurophysiology
6. DC Summary
20. Clinic Note

Begin dictation, State your name and the type of report, Spell the name of the patient (First and last), and spell out all proper names. Dictate the Medical Record number along with the date of service for each dictation. Touch 5 to end.

Press 2 to pause/resume

Press 3 for short rewind

Press 5 to end (confirmation # will be given)

Press 8 to go to next dictation (conf # will be given)

To listen to Radiology reports:

Dial 53770

At prompt, press 55#

Enter patient birth date – six digits (mo-day-year)