PEDIATRIC NEUROLOGY RESIDENCY TRAINING MANUAL

PROGRAM HANDBOOK AND POLICY MANUAL

2017-2018
PEDIATRIC NEUROLOGY RESIDENCY TRAINING MANUAL
2017-2018

Tim Bernard, M.D.
Program Director

Adam Finney
Program Coordinator

Introduction

This manual is meant to serve as a guidebook for what to expect during your three years of pediatric neurology training. As a residency training program, there are requirements for your training that must be met in order for you to be board eligible, and to competently and independently manage neurological disorders of childhood. It is our goal to ensure that you are successful. Our training program is regularly reviewed by the Accreditation Council of Graduate Medical Education (ACGME). This is known as the accreditation process. They have published guidelines for programs in child neurology which are included in this training manual and may also be accessed by clicking on this link: ACGME Child Neurology Requirements.

Other reference materials include the training manual for the adult neurology core program. Participation in the adult neurology core program is required for completion of the pediatric neurology program. Our program is also supported by the Pediatrics residency training program at Children’s Hospital Colorado.

Important supplemental material to this manual is also contained in the University of Colorado Graduate Medical Education Manual which may be accessed by clicking on this link: GME Manual and The Resident and Fellow Guide from Children’s Hospital Colorado. The electronic form of this Pediatric Neurology Residency Training Manual will be maintained on the pediatric neurology website.

We require that all residents read this manual. To verify that you have received and read the manual, please sign both cover sheets and have the Child Neurology Residency Coordinator initial them. One will be kept in your file. Please keep one for your records.

Thanks for your cooperation. Our goal is to provide excellent training during your residency. We wish you the best.

_____________________________  ____________________
Resident Signature            Date

_____________________________
Coordinator's Initials

(Department Copy)
Introduction

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____________________________________________  _________________________
Resident Signature    Date

____________________________________________
Coordinator's Initials

(Resident's Copy)
### Program Personnel and Contact Information

<table>
<thead>
<tr>
<th>Tim Bernard, MD</th>
<th>Adam Finney,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Director</td>
<td>Education Coordinator</td>
</tr>
<tr>
<td>Associate Professor, Pediatrics &amp; Neurology</td>
<td></td>
</tr>
<tr>
<td>P: 720-777-0184</td>
<td>P: 720-777-2704</td>
</tr>
<tr>
<td><a href="mailto:timothy.bernard@childrenscolorado.org">timothy.bernard@childrenscolorado.org</a></td>
<td>F: 720-777-7285</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:adam.finney@childrenscolorado.org">adam.finney@childrenscolorado.org</a></td>
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### Faculty Listing and Clinical/Research Interests

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Clinical / Research Interests</th>
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<tbody>
<tr>
<td>Jennifer Armstrong, MD</td>
<td>Research: Pediatric stroke</td>
</tr>
<tr>
<td>Assistant Professor of Pediatrics</td>
<td></td>
</tr>
<tr>
<td>Joshua Bear, MD</td>
<td></td>
</tr>
<tr>
<td>Assistant Professor of Pediatrics and Neurology</td>
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</tr>
<tr>
<td>Timothy A. Benke, MD, PhD</td>
<td>Research: Synaptic development, neonatal seizures</td>
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<tr>
<td>Associate Professor of Pediatrics, Neurology and Pharmacology</td>
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</tr>
<tr>
<td>Timothy Bernard, MD</td>
<td>Research: Pediatric Stroke</td>
</tr>
<tr>
<td>Residency Program Director</td>
<td>Associate Professor of Pediatrics, Neurology</td>
</tr>
<tr>
<td>Amy Brooks-Kayal, MD</td>
<td>Research: Epilepsy, GABA receptors</td>
</tr>
<tr>
<td>Chief and Ponzio Family Chair in Pediatric Neurology</td>
<td>Professor of Pediatrics, Neurology and Pharmaceutical Sciences</td>
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<tr>
<td>Richard Boada, PhD</td>
<td>Research: Stroke</td>
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<tr>
<td>Assistant Professor of Pediatrics Clinical Neuropsychologist</td>
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<tr>
<td>Kevin Chapman, MD</td>
<td>Research: Complex epilepsy</td>
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<tr>
<td>Associate Professor of Neurology</td>
<td>Pediatric Epilepsy</td>
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<tr>
<td>Abigail Collins, MD</td>
<td>Research: Movement Disorders</td>
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<td>Assistant Professor of Pediatrics and Neurology</td>
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<tr>
<td>Andra Dingman, MD</td>
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<tr>
<td>Assistant Professor of Pediatrics and Neurology</td>
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<tr>
<td>Cornelia (Lia) Drees, MD</td>
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<tr>
<td>Assistant Professor of Pediatrics and Neurology</td>
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</tr>
<tr>
<td>Carolyn Green, MD</td>
<td>Research: Medical Home</td>
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<tr>
<td>Associate Professor and Medical Director</td>
<td></td>
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<tr>
<td>Mona Jacobson, CPNP</td>
<td></td>
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<tr>
<td>Joanne Janas, MD</td>
<td></td>
</tr>
<tr>
<td>Name</td>
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<tr>
<td>Jennifer Janusz, PsyD</td>
<td>Assistant Professor of Pediatrics; Clinical Neuropsychologist</td>
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<tr>
<td>Kelly Knupp, MD</td>
<td>Assistant Professor of Pediatrics and Neurology</td>
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<tr>
<td>Angelina Koehler, CPNP</td>
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<tr>
<td>Susan Koh, MD</td>
<td>Associate Professor of Pediatrics; Director – Epilepsy Unit</td>
</tr>
<tr>
<td>Pramote Laoprasert, MD</td>
<td>Associate Professor of Pediatrics and Neurology</td>
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<tr>
<td>Paul M. Levisohn, MD</td>
<td>Associate Professor of Pediatrics and Neurology</td>
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<td>Bradford R. Miller, MD</td>
<td>Professor of Pediatrics and Neurology</td>
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<tr>
<td>Paul G. Moe, MD</td>
<td>Professor of Pediatrics and Neurology</td>
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<tr>
<td>Margot Nagan, MD</td>
<td>Assistant Professor of Pediatrics and Neurology</td>
</tr>
<tr>
<td>Jennifer Oliver, PNP</td>
<td>Instructor of Pediatrics</td>
</tr>
<tr>
<td>Padmini Palat, MD</td>
<td>Medical Student Clerkship Director</td>
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<tr>
<td>Kristen Park, MD</td>
<td>Associate Professor of Pediatrics and Neurology</td>
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<tr>
<td>Julie A. Parsons, MD</td>
<td>Professor Pediatrics &amp; Neurology</td>
</tr>
<tr>
<td>Teri Schreiner, MD</td>
<td>Associate Director - Adult Neurology Residency</td>
</tr>
<tr>
<td>Alan Seay, MD</td>
<td>Professor Pediatrics &amp; Neurology</td>
</tr>
<tr>
<td>Stephanie Shea, PAC</td>
<td>Instructor of Pediatrics</td>
</tr>
<tr>
<td>Chelsey Stillman, PAC</td>
<td>Instructor of Pediatrics</td>
</tr>
<tr>
<td>Scott Turner, PNP</td>
<td>Senior Instructor of Pediatrics and Neurology</td>
</tr>
<tr>
<td>Greta N. Wilkening, PsyD</td>
<td>Associate Professor of Pediatrics; Director, Neuropsychology; Clinical Neuropsychologist</td>
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<tr>
<td>Andy White, MD</td>
<td>Assistant Professor of Pediatrics and Neurology</td>
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### Associated Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Clinical / Research Interests</th>
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<tbody>
<tr>
<td>Nick Stence, MD</td>
<td>Neuroradiology</td>
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<tr>
<td>Kathleen Dorris, MD</td>
<td>Neuro-oncology</td>
</tr>
<tr>
<td>Peter Baker, MD</td>
<td>Metabolic disease</td>
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<tr>
<td>Bette Kleinschmidt-DeMasters, MD</td>
<td>Neuropathology</td>
</tr>
<tr>
<td>Marga Saenz, MD</td>
<td>Genetics</td>
</tr>
<tr>
<td>Dennis Matthews, MD</td>
<td>Rehabilitation Service,</td>
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<tr>
<td>Ann Reynolds, MD</td>
<td>Developmental Pediatrics</td>
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<tr>
<td>John Maloney, MD</td>
<td>Neuroradiology</td>
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### Resident & Fellow Listing (Updated Resident List)

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Lauren Treat, MD</td>
<td>Child Neurology Resident</td>
<td>PGY – 5</td>
<td>303-266-4509</td>
</tr>
<tr>
<td>Elizabeth Halperin, MD</td>
<td>Child Neurology Resident</td>
<td>PGY – 5</td>
<td>303-266-4485</td>
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<tr>
<td>Timothy Luebbert, MD</td>
<td>Child Neurology Resident</td>
<td>PGY - 5</td>
<td>303-266-4492</td>
</tr>
<tr>
<td>Austin Baltensperger, MD</td>
<td>Child Neurology Resident</td>
<td>PGY - 4</td>
<td>303-266-3686</td>
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<tr>
<td>Alicia Henriquez, MD</td>
<td>Child Neurology Resident</td>
<td>PGY - 4</td>
<td>303-266-2572</td>
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<tr>
<td>Gary Morris, MD</td>
<td>Child Neurology Resident</td>
<td>PGY - 4</td>
<td>303-266-3687</td>
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<tr>
<td>Elizabeth Tolar, MD</td>
<td>Child Neurology Resident</td>
<td>PGY - 4</td>
<td>303-266-2598</td>
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<tr>
<td>Dylan Brock, MD</td>
<td>Child Neurology Resident</td>
<td>PGY – 3</td>
<td>303-266-1257</td>
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<tr>
<td>Ryan Kammeyer, MD</td>
<td>Child Neurology Resident</td>
<td>PGY – 3</td>
<td>303-266-1306</td>
</tr>
<tr>
<td>Laurel McGarry, MD</td>
<td>Child Neurology Resident</td>
<td>PGY - 3</td>
<td>303-266-1333</td>
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<tr>
<td>Julie Ziobro, MD, PhD</td>
<td>Pediatric Epilepsy Fellow</td>
<td></td>
<td>303-266-5316</td>
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<tr>
<td>Krista Eschbach MD</td>
<td>Pediatric Epilepsy Fellow</td>
<td></td>
<td>303-266-5315</td>
</tr>
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</table>
Program Curriculum

General Principles and Program Structure
The program is set up to complete the length of training in child neurology as required by the American Board of Psychiatry and Neurology and the ACGME:

- One year must be adult clinical neurology
- One year must be clinical child neurology with a minimum of 4 months outpatient experience
- Participation in a Resident longitudinal/continuity clinic at least one half day weekly is required throughout the program.
- One year is referred to as “flexible” and the resident must learn “principles of neuropathology, neuroradiology, neuro-ophthalmology, psychiatry, rehabilitation, neurological surgery, neurodevelopment, and the basic sciences.

The curriculum is established to provide a framework to meet these goals. Patient care responsibilities are meant to ensure a balance between patient care and education that achieves for the trainee an optimal educational experience consistent with the best medical care. Patient care responsibilities include inpatient, outpatient, critical care and consultation experiences.

Teaching is provided by the program director and teaching staff. Teaching staff are certified by the ABPN with special qualification in child neurology and have diverse interests and skills to meet the broad needs to provide the breadth of teaching necessary. The teaching staff actively pursues scholarly activities in the neurosciences and encourages residents to do the same. An Education Committee comprised of the teaching staff and at least one of the child neurology residents regularly (bi-annually) reviews various aspects of the training program as well as materials in this manual.

There is always a designated member of the teaching staff available to assume the responsibilities of the day-to-day activities of the program. Clinical teaching rounds are at least 5 days per week. The teaching staff regularly discusses the program’s progress, effectiveness and use of resources at faculty meetings. Resident participation on an annual basis at these meetings is encouraged.

Other faculty available for teaching includes those with expertise in neuropsychology, child psychiatry, neuro-oncology, neuroradiology, neuropathology, neurosurgery, genetics, child development, epilepsy, movement disorders, critical care, neuro-ophthalmology, metabolic disease, neuroimmunology, infectious diseases, neuromuscular diseases, rehabilitation, clinical neurophysiology palliative care and pain management.

PGY 3
Per the adult neurology 1st year core. Typically:
7 blocks: Adult Neurology inpatient ward service at University Hospital, VA & Denver Health Medical Center; Night Float schedule at University Hospital Call schedule typically every 4th night in house at VA & Denver Health Medical Center
2 blocks: Adult Neurology ambulatory services at University Hospital and VA Hospitals
2 blocks: adult electives in Neuroradiology and Neurophysiology
1 block: Inpatient & emergency consult service at Children’s Hospital Colorado
1 block: Dedicated research elective at Children’s Hospital Colorado
Continuity Clinic in Child Neurology at CHC; one-half day weekly, mandatory attendance

1st Year
Above is structured to meet the Residency Review Committee (RRC) requirements. RRC requirements note:

at least 12 FTE months of adult neurology that do not need to be contiguous, including:

- six months on inpatient rotations (an inpatient rotation is defined as one that requires more than 50 percent of time spent managing patients admitted to an inpatient service requiring neurologic care) (Core)
- three months of outpatient clinical adult neurology (an outpatient rotation is defined as any rotation that requires more than 50 percent of time spent managing patients in an outpatient clinic setting); and, (Core)
- three months of elective adult neurology clinical experiences. Rotations on subspecialty areas of neurology, including neuroradiology, neuropathology, and neurophysiology, may be counted toward this requirement. (Detail)

at least 12 FTE months of clinical child neurology; (Core)

- This must include at least four FTE months of outpatient experience. (Core)
- at least a one-month FTE experience under the supervision of a qualified child and adolescent psychiatrist; (Core)
- a minimum of three months elective time with assignments that accommodate
individual resident interests and previous education; (Detail)
• management responsibility for hospitalized patients with neurological disorders, including pediatric patients with acute neurological disorders, in an intensive care unit and in an emergency department; (Detail)
• experience in the evaluation and management of patients with disorders of the nervous system requiring surgical management; and, (Detail)
• assignment on a consultation service to the medical, surgical, and psychiatric services. (Detail)
• Residents must attend a longitudinal/continuity clinic at least one half-day weekly throughout the duration of the program. (Core)

Program Specifics for PGY 3-5:
Continuity clinic will be attended weekly for ½ day throughout the 3 years of the program. This is mandatory. Certain program requirements are (partially) met through documented attendance at lectures. This includes basic science teaching, bioethics, palliative care, neuroradiology, neurosurgery, neuro-oncology, neuro-ophthalmology, psychiatry, neurodevelopment, rehabilitation, neuropsychology and neurophysiology

In ACGME block diagram form:

<table>
<thead>
<tr>
<th>BLOCK ROTATIONS – Program Year 1 (PGY3)</th>
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<tbody>
<tr>
<td>Block 1</td>
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LONGITUDINAL EXPERIENCES - Program Year 1

<table>
<thead>
<tr>
<th>Type Of Experience*</th>
<th>Weekly Structured</th>
<th>Number Of Weeks</th>
<th>Amount Of Time (FTE)</th>
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<tbody>
<tr>
<td>Child Neurology Continuity Clinic (CHC)</td>
<td>½ day each week</td>
<td>48 per year</td>
<td>24</td>
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Program Specifics PG3:
Details of the adult program are more closely detailed in the adult program training manual

Specific knowledge base gained: Diagnosis and management of inpatient and outpatient emergent, acute and chronic neurological disorders in adults.

Specific techniques learned: Use of the history and physical examination to diagnose and treat inpatient and outpatient emergent, acute and chronic neurological disorders in adults.
Assessment of competence: Direct observation by faculty including final written assessment at the end of the rotation.

During the adult year, residents will be trained on how to recognize and treat neurological disorders in adults. This training, supervised and detailed in the adult training manual, provides an opportunity to elicit by history and physical examination neuropathology in mature patients.

**BLOCK ROTATIONS - Program Year 2 (PGY4)**

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<td>CHC Neuro-oncology</td>
<td>CHC Outpatient Service/ Rotating Clinics</td>
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<td>Adult Elective: Neuro-pathology</td>
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**LONGITUDINAL EXPERIENCES – Program Year 2**

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<tr>
<th>Type Of Experience*</th>
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<tr>
<td>Child Neurology Continuity Clinic (CHC)</td>
<td>½ day each week</td>
<td>48 per year</td>
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<tr>
<td>Psychiatry: Child Psychiatry clinic (CHC)</td>
<td>½ day each week during outpatient months</td>
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<tr>
<td>Child Developmental Disorders and Behaviors clinic (CHC)</td>
<td>½ day each week during outpatient months</td>
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<tr>
<td>Genetics clinic &amp; Metabolic (CHC)</td>
<td>½ day each week during outpatient months</td>
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<tr>
<td>Rehabilitation/MDA clinic (CHC)</td>
<td>1 day each week during outpatient months</td>
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**BLOCK ROTATIONS - Program Year 3 (PGYS)**

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LONGITUDINAL EXPERIENCES - Program Year 3

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<tr>
<td>Psychiatry: Child Psychiatry clinic (CHC)</td>
<td>½ day each week during outpatient months</td>
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<tr>
<td>Child Developmental Disorders and Behaviors clinic (CHC)</td>
<td>½ day every other week during outpatient months</td>
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<tr>
<td>Genetics clinic (CHC)</td>
<td>½ day each week during outpatient months</td>
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<tr>
<td>Rehabilitation/MDA clinic (CHC)</td>
<td>1 day each week during outpatient months</td>
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</table>

**Program Specifics:**

Electives are approved and discussed with the program director at least 1 month prior to the beginning of the rotation to ensure that an outline of the specific knowledge gained, techniques learned and assessment strategies are in place. These can include basic or clinical science research training, epilepsy, neuromuscular, genetics, neurovascular/stroke, physical medicine, epidemiology, neuro-immunology, neuro-ophthalmology, neurosurgery, neuroradiology, neuro-oncology, neuropsychology and neurodevelopment.

Specific knowledge gained, techniques learned and assessment will depend on each rotation and will be determined prior to each rotation. Typically, assessment will be undertaken by the use of a written evaluation performed by the faculty person primarily involved in mentoring the resident for the rotation; clinical rotations will assess the 6 core ACGME competencies in regard to the specific rotation.
Neurology Orientation FAQs

Important information for your everyday life

*Anything in quotations is directly out of the Child Neurology ACGME Manual or the CU GME policy*

1. What are the core requirements of a child neurology resident (per ACGME)?
   a. 12 months of adult neurology
      i. 6 months adult neurology inpatient
      ii. 3 months adult neurology outpatient
      iii. 3 months adult neurology elective
   b. 12 months of clinical child neurology
      i. at least 4 months outpatient
      ii. at least one month child psych
      iii. at least three months of elective
2. What do we need to document/log per ACGME or program policy?
   a. Duty hours must be submitted weekly in MedHub
   b. Evaluations of monthly rotations and faculty you worked with must be submitted monthly in MedHub, within two weeks of the end of the rotation
   c. Conference attendance sheets must be submitted monthly (Done at the monthly resident meeting)
   d. Semi-annual evaluations must be submitted within 2 weeks of receiving them in MedHub
   e. Child Neurology Milestone evaluations must be completed prior to your in-person semi-annual review (now online)
   f. Self-reflection form must be completed annually and submitted in a sealed envelope to Program Coordinator
   g. Elective proposal forms must be submitted to Program Coordinator two weeks prior to your scheduled elective signed by the mentor for the elective
   h. All charts must be completed within 24 hours
3. What sort of QI requirement do we have?
   a. “Program director must ensure residents are integrated and actively participate in interdisciplinary clinical QI and patient safety programs”
   b. We meet this requirement:
      i. Yearly Participation in a M&M
      ii. Chief led QI projects that typically involve all residents
4. What sort of research requirement do we have?
   a. “Residents should participate in scholarly activity under the mentorship of program faculty members”
   b. Through the support of the SOC (Scholarly Oversight Committee) residents will be encouraged to engage in scholarly activity throughout the five years of residency.
      i. Phase 1 (PGY 1-3): Project Background and Preliminary Design (Aims page due by end of PGY 3)
      ii. Phase 2 (PGY 3-4): IRB Submission/presentation to NART (Due by the end of PGY 4)
iii. Phase 3 (PGY 4-5): Data Collection, Abstract Submission (Due by Neurology Research Day at the end of PGY 5)
   c. Research committee member will meet with every resident yearly to discuss research options, help identify a research mentor and discuss research progress
   d. By the end of your fifth year, you will be expected to give Grand Rounds and create a poster to display at the neurology resident research day in June.

5. What other presentations do we give?
   a. Weekly Case Conference – Case Conference occurs every week on Friday mornings and is divided among the residents.
   b. Journal Club – you will give two Journal Clubs one in your fourth year and one during your fifth year. Once you have identified your article(s) set-up a meeting with Kristen Park to discuss. Set up one meeting a month out to confirm article and set up another two weeks prior to review presentation. At least 5 Child Neurology Residents need to be at every journal club. **We will try to have the adult resident on-service cover these hours for the evening shift resident.**
   c. Thursday afternoon lectures- you will present one lecture during your fourth year and one during your fifth year. This can be on any topic of your choosing.
   d. Grand Rounds – you will split one Grand Rounds session with the other fifth year residents, presented at the end of your fifth year

6. What do we need to show up to each week/month?
   a. Weekly conferences that are mandatory include:
      i. Neuro-radiology conference every Tuesday at 8:30AM
      ii. Neurology Grand Rounds every Wednesday at 12pm
      iii. Neurology Didactics every Wednesday afternoon from 2-5pm
      iv. Child Neurology Lecture every Thursday afternoon from 12:30-1:30PM
      v. Child Neurology case conference every Friday morning at 7:30AM
   b. Monthly conferences include:
      i. Journal club will occur once a month, either on a Friday morning or off campus Wednesday once per quarter
      ii. Residency program meetings will occur on the Second Wednesday of every month following the Flipped Classroom time this will include PGY 3-5 but is open to everyone
      iii. Core EEG Lecture, usually the third Monday of every month
      iv. When applicable, the fifth Friday will be the Quarterly Resident meeting during the Case Conference Lecture time. The meeting is open to all residents PGY 3-5 are expected to attend
      v. The Flipped Classroom will occur on the Second Wednesday of every month 1-4 this will include PGY 3-5 but is open to everyone

7. How much continuity clinic do we do?
   a. “Residents must attend at continuity clinic at least one half-day weekly throughout the duration of the program” – This equates to 48 half-day continuity clinics (allowing for three weeks of vacation and one week of conference) so there will be months where you will have two clinics per week to make-up for other missed weeks.

8. What happens if we’re sick? Who covers us?
a. There is a jeopardy system in place for the residents to cover sick days where someone must cover (this includes the inpatient service and possibly some outpatient clinic days when patients are assigned to them)
b. Each resident will rotate two months at the top of the jeopardy list
c. If a resident is unable to come in due to illness/injury/etc, it is their responsibility to contact the resident at the top of the list for coverage and/or one of the chief residents, if that person is unavailable, move down the list until coverage is found.
d. If you are called to cover for Jeopardy and are not out of town or have other obligations, you must agree to cover.
e. This system is a payback system. If you cover a shift for someone, they will be expected to pay you back with coverage of a similar shift of your mutual agreement.
f. If you are listed as the first person on the jeopardy list, it is your responsibility to ensure that one of the other residents will be available for jeopardy if you go out of town during your two-month period.
g. Jeopardy list will be found on the Neurology Intranet site in the Residents/Students section
h. Please email the Program Coordinator and Program Director and Chief of Clinic Operations for tracking purposes
i. The yearly jeopardy schedule should be complete by July 1st and posted to the Intranet

9. Inclement Weather Policy
   a. **Inpatient (IP) residents and APPs (7am-5pm):** Unless informed otherwise by the IP attendings, all inpatient team members (residents and APPs) are essential and should report for work. The IP attendings may, at their discretion, determine that some team members are nonessential, but a minimum of one resident must remain in-hospital (either the senior resident or the resident on call later in the day). The in-hospital resident should carry both the Floor and ICU pagers
   b. **Inpatient (IP) resident on call (5pm-8am):** via phone/remote EPIC access AND available to return to the hospital within 40 minutes. If the resident is not able to reach the hospital within 40 minutes, the on-call resident should remain/return to be in-hospital overnight. If the resident remains in-hospital overnight, the resident should be relieved from clinical duties the following morning (to abide by 28-hour maximum duty hours).
   c. **Resident Jeopardy System:** If a resident cannot be present for a shift, it is the resident’s responsibility to facilitate other arrangements via the jeopardy system. This may include arriving later in the shift, switching calls with another resident, activating the Severe Weather Transportation hotline, or leaving their other clinical duties to arrive earlier. If a resident is asked to cover a shift in place of the scheduled resident during the evening/night, this resident will be relieved of clinical duties the following day.

10. What are the rules about home call?
    a. See the blue book for details or refer to the ACGME policy located on the CU GME website at
       http://www.ucdenver.edu/academics/colleges/medicalschool/education/graduatemedicaleducation/GMEDocuments/Documents/12.%20Duty%20Hours/ACGME%20final%20Duty_Hour_Requirements.pdf

11. Can I go to a conference? Who pays for that? How much leave do I get?
a. Yes! Residents have $1100 per year to use towards conference attendance (registration, flights, hotels, meals, rental car, etc). If not used, this money transfers over to the following year
b. If you present at a conference (lecture or poster presentation you are entitled to an extra $500 in conference funds. This is only available once per year
c. Chief of Education, Chief of Inpatient Affairs, Chief of Outpatient Affairs all receive an additional $300 of conference funds.
d. There are 7 Calendar days approved for Educational leave this includes all educational conferences and educational visits to other Child Neurology programs. You need to let Adam know when you’re leaving. Note: We arrive at 7 days by adding 2 pay back days for covering Monday holidays.
e. It is the resident’s responsibility to be aware of deadlines for conference registration, request time off for conferences and/or find coverage for themselves. Please plan ahead.
f. The Program Coordinator will help you use your funds to register, purchase flights (this occurs through a program called Concur) and obtain reimbursement for expenses upon your return
g. Get and keep itemized receipts for everything!

12. Can I buy a book or equipment? Who pays for that?
   a. Yes! The Child Neurology Program has $2000 per year that we have traditionally divided evenly among the residents to give each resident $200/year for books/equipment. This is flexible however, and we can discuss other options for use of that money if we want. Talk to the Program Coordinator if you want to buy a book/equipment for yourself.

13. How do I take care of myself?
   a. Eat, sleep, exercise
   b. Find what helps you relax
   c. Don’t do it alone!
   d. Talk to chief residents, PD or PC
   f. CU GME Insurance also allows a certain number of counseling/therapy sessions with co-pay (currently 30 sessions per year with $20 co-pay)

14. What the heck is a clinical skills evaluation?
   a. Required for graduation by ABPN
   b. One adult, four child neurology patients
      i. One infant (0-2 years), one child (2-10 years), one adolescent (11-18)
      ii. One critically ill, one neuromuscular, one ambulatory (ED or clinic), one neurodegenerative (the hard one)

15. End of the year Policy
   a. If all charts, evaluations and official business is complete residents may take the last two weekdays of residency for self-study and board preparation at home
   b. Must be available via EPIC and cell phone
   c. Any variation to this must be approved by the Program Director by the end of May
General Goals and Objectives for Rotations in Pediatric Neurology

**Neuropathology rotation**

**Specific knowledge base gained:** Criteria for pathology-based diagnosis of diseases relevant to child neurology.

**Specific techniques learned:** An understanding of the different histological techniques used to make diagnosis of diseases relevant to child neurology.

**Assessment of competence:** Direct observation by faculty including final written assessment at the end of the rotation.

*This is to be accomplished by concentrated time with the neuropathology and neuro-oncology services. This will include gross observations during brain cuttings and autopsies and associated conferences as well as microscopic observations during “sign-out” of frozen and fixed specimens.*

**Rotation objectives:**

1. **Medical Knowledge**
   a. Acquisition and demonstration of the skills required to interpret neuropathology specimens, using gross inspection and microscopic techniques.
   b. Acquisition and demonstration of the ability to correlate pathologic findings with clinical symptoms
   c. Synthesis of such information to arrive at hypotheses and conclusions with respect to the pathogenesis of neurological and neurodevelopmental disorders.
   d. Development of criteria for ordering an autopsy on a patient or for ordering a biopsy on a patient.
   e. Creation of an individual, systematic process for review of neuroanatomy and neuropathology for neurology board preparation using existing resources and independent study.
   f. Understand basic and unusual types of vascular disease.
   g. Know common infections that affect the CNS, including the morphological appearance of the organisms
   h. Understand basic and latest updates on demyelinating diseases of the CNS, especially Multiple Sclerosis and Neuromyelitis Optica
   i. Understand basic features of toxic metabolic disease that affects the CNS
   j. Know grading system and biological behavior of common tumors that affect the CNS/PNS
   k. Understand the principles of muscle, nerve and neurodegenerative diseases including mode of inheritance where applicable
   l. Read Prayson Textbook of Neuropathology

2. **Patient Care Skills**
   a. Acquisition and demonstration of the ability to correlate pathologic findings with clinical symptoms
b. Synthesis of such information to arrive at hypotheses and conclusions with respect to the pathogenesis of neurological and neurodevelopmental disorders.
c. Development of criteria for ordering an autopsy on a patient or for ordering a biopsy on a patient. Creation of an individual, systematic process for review of neuroanatomy and neuropathology for neurology board preparation using existing resources and independent study.

3. **Interpersonal and Communication Skills**
a. Development of criteria for ordering an autopsy on a patient or for ordering a biopsy on a patient.

4. **Professionalism**
a. Development of criteria for ordering an autopsy on a patient or for ordering a biopsy on a patient.
b. Attendance at all autopsies lectures and demonstrations during the rotation.

5. **Systems-Based Practice**
a. Recognize the factors involved in to insure quality control and of pathology specimens and autopsy material.

6. **Practice-Based Learning and Improvement**
a. Acquisition and demonstration of the ability to correlate pathologic findings with clinical symptoms.
b. Development of criteria for ordering an autopsy on a patient or for ordering a biopsy on a patient.
c. Creation of an individual, systematic process for review of neuroanatomy and neuropathology for neurology board preparation using existing resources and independent study.

### Neuroradiology rotation

**Specific knowledge base gained:** Criteria for radiology-based diagnosis of diseases relevant to child neurology.

**Specific techniques learned:** An understanding of the different radiological techniques used to make diagnosis of diseases relevant to child neurology.

**Assessment of competence:** Direct observation by faculty including final written assessment at the end of the rotation.

*This is to be accomplished by concentrated time with the neuroradiology services. This will include shadowing a neuroradiologist during their rounds and participation in associated weekly conferences. Modalities to be observed include ultrasound, plain radiography, computerized tomography, MRI, SPECT and various modalities and arteriography.*

**Rotation Objectives:**
The pediatric neurology resident should gain exposure to the following topics both by review of films, review of teaching files and independent reading. The normal developmental changes seen
radiographically in a developing child, pediatric congenital malformations of the brain and spinal cord, diseases of the white matter, pediatric strokes, encephalitis, post infectious encephalitis, pediatric brain tumors.

1. **Medical Knowledge**
   a. Acquisition of additional exposure to the organized evaluation and interpretation of neuroimaging studies of the brain and spinal cord including CT, MRI, MR angiography, conventional angiography, and brain ultrasound
   b. Acquisition of knowledge of neuroanatomy and vascular anatomy of the brain and spine as it relates to neuroimaging
   c. Acquisition of basic understanding of neuroimaging technology
   d. Exposure to the procedural aspects of neuroimaging
   e. Attendance at neuroradiology reading rounds with the pediatric neuroradiologist at least 4 days a week
   f. Development of criteria for ordering neuroimaging studies
   g. Organization of a self review of neuroanatomy, using reference texts and teaching files
   h. Attendance and observation of at least one case each of myelography and conventional cerebral angiography in the adult, as well as attend and observe at least one case each of neonatal head ultrasound, and MRI/MRA brain with sedation in a child.
   i. Criteria for radiology based diagnosis of diseases relevant to child neurology.

2. **Patient Care Skills**
   a. Acquisition of additional exposure to the organized evaluation and interpretation of neuroimaging studies of the brain and spinal cord including CT, MRI, MR angiography, conventional angiography, and brain ultrasound
   b. Acquisition of knowledge re: neuroanatomy and vascular anatomy of the brain and spine as it relates to neuroimaging
   c. Acquisition of basic understanding of neuroimaging technology
   d. Exposure to the procedural aspects of neuroimaging
   e. Attendance at neuroradiology reading rounds with the pediatric neuroradiologist at least 4 days a week
   f. Development of criteria for ordering neuroimaging studies
   g. Organization of a self review of neuroanatomy, using reference texts and teaching files
   h. Attendance and observation of at least one case each of myelography and conventional cerebral angiography in the adult, as well as attend and observe at least one case each of neonatal head ultrasound, and MRI/MRA brain with sedation in a child.

3. **Interpersonal and Communication Skills**
   a. Attendance at neuroradiology reading rounds with the pediatric neuroradiologist at least 4 days a week
   b. Development of criteria for ordering neuroimaging studies

4. **Professionalism**
a. Attendance at neuroradiology reading rounds with the pediatric neuroradiologist at least 4 days a week
b. Development of criteria for ordering neuroimaging

5. Systems-Based Practice
   a. Be able to provide criteria for selection of neuroimaging for pediatric appropriate patients to neurology team and other services
   b. Provide interpretation of neuroimaging studies to the neurology team and other services

6. Practice-Based Learning and Improvement
   a. Organization of a self review of neuroanatomy, using reference texts and teaching files
   b. Provide interpretation of neuroimaging studies to the neurology team and other services

**Neurophysiology rotation**

Specific knowledge base gained: Criteria for electrophysiology-based diagnosis of diseases relevant to child neurology.

Specific techniques learned: An understanding of the different electrophysiological techniques used to make diagnosis of diseases relevant to child neurology.

Assessment of competence: Direct observation by faculty including final written assessment at the end of the rotation.

This will be done by concentrated time with the epilepsy service. This will include patient care of children admitted to the epilepsy service for monitoring and surgery. EEG basics and readings will be supervised by child neurology staff. EMG and NCS basics and readings will be supervised by child neurology and physical medicine staff.

**Rotation objectives:**
1. Medical Knowledge
   a. Differentiating between normal and abnormal EEG waveforms for children and for neonates
   b. Benign variants seen in children as well as posterior dominant rhythm
   c. Understanding some of the common waveforms seen in neonates (i.e. delta brushes, negative sharp transients, positive sharp transients). Understand what is the difference between neonatal recording and regular childhood recording.
   d. What a seizure pattern looks like and whether a seizure is partial or generalized
   e. What the background looks like in a benign childhood epilepsy (meaning: normal background in between spikes, the 3Hz spike and wave pattern, Rolandic spikes)
   f. What the background looks like in an encephalopathic patient and the different patterns seen (i.e. burst suppression, invariance, OIRDA, triphasic waves, PLEDs)
   g. The benefits and disadvantages of videotelemetry, ambulatory EEG and continuous ICU monitoring
   h. Differentiating artifact in a recording
i. The differences in montages, paper speed, sensitivity, and the basic technical aspects of EEG such as the International 10-20 system
j. Use of activation in children
k. What is normal sleep and what is electrical status epilepticus of sleep
l. What is an electrocerebral silence recording
m. When a patient is an epilepsy surgery candidate and when a patient needs functional mapping, ECoG versus subdural grids, etc
n. What is a Wada examination and why is it used?
o. Other modalities for epilepsy treatment: ketogenic diet, vagal nerve stimulation and when to use them

2. Patient Care Skills
   a. Describing what an EEG report means
   b. How to interpret a normal EEG
   c. Taking a history and physical for an epilepsy patient in clinic
   d. When to use Ketogenic diet and vagal nerve stimulator
   e. Determining from the history and physical if a patient has focal or partial seizures
   f. Determining which medication choices may benefit a patient

3. Interpersonal and Communication Skills
   a. Describing an EEG report to a physician and inpatient service group
   b. Explaining to a technician why a patient needs to be hooked up for EEG
   c. Explaining to the attending epileptologist what one is seeing on a background

4. Professionalism
   a. The rapport a resident has with a patient and if this is appropriate
   b. The rapport with the attending epileptologist and with the EEG technicians
   c. The rapport and way a resident discusses the results of an EEG with the inpatient team
   d. Whether the resident is on time and completes his work appropriately

5. Systems-Based Practice
   a. How the resident is able to interpret and explain to the referring inpatient team the results of the telemetry and EEG
   b. How the resident is able to use the MRI scans and functional neuroimaging scans for the patient
   c. If the resident knows what referral is appropriate for neuropsychology and other services

6. Practice-Based Learning and Improvement
   a. If the resident is able to understand what is being explained to him in didactic lectures, reading and observing waveforms during rounds and is able to improve his interpretation technique and dictation on EEG reading
   b. If the resident is able to understand what is being explained to him in didactic lectures, reading and able to translate that to improved patient care in terms of coming up with a differential diagnosis and better treatment plan in epilepsy clinic

Neuro-oncology rotation
**Assessment of competence:** Direct observation by faculty including final written assessment at the end of the rotation.

**Rotation objectives:**

1. **Medical Knowledge**
   a. Acquisition of experience in the diagnosis and management of the following disorders: cerebellar medulloblastoma, cerebellar and cerebral astrocytoma, spinal cord tumors—intramedullary, intradural, and extradural, neurofibromas, dysembryonic neuroectodermal tumors, gangliogliomas and other tumors of the central and peripheral nervous system.
   b. Familiarity with the national protocols used to treat central nervous system tumors in children.
   c. Familiarity with many of the chemotherapeutic agents—their indications and potential side effects.

2. **Patient Care Skills**
   a. Acquisition and mastery of the neurologic history and exam in children with tumors of the central and peripheral nervous systems.

3. **Interpersonal and Communication Skills**
   a. Communicate effectively with oncology patients and parents using verbal, non-verbal, and writing skills.
   b. Transmit information to patients in a clear, meaningful fashion.
   c. Work effectively with the neurology care team.

4. **Professionalism**
   a. Use medical records effectively to document the course of illness and treatment.
   b. Demonstrate ethical behavior and integrity, honesty and compassion.
   c. Demonstrate appreciating end of life issues and end of life care.

5. **Systems-Based Practice**
   a. Utilize appropriate consultation and referral for optimal management of oncology patients.
   b. Demonstrate accurate cross coverage and documentation of accurate medical data in communications and management of oncology patients.
   c. Demonstrate knowledge of community systems and support services such as rehabilitation, hospice, palliative care, and skilled care.

6. **Practice-Based Learning and Improvement**
   a. Demonstrate appropriate skills with regard to literature databases, drug information databases.
   b. Active Participation in conferences, patient care conferences, tumor board, and any other organized educational activities during oncology rotation.
   c. Familiarity with treatment and study trial protocols for oncology patients.

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**Outpatient Clinic rotations**
During months on the rotating outpatient clinic schedule, an example weekly schedule is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td>AM</td>
<td>Child Psychiatry clinic/consult</td>
<td>Continuity or Neurology</td>
<td>TTM* or Continuity Clinic</td>
<td>Metabolic Clinic</td>
<td>Neuromuscular/ Rehab</td>
</tr>
<tr>
<td>PM</td>
<td>NeuroGenetics</td>
<td>Admin</td>
<td>Didactic afternoon</td>
<td>Continuity or Neurology</td>
<td>Neuromuscular/ Rehab</td>
</tr>
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</table>

- *Tics, Tremors, Movement clinic
- Other clinics in this month will include Stroke, Neuro-immunology, Lumbar Puncture, New Onset Epilepsy and Complicated Epilepsy

**PGY – 4 Rotation Objectives:**

1. **Medical Knowledge**
   a. Acquisition and demonstration of the medical, organizational, and communication skills necessary to provide longitudinal care to neurological/neurodevelopmental disabilities in patients
   b. Acquisition and demonstration of the medical, organizational and communication skills necessary to provide longitudinal service and education to referring primary care physicians, therapists, teachers and educational aides, school nurses, and social workers
   c. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities

2. **Patient Care Skills**
   a. Acquisition and demonstration of the medical, organizational, and communication skills necessary to provide longitudinal care to neurological/neurodevelopmental disabilities in patients including: Collection of medical information by history and examination; localization of the lesion/clinical problem; generation of a differential diagnosis and plan of investigation and treatment; appropriate selection and skillful performance of required technical skills treatment of patients and families with respect and empathy
   b. Acquisition and demonstration of the medical, organizational and communication skills necessary to provide longitudinal service and education to referring primary care physicians, therapists, teachers and educational aides, school nurses, and social workers
   c. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities

3. **Interpersonal and Communication Skills**
   a. Acquisition and demonstration of the medical, organizational, and communication skills necessary to provide longitudinal care to neurological/ neurodevelopmental disabilities in patients including:
   b. Successful communication with patients and families in the face of cultural, educational, language or emotional barriers
c. Clear, correct presentation of spoken or written medical material to patients, families, the community, students, colleagues

d. Ability to communicate with consultants in a timely and appropriate manner

e. Continued development of the communication skills necessary in order to effectively communicate to families and other health care providers in the team about the patient’s medical condition, the necessary diagnostic tests, and management plan. These communication skills include excellent listening skills, ability to establish rapport with patient and family, ability to explain medical terms in a simplified manner, culturally sensitive care.

4. **Professionalism**
   a. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities including:
   
   b. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting
   
   c. Further experience teaching of medical students and service rotators in the adult rotations, and to further hone the skills of team management with an expanded role in the supervision and teaching

5. **Systems-Based Practice**
   a. Acquisition and demonstration of increasing independence in the medical, organizational, and communication skills necessary to provide longitudinal care to neurological/neurodevelopmental disabilities in patients including:
   
   b. Understanding the cost of most diagnostic tests and medication in order to consider cost: benefit ratio and other economic factors (such as insurance) in patient management decisions
   
   c. Successful use of multidisciplinary case management to deliver medical care—including the primary care provider, other physicians, nurses, social workers, child protective services, physical therapists, occupational therapists, speech therapists, community liaisons, and others in the health care team
   
   d. Successful and timely completion of documentation to minimize inefficiency and poor communication
   
   e. Understanding of the criteria for referring to subspecialist and how to interact with these providers
   
   f. Understanding of current community and national health care issues
   
   g. Integration into systems-based practice through the care team models in clinic involving allied health professionals

6. **Practice-Based Learning and Improvement**
   a. Acquisition and demonstration of the medical, organizational and communication skills necessary to provide longitudinal service and education to referring primary care physicians, therapists, teachers and educational aides, school nurses, and social workers
   
   b. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities.
PGY – 5 Rotation Objectives:

1. **Medical Knowledge**
   a. Acquisition and demonstration of increasing independence in the medical, organizational, and communication skills necessary to provide longitudinal care to neurological and neurodevelopmental disabilities in patients
   b. Acquisition and demonstration of increasing independence in the medical, organizational and communication skills necessary to provide longitudinal service and education to referring primary care physicians, therapists, teachers and educational aides, school nurses, and social workers
   c. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities

2. **Patient Care Skills**
   a. Acquisition and demonstration of the medical, organizational, and communication skills necessary to provide longitudinal care to neurological/ neurodevelopmental disabilities in patients including:
   b. Collection of medical information by history and examination; localization of the lesion/clinical problem; generation of a differential diagnosis and plan of investigation and treatment; appropriate selection and skillful performance of required technical skills; treatment of patients and families with respect and empathy
   c. Acquisition and demonstration of the medical, organizational and communication skills necessary to provide longitudinal service and education to referring primary care physicians, therapists, teachers and educational aides, school nurses, and social workers
   d. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities

3. **Interpersonal and Communication Skills**
   a. Acquisition and demonstration of increasing independence in the medical, organizational, and communication skills necessary to provide longitudinal care to neurological/ neurodevelopmental disabilities in patients including:
   b. Successful communication with patients and families in the face of cultural, educational, language or emotional barriers
   c. Clear, correct presentation of spoken or written medical material to patients, families, the community, students, colleagues
   d. Ability to communicate with consultants in a timely and appropriate manner
   e. Mastery of the communication skills necessary in order to effectively communicate to families and other health care providers in the team about the patient's medical condition, the necessary diagnostic tests, and management plan. These communication skills include excellent listening skills, ability to establish rapport with patient and family, ability to explain medical terms in a simplified manner, culturally sensitive care)

4. **Professionalism**
a. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities including mastery of the following:

b. The skills required to function as the leader of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting

c. The skills required to be the leader of the teaching of medical students and service rotators in the adult rotations, and to further hone the skills of team management with an expanded role in the supervision and teaching

5. Systems-Based Practice
   a. Acquisition and demonstration of increasing independence in the medical, organizational, and communication skills necessary to provide longitudinal care to neurological/neurodevelopmental disabilities in patients including:
   b. Understanding the cost of most diagnostic tests and medication in order to consider cost: benefit ratio and other economic factors (such as insurance) in patient management decisions
   c. Successful use of multidisciplinary case management to deliver medical care—including other physicians, nurses, social workers, child protective services, physical therapists, occupational therapists, speech therapists, community liaisons, and others in the health care team
   d. Successful completion of documentation to minimize inefficiency and poor communication
   e. Understanding of the criteria for referring to subspecialist and how to interact with these providers
   f. Understanding of current community and national health care issues
   g. Full integration into systems-based practice through the care team models in clinic involving allied health professionals

6. Practice-Based Learning and Improvement
   a. Acquisition and demonstration of increasing independence in the medical, organizational and communication skills necessary to provide longitudinal service and education to referring primary care physicians, therapists, teachers and educational aides, school nurses, and social workers
   b. Establishment of oneself as the primary neurologist (under supervision) for a group of pediatric patients with neurological disorders and/or neurodevelopmental disabilities

**Genetics and Metabolic clinic**

Specific knowledge base gained: Knowledge of metabolic and inherited basis of diseases relevant to child neurology and the basic aspects of genetic counseling of inherited diseases.

Specific techniques learned: Utilization of the latest molecular modalities available for diagnosis of diseases relevant to child neurology, obtaining genetic history, genetic counseling.

Assessment of competence: Direct observation by faculty including final written assessment at the end of the rotation.
Genetics clinics include participation in the Inherited Metabolic Disease and Neurocutaneous clinics. Supervision is by Genetics and Metabolic staff. Residents are to participate as genetic fellows in this discipline and are responsible for seeing new outpatient consultations as well as follow-up visits.

REQUIRED: Please refer to Appendix 7 for the clinic check list and forms required for this rotation.

Rotation objectives:
1. Medical Knowledge
   a. Acquisition and demonstration of the skills required to obtain and record a basic family/genetic history
   b. Acquisition and demonstration of the skills to perform a basic dysmorphology examination
   c. Acquisition and demonstration of the skills required to recognize the following clinical presentations of inborn errors of metabolism and be able to initiate investigation, diagnosis, and consultation where indicated, always providing efficient, culturally competent, cost-effective care: chronic encephalopathy, progressive myoclonic epilepsy, movement disorder, myopathy/muscle weakness, stroke, psychiatric problems, hypoglycemia, lactic acidosis, hyperammonemia, cyclic vomiting, and neonatal acute encephalopathy
   d. Acquisition and demonstration of the skills to recognize the signs and symptoms of the following disorders, initiate appropriate investigational studies needed to confirm the diagnosis, and institute appropriate management therapies: amino acidopathies; organic acidemias; mitochondrial disorders; neurotransmitter disorders; urea cycle disorders; peroxisomal disorders; lysosomal storage disorders; defects in fatty acid metabolism; vitamin deficiencies (including Vitamin B12, folate, and pyridoxine); pyridoxine dependency; mucopolysaccharidoses; defects in copper metabolism; porphyria. Again, the resident will always demonstrate effective, cost-efficient, and culturally competent care.
   e. Acquisition and demonstration of the skills required to recognize the signs and symptoms of following chromosomal/genetic syndromes and to be able to initiate the appropriate diagnostic studies to confirm the diagnosis: Trisomy 21 syndrome; Fragile X syndrome; Angelman’s syndrome; Rett’s syndrome; William’s syndrome; Smith-Lemli-Opitz syndrome; and other chromosomal/genetic syndromes. The resident should know the available management strategies for each syndrome, their mode of inheritance, and how to counsel families re: inheritance and prognosis.
   f. Acquisition and demonstration of the knowledge and skills required to diagnose and manage the neurocutaneous disorders, especially tuberous sclerosis and neurofibromatosis—signs and symptoms of the disorders; investigative studies; diagnostic criteria; complications of the disorders; management strategies; inheritance pattern; prognosis.
   g. Acquisition and demonstration of the skills required to utilize the genetics databases available on the internet
   h. Acquisition and demonstration of a basic knowledge in the principles of molecular genetics and how it can be applied to the clinical practice of pediatric neurology
2. **Patient Care Skills**
   a. Acquisition and demonstration of the skills required to obtain and record a basic family/genetic history
   b. Acquisition and demonstration of the skills to perform a basic dysmorphology examination
   c. Acquisition and demonstration of the skills required to recognize the following clinical presentations of inborn errors of metabolism and be able to initiate investigation, diagnosis, and consultation where indicated, always providing efficient, culturally competent, cost-effective care: chronic encephalopathy, progressive myoclonic epilepsy, movement disorder, myopathy/muscle weakness, stroke, psychiatric problems, hypoglycemia, lactic acidosis, hyperammonemia, cyclic vomiting, and neonatal acute encephalopathy.
   d. Acquisition and demonstration of the skills to recognize the signs and symptoms of the following disorders, initiate appropriate investigational studies needed to confirm the diagnosis, and institute appropriate management therapies:
      - amino acidopathies
      - organic acidemias
      - mitochondrial disorders
      - neurotransmitter disorders
      - urea cycle disorders
      - peroxisomal disorders
      - lysosomal storage disorders
      - defects in fatty acid metabolism
      - porphyría
      - pyridoxine dependency
      - defects in copper metabolism
      - mucopolysaccharidoses
      - vitamin deficiencies (including Vitamin B12, folate, and pyridoxine)
   e. Acquisition and demonstration of the skills required to recognize the signs and symptoms of following chromosomal/genetic syndromes and to be able to initiate the appropriate diagnostic studies to confirm the diagnosis: Trisomy 21 syndrome; Fragile X syndrome; Angelman’s syndrome; Rett’s syndrome; William’s syndrome; Smith-Lemli-Opitz syndrome; and other chromosomal/genetic syndromes. The resident should know the available management strategies for each syndrome, their mode of inheritance, and how to counsel families re: inheritance and prognosis.
   f. Acquisition and demonstration of the knowledge and skills required to diagnose and manage the neurocutaneous disorders, especially tuberous sclerosis and neurofibromatosis—signs and symptoms of the disorders; investigative studies; diagnostic criteria; complications of the disorders; management strategies; inheritance pattern; prognosis.
   g. Acquisition and demonstration of the skills required to utilize the genetics databases available on the internet
   h. Acquisition and demonstration of a basic knowledge in the principles of molecular genetics and how it can be applied to the clinical practice of pediatric neurology

3. **Interpersonal and Communication Skills**
   a. Acquisition and demonstration of the skills required to obtain and record a basic family/genetic history.
   b. Demonstrate complete and timely written documentation.
   c. Acquisition and demonstration of the skills required to recognize the following clinical presentations of inborn errors of metabolism and be able to initiate
investigation, diagnosis, and consultation where indicated, always providing efficient, culturally competent, cost-effective care: chronic encephalopathy, progressive myoclonic epilepsy, movement disorder, myopathy/muscle weakness, stroke, psychiatric problems, hypoglycemia, lactic acidosis, hyperammonemia, cyclic vomiting, and neonatal acute encephalopathy.

d. Acquisition and demonstration of the skills to recognize the signs and symptoms of the following disorders, initiate appropriate investigational studies needed to confirm the diagnosis, and institute appropriate management therapies: amino acidopathies; organic acidemias; mitochondrial disorders; neurotransmitter disorders; urea cycle disorders; peroxisomal disorders; lysosomal storage disorders; defects in fatty acid metabolism; vitamin deficiencies (including Vitamin B12, folate, and pyridoxine); pyridoxine dependency; mucopolysaccharidoses; defects in copper metabolism; porphyria. Again, the resident will always demonstrate effective, cost-efficient, and culturally competent care.

e. Acquisition and demonstration of the skills required to recognize the signs and symptoms of the following chromosomal/genetic syndromes and to be able to initiate the appropriate diagnostic studies to confirm the diagnosis: Trisomy 21 syndrome; Fragile X syndrome; Angelman’s syndrome; Rett’s syndrome; William’s syndrome; Smith-Lemli-Opitz syndrome; and other chromosomal/genetic syndromes. The resident should know the available management strategies for each syndrome, their mode of inheritance, and how to counsel families re: inheritance and prognosis.

f. Acquisition and demonstration of the knowledge and skills required to diagnose and manage the neurocutaneous disorders, especially tuberous sclerosis and neurofibromatosis—signs and symptoms of the disorders; investigative studies; diagnostic criteria; complications of the disorders; management strategies; inheritance pattern; prognosis.

4. **Professionalism**
   a. Establish oneself as the primary neurologist (under supervision) for a group of pediatric patients with inborn errors of metabolism, genetic disorders and neurocutaneous syndromes.

5. **Systems-Based Practice**
   a. Acquisition and demonstration of the skills required to recognize the following clinical presentations of inborn errors of metabolism and be able to initiate investigation, diagnosis, and consultation where indicated, always providing efficient, culturally competent, cost-effective care: chronic encephalopathy, progressive myoclonic epilepsy, movement disorder, myopathy/muscle weakness, stroke, psychiatric problems, hypoglycemia, lactic acidosis, hyperammonemia, cyclic vomiting, and neonatal acute encephalopathy.

   b. Acquisition and demonstration of the skills to recognize the signs and symptoms of the following disorders, initiate appropriate investigational studies needed to confirm the diagnosis, and institute appropriate management therapies: amino acidopathies; organic acidemias; mitochondrial disorders; neurotransmitter disorders; urea cycle disorders; peroxisomal disorders; lysosomal storage disorders; defects in fatty acid metabolism; vitamin deficiencies (including Vitamin B12, folate, and pyridoxine); pyridoxine dependency; mucopolysaccharidoses; defects in copper metabolism; porphyria. The resident will always demonstrate
effective, cost-efficient, and culturally competent care
c. Acquisition and demonstration of the knowledge and skills required to diagnose and manage the neurocutaneous disorders, especially tuberous sclerosis and neurofibromatosis—signs and symptoms of the disorders; investigative studies; diagnostic criteria; complications of the disorders; management strategies; inheritance pattern; prognosis.

6. **Practice-Based Learning and Improvement**
   a. Acquisition and demonstration of the skills required to recognize the following clinical presentations of inborn errors of metabolism and be able to initiate investigation, diagnosis, and consultation where indicated, always providing efficient, culturally competent, cost-effective care: chronic encephalopathy, progressive myoclonic epilepsy, movement disorder, myopathy/muscle weakness, stroke, psychiatric problems, hypoglycemia, lactic acidosis, hyperammonemia, cyclic vomiting, and neonatal acute encephalopathy.
   b. Acquisition and demonstration of the skills to recognize the signs and symptoms of the following disorders, initiate appropriate investigational studies needed to confirm the diagnosis, and institute appropriate management therapies: amino acidopathies; organic acidemias; mitochondrial disorders; neurotransmitter disorders; urea cycle disorders; peroxisomal disorders; lysosomal storage disorders; defects in fatty acid metabolism; vitamin deficiencies (including Vitamin B12, folate, and pyridoxine); pyridoxine dependency; mucopolysaccharidoses; defects in copper metabolism; porphyria. Again, the resident will always demonstrate effective, cost-efficient, and culturally competent care.
   c. Acquisition and demonstration of the skills required to recognize the signs and symptoms of following chromosomal/genetic syndromes and to be able to initiate the appropriate diagnostic studies to confirm the diagnosis: Trisomy 21 syndrome; Fragile X syndrome; Angelman’s syndrome; Rett’s syndrome; William’s syndrome; Smith-Lemli-Opitz syndrome; and other chromosomal/genetic syndromes. The resident should know the available management strategies for each syndrome, their mode of inheritance, and how to counsel families re: inheritance and prognosis.
   d. Acquisition and demonstration of the knowledge and skills required to diagnose and manage the neurocutaneous disorders, especially tuberous sclerosis and neurofibromatosis—signs and symptoms of the disorders; investigative studies; diagnostic criteria; complications of the disorders; management strategies; inheritance pattern; prognosis.
   e. Acquisition and demonstration of the skills required to utilize the genetics databases available on the internet.
   f. Acquisition and demonstration of a basic knowledge in the principles of molecular genetics and how it can be applied to the clinical practice of pediatric neurology.

**Child Psychiatry clinic/consult**

**Specific knowledge base gained:** Knowledge of psychiatric diseases relevant to child neurology and the ability to recognize and manage psychiatric disorders that may have neurological manifestations and vice versa. Specifically, residents should also become familiar with the principles and practice of psychopharmacology.

**Specific techniques learned:** Obtaining psychiatric history.
Assessment of competence: Direct observation by faculty including final written assessment at the end of the rotation.

Psychiatry clinics include general child psychiatry clinics and psychopharmacology clinics. The psychiatric liaison service provides inpatient psychiatric consultations. Supervision is by Psychiatry faculty. Residents are to participate as psychiatry fellows in this discipline and are responsible for seeing new consultations as well as follow-up visits.

Rotation objectives:
1. Medical Knowledge
   a. Knowledge of psychiatric diseases relevant to child neurology
   b. Ability to recognize and manage psychiatric disorders that have neurologic manifestations
   c. Become familiar with the principles and practice of psychopharmacology

2. Patient Care Skills
   a. Perform an appropriate psychiatric history on inpatients as well as outpatient consults
   b. Perform an appropriate psychiatric exam including mental status exam
   c. Understand parameters for chemical and physical restraints

3. Interpersonal and Communication Skills
   a. Demonstrate oral and written communication skills enabling establishment and maintenance of effective professional relationships with patients, families, and other members of the healthcare team
   b. Demonstrate skills to discuss sensitive issues in an effective, compassionate manner
   c. Perform complete and focused case presentations that are accurate and well organized.
   d. Prepare and maintain accurate medical records

4. Professionalism
   a. Display integrity, honesty and appropriate boundaries with patients, families and other professionals
   b. Recognized the limits of one’s knowledge and skills
   c. Protect patient privacy in discussions, medical records and professional interactions

5. Systems-Based Practice
   a. Prioritize patient problems
   b. Develop cost-effective diagnostic plans
   c. Develop evidence based plan for treatment
   d. Understand the roles and responsibilities of all members of the psychiatric team

6. Practice-Based Learning and Improvement
   a. Incorporate evidence based medicine into diagnostic work up and treatment plan
   b. Locate, evaluate, and incorporate information for problem solving and decision making relevant to the patients cared for
   c. Effectively transmit medical knowledge to medical staff
**Development clinic**

**Specific knowledge base gained:** Knowledge of developmental and psychiatric diseases relevant to child neurology and the ability to recognize and manage developmental disorders that may have neurological manifestations and vice versa. Specifically, residents should also become familiar with the principles and practice of psychopharmacology as it pertains to developmental disorders.

**Specific techniques learned:** Basic understanding of instruments used for neuropsychiatric and neuro-educational testing; obtaining developmental and behavioral history.

**Assessment of competence:** Direct observation by Developmental and Behavior faculty including final written assessment at the end of the rotation.

Development clinics are to focus on neurodevelopmental disabilities. Supervision is by Developmental Pediatrics staff. Residents are to participate as development fellows in this discipline and are responsible for seeing new consultations as well as follow-up visits.

**Neurology clinics (General Epilepsy and Neuromuscular)**

**Specific knowledge base gained:** Knowledge of the broad spectrum of child neurological disorders seen in the outpatient setting. This includes history taking, physical examination, usage and evaluation of testing modalities, use of anticonvulsants and other medicines including those used for migraine, communication of results and treatment plans, counseling, accessing therapy and other modalities in the health-care system and interaction with schools and educational counselors.

**Specific techniques learned:** Elements of obtaining the history and physical exam.

**Assessment of competence:** Direct observation by faculty including final written assessment at the end of the rotation.

Neurology clinics are general child neurology clinics. Epilepsy clinic and neuromuscular (NM) clinic are sub-specialty child neurology clinics. Supervision is by Child Neurology staff and jointly by Child Neurology, Physical Medicine and Genetics staff in the NM clinic. Residents are responsible for seeing new outpatient consultations as well as follow-up visits. NM clinic is essential to provide residents with the necessary exposure to the physical medicine service. The goals and objectives of the muscle clinic are to learn to recognize and manage neuromuscular disorders. The goals and objectives of the epilepsy clinic are to learn to recognize and manage epileptic disorders. Residents are to become familiar with the pharmacological profiles of all anticonvulsant medications. Residents are to become familiar with alternatives to anticonvulsant medications and how these are managed, including the ketogenic diet, vagal nerve stimulator and epilepsy surgery.

**Inpatient Consult Service**

**Specific knowledge base gained:** Knowledge of the broad spectrum of child neurological disorders seen in the inpatient setting, especially management of neurological emergencies and patients in the intensive care unit. This includes history taking, physical examination, evaluation and use of testing modalities, use of anticonvulsants and other medicines including those used for migraine,
communication of results and treatment plans, counseling, accessing therapy and other modalities in the health-care system and interaction with schools and educational counselors.

**Specific techniques learned:** patient history, physical and neurologic exam, diagnosis and management of pediatric neurologic disease.

**Assessment of competence:** Direct observation by faculty including final written assessment at the end of the rotation.

The pediatric neurology resident will learn from involvement in patient care, independent reading, case presentations and attending teaching that occurs during daily work rounds as well as didactic teaching sessions held 2 to 3 times a week.

**PGY-3 and 4 Rotation objectives:**

1. **Medical Knowledge** (topics to be covered – must cover and assess)
   a. Acquisition and mastering of the neurologic history and examination in children
   b. Increased clinical experience in the management of acute neurologic problems in children in the hospital setting
   c. Further development of a clinical approach to localization and differential diagnosis of neurologic disorders in children
   d. Further acquisition and refinement of the skills required to deliver competent and cost-effective medical care to children with primary neurological and neurodevelopmental disorders, as well as those patients who have neurological/neurodevelopmental consequences of systemic diseases
   e. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting
   f. Further experience teaching of medical students and service rotators in the adult rotations, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations
   g. Initiation of career planning through individualized reflection and faculty mentoring

2. **Patient Care Skills** (including technical skills to be learned and demonstrated – must cover and assess)
   a. Acquisition and mastering of the neurologic history and examination in children
   b. Increased clinical experience in the management of acute neurologic problems in children in the hospital setting
   c. Further development of a clinical approach to localization and differential diagnosis of neurologic disorders in children
   d. Further acquisition and refinement of the skills required to deliver competent and cost-effective medical care to children with primary neurological and neurodevelopmental disorders, as well as those patients who have neurological and neurodevelopmental consequences of systemic diseases
   e. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting
f. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting

3. **Interpersonal and Communication Skills**
   a. Acquisition of the communication skills necessary in order to effectively communicate to families and other health care providers in the team about the patient’s medical condition, the necessary diagnostic tests, and management plan. These communication skills include excellent listening skills, ability to establish rapport with patient and family, ability to explain medical terms in a simplified manner, culturally sensitive care.
   b. Further acquisition and refinement of the skills required to deliver competent and cost-effective medical care to children with primary neurological and neuorodevelopmental disorders, as well as those patients who have neurological and neuorodevelopmental consequences of systemic diseases.
   c. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.
   d. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.
   e. Further experience teaching of medical students and service rotators in the adult rotations, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations.

4. **Professionalism**
   a. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.
   b. Initiation of career planning through individualized reflection and faculty mentoring.
   c. Timely completion of consults’ medical records.

5. **Systems-Based Practice**
   a. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.
   b. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.
   c. Further experience teaching of medical students and service rotators in the adult rotations, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations.
   d. Initiation of career planning through individualized reflection and faculty mentoring.
6. **Practice-Based Learning and Improvement**
   a. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting
   b. Acquisition and demonstration of the skills required to function as part of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting
   c. Further experience teaching of medical students and service rotators in the adult rotations, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations
   d. Initiation of career planning through individualized reflection and faculty mentoring

**PGY-5 Rotation objectives:**
Residents are given increased responsibility and autonomy in the development of evaluation and care plans with the goal of independent practice. Emphasis is placed on leadership, management and team building skills in coordinating the ward and consultation services. Senior residents are also encouraged to participate in educational activities and research projects facilitated by attending faculty.

1. **Medical Knowledge** *(topics to be covered – must cover and assess)*
   a. Mastering of the neurologic history and examination in children, as well as the ability to teach these skills to junior members of the team
   b. Increased clinical experience in the management of acute neurologic problems in children in the hospital setting
   c. Further development of a clinical approach to localization and differential diagnosis of neurologic disorders in children
   d. Further acquisition and refinement of the skills required to deliver competent and cost-effective medical care to children with primary neurological and neurodevelopmental disorders, as well as those patients who have neurological/neurodevelopmental consequences of systemic diseases
   e. Development of the skills required to function as the leader of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting
   f. Leader of the teaching of medical students and service rotators, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations

2. **Patient Care Skills** *(including technical skills to be learned and demonstrated – must cover and assess)*
   a. Mastering of the neurologic history and examination in children, as well as the ability to teach these skills to junior members of the team
   b. Increased clinical experience in the management of acute neurologic problems in children in the hospital setting
   c. Further development of a clinical approach to localization and differential diagnosis of neurologic disorders in children
Further acquisition and refinement of the skills required to deliver competent and cost-effective medical care to children with primary neurological and neurodevelopmental disorders, as well as those patients who have neurological/neurodevelopmental consequences of systemic diseases.

Development of the skills required to function as the leader of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.

3. **Interpersonal and Communication Skills**
   a. Mastering of the neurologic history and examination in children, as well as the ability to teach these skills to junior members of the team.
   b. Acquisition of the communication skills necessary in order to effectively communicate to families and other health care providers in the team about the patient’s medical condition, the necessary diagnostic tests, and management plan. These communication skills include excellent listening skills, ability to establish rapport with patient and family, ability to explain medical terms in a simplified manner, culturally sensitive care.
   c. Further acquisition and refinement of the skills required to deliver competent and cost-effective medical care to children with primary neurological and neurodevelopmental disorders, as well as those patients who have neurological/neurodevelopmental consequences of systemic diseases.
   d. Development of the skills required to function as the leader of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.
   e. Leader of the teaching of medical students and service rotators, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations.

4. **Professionalism**
   a. Mastering of the neurologic history and examination in children, as well as the ability to teach these skills to junior members of the team.
   b. Development of the skills required to function as the leader of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.

5. **Systems-Based Practice**
   a. Development of the skills required to function as the leader of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting.
   b. Leader of the teaching of medical students and service rotators, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations.

6. **Practice-Based Learning and Improvement**
   a. Mastering of the neurologic history and examination in children, as well as the ability to teach these skills to junior members of the team.
b. Development of the skills required to function as the leader of a multidisciplinary health care team and to be able to organize the communication vehicles and resources required to transition patients to an outpatient setting

c. Leader of the teaching of medical students and service rotators, and to further hone the skills of team management with an expanded role in the supervision and teaching of students and service rotators as well as pediatric residents in the pediatric rotations

Research Elective Rotation

Rotation objectives:

1. Medical Knowledge (topics to be covered – must cover and assess)
   a. Completion of a resident research project.
   b. Grand Rounds presentation prior to graduation
   c. In depth research on a topic or area of interest to the resident

2. Patient Care Skills (including technical skills to be learned and demonstrated – must cover and assess)
   a. Dependent on project or scholarly work presented

3. Interpersonal and Communication Skills
   a. Effective written communication or display of research
   b. Effective oral communication of research subject matter

4. Professionalism
   a. Establishment of a research or career plan with direct mentoring from faculty

5. Systems-Based Practice
   a. Establishment of a career plan with direct mentoring from faculty

6. Practice-Based Learning and Improvement
   a. Completion of a resident quality improvement or safety project and Grand Rounds presentation prior to graduation
   b. Establishment of a career plan with direct mentoring from faculty

Overall Goals and Objectives with each training year

Broadly, residents will acquire progressive responsibility throughout the program; residents will be expected to liaise more with staff and referring physicians. As a residency training program, this curriculum is designed to meet two objectives. It will prepare residents to sit for board exams at the completion of the program; and to individually and competently attend to the neurological disorders of childhood. Residents will gradually be able to expand their differential diagnoses of, treatment options for, and management of patients as their experience and training progresses. Evaluation of individual resident’s progress toward achieving these basic goals and the related core competencies (see appendix 8) of each rotation will be graded on a rotation-by-rotation basis, which is typically monthly. Residents must achieve a satisfactory rating for each rotation or will need to repeat that rotation; further details are noted below (see Program Advancement).
Knowledge gained with each year of training:
1) Recognition of common neurological diseases in childhood and their differential diagnosis.
2) Competency in performing the neurologic examinations of infants and children.
3) Recognition of abnormal patterns of neurodevelopment.
4) Interpretation of neuro-diagnostic studies in infants and children.
5) Diagnosis and management of neurological emergencies in children.
6) Development of effective interactions with consulting services and ancillary staff.
7) Acquisition of effective practice management skills.
8) Familiarity with best practice guidelines.
9) Ability to incorporate evidence based medicine into practice.

### Conferences and Lectures

<table>
<thead>
<tr>
<th>DATE</th>
<th>MANDATORY</th>
<th>MONTHLY MANDATORY</th>
<th>OPTIONAL</th>
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</thead>
<tbody>
<tr>
<td>MON</td>
<td>12PM - EEG Conference</td>
<td></td>
<td>(1st, 2nd, 4th and 5th Tues) 12PM Child Psychology GRs</td>
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<tr>
<td>TUES</td>
<td>8:30AM – Neuro-radiology Conference 2nd Tues 7:30am Faculty Education or M&amp;M</td>
<td>(2nd Tues) 8:30AM Developmental Disabilities Research Group (2nd and 4th Tues) Developmental Psychobio Research Group</td>
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<tr>
<td>WED</td>
<td>12PM Grand Rounds 2PM - Neurology Resident Wednesday Didactics Series &amp; Neurology Grand Rounds</td>
<td>(2nd and 3rd Wed) Neuro-Onc Tumor Conference</td>
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<tr>
<td>THURS</td>
<td>12:30PM Child Neurology Weekly Lecture Series</td>
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<tr>
<td>FRI</td>
<td>7:30AM - Case Conference</td>
<td>(1st Fri) 7:30 AM Muscle Journal Club (4th Fri) 7:30AM Stroke conference</td>
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**Lectures:**
- **EEG Conference** - every Monday 12 noon to 1:00 pm in the Mt. Antero Conference Room
- **Neuro-radiology Conference** - every Tuesday 8:30-9:00 am in the Aspen conference room, on the first floor of the hospital on the back hall just before the double doors to the ED.
- **Journal Club** - There will be 9 journal clubs throughout the year. There will be 4-5 held on Friday mornings in place of the case conference and 4-5 that will be held Wednesday evening at a faculty member's house.
- **First Friday Muscle Journal Club** – the 1st Friday of every month at 7:30 am at Mt. Wilson
• **Neurology Resident Wednesday Didactic Series** - every Wed 2:00-5:00 pm on various topics. Meets in Research Bldg 2 - 5th Floor Conf. Room 5105.

• **Neurology Grand Rounds** - every Wed 12:00 pm on various topics; usually meets in RC-1 North, Hensel Phelps East Auditorium, 1st Floor, P18-1000 unless otherwise noted on the monthly schedule.

• **Child Neurology Weekly Lecture series** – every Thursday 12:30 noon to 1:30 pm in the Mt. Wilson Conference room on the third floor of the inpatient pavilion.

• **Case conference** - every Friday 7:30 am in the Mt Antero Conference room on the second floor of the hospital, just to the west of the outpatient elevators. - Neurology residents will present patients for discussion.

**Optional Lectures:**

• **Child Psychology Grand Rounds**, every Tuesday, 12 noon, (except the third Tuesday of the month)

• **Genetics Conference** – Every Wednesday, 3:00 p.m., Education 2 South, Room 2201

• **Developmental Disabilities Research Group (DDRG)** - 2nd Tuesday of the month, 8:30-9:30, ED2, 5th floor, Room 2305. Contact Susan.Hepburn@ucdenver.edu

• **Developmental Psychobiology Research Group** - the 2nd and 4th Tuesday of the month from 10-11:30. (Academic Year Only-not during the summer) The Children’s Hospital, Gary Pavilion (Basement), Denver Seminar Room
  [http://www.ucdenver.edu/academics/colleges/medicalschool/departments/psychiatry/Research/DPRG/Pages/DPRGOverview.aspx](http://www.ucdenver.edu/academics/colleges/medicalschool/departments/psychiatry/Research/DPRG/Pages/DPRGOverview.aspx)

• **Neuro-Oncology** – CNS Tumor Conference – 2nd and 3rd Wednesday of the Month, 7:30-8:30 a.m., 7th Floor Pyramid Peak Conference Room

• **Muscle Journal Club** - 1st Friday of the month at 7:30 AM in Mt. Wilson on the 2nd floor of the hospital.

• **Pediatric Neuroradiology Conference** – 7:30 a.m., the third Wednesday of the Month, Mt. Columbia Conference room, second floor conference center.

• **Stroke Conference** – 7:30 a.m. the fourth Friday of the month, Mt. Lincoln Conference room, on the first floor of the hospital on the back hall just before the double doors to the ED.

• **Ethics** – There are four Noon conferences throughout the year. Lecture announcements will be forwarded to Residents when they are received.
Program Manual Statement

The Pediatric Neurology Residency Program complies with Accreditation Council for Graduate Medical Education (ACGME) and UCDSOM Graduate Medical Education (GME) policies, procedures and processes which are available on the GME website. In addition, direct access is available by clicking hyperlinks throughout this Program Manual. The program reviews all GME and program policies, procedures and processes at least annually with residents/fellows.

GME Policies

Additional Pay for Additional Work Policy
Concern/Complaint Policy
Disciplinary Action Policy
Duty Hours Policy
Eligibility and Selection Policy
Evaluation and Promotion Policy
Grievance Policy
International Residency Rotations Policy
Leave Policy
Medical Records Policy
Moonlighting Policy
Non-Compete Policy
Physician Impairment Policy
Prescriptions: Residents Writing for Staff, Family & Friends Policy
Professionalism Policy
Quality Improvement and Patient Safety Policy
Supervision Policy
Transitions of Care (Structured Patient Hand-off) Policy
Policy on USMLE (and COMLEX) Examinations
Work Environment Policy

Key University of Colorado Policies

Sexual Harassment Policy
Disability Accommodation Policy
HIPAA Compliance
Objectives
1. Students will learn to elicit a detailed neurologic history.
2. Students will learn to perform a complete screening neurologic examination.
3. Students will learn to administer a cognitive scaled test such as the Mini-Mental State Examination (MMSE) or Montreal Cognitive Assessment (MOCA).
4. Students will be familiar with basic findings of the fundoscopic examination.
5. Students will learn to localize neurological deficits based on their knowledge of neuroanatomy, develop reasonable differential diagnoses and recommend appropriate evaluative and management plans for the following diseases and/or common neurological presentations:

<table>
<thead>
<tr>
<th>Common Symptoms</th>
<th>Diseases/Disorders</th>
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<tbody>
<tr>
<td>Weakness and/or numbness</td>
<td>Cerebrovascular disease/Stroke</td>
</tr>
<tr>
<td>Confusion and decreased responsiveness</td>
<td>Dementias</td>
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<tr>
<td>Memory loss</td>
<td>Multiple Sclerosis</td>
</tr>
<tr>
<td>Headache</td>
<td>Neuropathies, myopathies and radiculopathies</td>
</tr>
<tr>
<td>Back pain</td>
<td>Myasthenia gravis and other disorders of the neuromuscular junction</td>
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<tr>
<td>Visual complaints</td>
<td>Epilepsy and provoked seizures</td>
</tr>
<tr>
<td>Spells</td>
<td>Migraines and other headaches syndromes</td>
</tr>
<tr>
<td>Dizziness and Vertigo</td>
<td>Parkinson’s Disease &amp; other disorders of movements</td>
</tr>
<tr>
<td>Abnormal movements and tics</td>
<td>CNS neoplasms</td>
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<tr>
<td></td>
<td>CNS infections</td>
</tr>
<tr>
<td></td>
<td>Medical diseases and metabolic states with neurological complications</td>
</tr>
<tr>
<td></td>
<td>Common pediatric neurological disease</td>
</tr>
</tbody>
</table>
6. Students will understand the medical, legal, and ethical implications of **brain death**, the **vegetative state**, and the **minimally conscious state**.

7. Students will understand the indications for and limitations of **computed tomography (CT)**, **magnetic resonance imaging (MRI)**, **electroencephalography (EEG)**, and **nerve conduction studies and electromyography (NCS/EMG)**.

8. Students will have performed or observed a **lumbar puncture (LP)**, and will understand the indications for LP and the interpretation of basic cerebrospinal fluid findings.

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**Concern/Complaint Policy**

In addition to complying with the GME [Concern/Complaint Policy](#), the Child Neurology Residency program’s policies and procedures are:

The following options and resources are available and communicated to residents, fellows, and faculty annually:

**Step One**
Discuss the concern or complaint to the program's Chief Resident, Service Director, Associate Program Director and/or Program Director, or Program Coordinator as appropriate.

**Step Two**
If the concern or complaint involves the Program Director and/or cannot be addressed in option one, residents and fellows have the option of discussing issues with the section heads, division chiefs, internal program ombudsperson and department chairs as appropriate.

**Step Three**
If residents are not able to resolve their concerns or complaints within the program, they may contact the GME Designated Institutional Official (DIO) via one of the following:

- Confidential email - [gme@ucdenver.edu](mailto:gme@ucdenver.edu)
- Anonymous Reporting Form on the GME website: [http://www.ucdenver.edu/academics/colleges/medicalschool/education/graduatemedicaleducation/concerns/Pages/form.aspx](http://www.ucdenver.edu/academics/colleges/medicalschool/education/graduatemedicaleducation/concerns/Pages/form.aspx)
- GME Confidential Hotline at 303-724-5918
Duty Hours Policy

The Child Neurology Residency program complies with the ACGME Common and specialty-specific Program Requirements copied below.

http://www.acgme.org/acgmeweb/Portals/0/PDFs/Specialty-specific%20Requirement%20Topics/D10-Duty_Hours.pdf

Eligibility and Selection Policy

Eligibility and Selection Policy

In addition to complying with GME Eligibility and Selection Policy, the Child Neurology Residency program’s policies and procedures are:

The Pediatric Neurology Residency Program participates in the National Residency Matching Program (NRMP) and is currently approved to accept three trainees per year.

1. Each applicant must:
   a. be a graduate of an LCME (Liaison Committee on Medical Education) accredited medical school, or
   b. be a graduate of an AOA (American Osteopathic Association) accredited college of osteopathic medicine, or
   c. be an international medical graduate who holds a valid ECFMG (Education Commission for Foreign Medical Graduates) certificate, or
   d. have a full, unrestricted license to practice medicine in a US licensing jurisdiction, or
   e. have completed a fifth pathway program provided by a LCME-accredited medical school.

2. The University of Colorado School Of Medicine (UCSOM) recognizes that Housestaff enrolled in UCSOM programs are trainees, not employees. As such, applicants must also be able to meet the conditions of the UCSOM House officer Training Agreement. Specifically, each Housestaff must meet the following criteria:
   Residents in our program must be a U. S. Citizen, lawful permanent resident, refugee, asylee, or possess the appropriate documentation to allow Resident to legally train at the University Of Colorado Denver School Of Medicine. (Canadian citizens must receive a letter from their province stating the province's willingness to allow the resident to obtain a job in Neurology in Canada upon completion of Neurology residency training in the USA.)

3. Applicants must have documented strong interest in Neurology, as judged by statement, prior training, or research experience.

4. Applicants must have passed USMLE Parts I and II, or the equivalent, with a minimum average score on both tests that is typically between 200 and 210.
Satisfactory results on Part III must be submitted to the department prior to beginning PGY3.

5. Excellent references are required from a minimum of three physicians or researchers with whom the applicant has worked on a regular basis for at least one month. For individuals who have had prior training in another residency program, this must include a letter from the previous program director.

6. For individuals who have had prior training in another training program, successful completion of that year (or years) of the program, and receipt of certification, are required.

7. Applicants must have a Dean’s letter or equivalent, and documented grades from medical school. Graduation in the top 2/3 of the class is preferred.

8. Applicants must have the ability to hear, understand, speak, read, and write the English language, including English medical jargon, exceeding conversational level. Visually and hearing impaired applicants will be considered based on GME policy, the requirements of the program, the availability of resources and federal requirements.

9. Applicants must have the ability to comprehend and utilize computer software typically used in a USA hospital setting.

10. Continuous medical treatment of patients, with lapses not to exceed three years, must be documented (exceptions may be made for pregnancy and related child-care activities, or for obtaining a PhD). Patient treatment may include medical school and/or prior residency training.

11. Prerequisite training outlined as follows which can be initiated following one of three options:
   a. 2 years of residency training in pediatrics in the United States or Canada;
   b. one PG-1 year (as described in the Program Requirements for Residency Education in Neurology, Section I.A.1) and 1 year of residency training in pediatrics; or
   c. 1 year of pediatrics plus 1 year of basic neuroscience training. The program director must review and determine the acceptability of these initial 2 years of training.

All applicants should apply for prerequisite training separately.

12. Child Neurology only reviews applications submitted through ERAS.

13. The UCSOM and the Department of Neurology do not discriminate with regard to race, sex, age, religion, color, national origin, sexual orientation, or veteran status.

14. Additional information can be obtained from: http://www.ucdenver.edu/academics/colleges/medicalschool/departments/pediatrics/subs/neuro/educat/fellows/Pages/fellows.aspx
Evaluation & Promotion Policy

Criteria for Promotion & Graduation

In addition to complying with the GME Evaluation and Promotion Policy, the Child Neurology Residency program's policies and procedures are:

### Evaluation of Residents
Residents are given an assessment of competence using ACGME competencies, evaluations by multiple evaluators, and documented progressive resident performance improvement appropriate to educational level.

The Program Director meets each resident for a formal semi-annual evaluation meeting which includes incorporation of quarterly reviews. The Program Director reviews the past 3 month block rotation evaluation, case logs, duty hours, research projects, quality and patient safety projects, the residents individual learning plan (self-evaluation) and fatigue/wellness are discussed.

Residents are required to complete a written self reflection which is hand written/typed and given to the residency coordinator to file in resident's personnel file. Residents are also required to complete a self evaluation which is sent annually through Medhub.

Supervising faculty evaluates the resident’s performance in a timely manner during each rotation, and documents the evaluation at the completion of the assignment using the GME residency management system. Faculty are sent an email reminder everyday they are delinquent with their evaluations. The program gives up to 10 days after the due date for faculty to complete the resident evaluation. If the evaluation is not completed in a timely manner, the Program Director will meet with the faculty immediately to find out if there are issues regarding completion.

The program uses multi-source evaluations by the nurses, patients and administrative teams to also evaluate the residents. These evaluations are obtained semi-annually.

A summative evaluation for each resident completing the program is conducted and documented by the Program Director.

### Evaluation of Faculty:
Faculty are evaluated annually by the department chair and program. The faculty evaluation includes summarized written confidential evaluations completed by the residents after every rotation block. Resident evaluations are de-identified and accrued for at least six months to preserve confidentially.

### Evaluation of Program:
The residents and faculty evaluate the program confidentially using the residency management system annually. The residents and faculty meet yearly to evaluate the overall program which includes a systemic review of the above, the curriculum, faculty development and graduate performance. An annual program improvement plan is created with input from the faculty and residents.
Residents are always encouraged to provide feedback of the program. Residents are provided an opportunity to evaluate the residency program formally on an annual basis and to evaluate all faculty bi-annually. Evaluations are kept with the program's records. Resident concerns are discussed at the monthly faculty meetings of the teaching staff. Resident participation in these meetings when confidential matters are not being discussed is encouraged.

The Training Director serves as the primary contact and means of resolving any problem issues as they arise.

See Appendix 3 for sample evaluations forms.

**Program Advancement/Promotion**

1) Proof of successful completion of USMLE Parts I, II, and III must be submitted to the Program Director and Coordinator prior to the beginning of PGY3.

2) Satisfactory completion of curricular activities. Residents are instructed and evaluated with documentation by faculty in the following areas:
   a) History taking
   b) Organizing and recording data
   c) Using the history and data to form a differential diagnosis and plan

3) Attendance at the rotating series, seminars, basic science and core lectures scheduled by the child and adult neurology program. Attendance will be monitored.

4) Attendance at the pediatrics neurology journal club. Attendance will be monitored.

5) Core required “electives”: 2 months of neuroradiology, 2 months of neurophysiology, 1 month of neuropathology, and 1 month of Neuro-Oncology (see Outline of Program above).

6) Attendance at weekly continuity clinic ½ day for full 3 years (see Outline of Program above).

7) One month FTE of outpatient psychiatry (see Outline of Program above).

8) Attendance at weekly neurosurgical/neuro-radiological/neuro-oncology case conferences to participate in the evaluation and management of neurosurgical diseases in children. Attendance will be monitored.

9) Regular participation in the rotating clinics: child neurology, genetics, metabolic, neuromuscular, rehabilitation and development (see Outline of Program above).

10) Attendance at weekly pediatric neurology conferences including EEG, electrophysiology, stroke, selected neurology topics of general interest and addressing bioethics, palliative care, pain relief, and cost-effective medical management. Attendance will be monitored.

11) Participation in teaching of other residents, medical students and allied health care personnel. Teaching will be evaluated by teaching staff.
12) Satisfactory professional and ethical behavior throughout the training program. These attitudes and behaviors are described in the UCDSOM House Staff Manual and the CHC Manual for Residents and Fellows.

13) Satisfactory performance on the residency in-service training exam.

14) Presentation of at least two M&M conferences during the residency.

15) Successful completion of at least one scholarly activity, i.e., a poster, a research project, an original research paper, etc.

16) Successful completion of the ABPN exam requirements (see pages 22-23).

Residents are evaluated at least monthly by teaching faculty and these evaluations are placed in a confidential file that is accessible to the resident. Included in these evaluations are observations by teaching faculty of the resident’s ability to obtain a patient history, examine patients of various ages, discuss the findings, assessment and plan with the patient and family and to counsel the patient and family effectively.

Residents are also evaluated by other members of the child neurology staff including nurses, technicians, and support staff, as well as by patients and families (see sample evaluation forms in Appendix 6).

Resident evaluations are viewed by the program director and are evaluated within a month of being completed. These are then initialed by the program director and the original sent to the resident while a copy is placed in the resident’s permanent file. Any deficiencies or problems are identified and brought to the next monthly faculty meeting of the teaching staff which includes time for discussion of the residency program. Minutes of these meetings are kept on file with the residency program. Plans to address these deficiencies or problems are then brought to the resident’s attention with a special meeting within the next month. A summary of the meeting is placed in the resident’s permanent file.

Residents are formally evaluated semiannually by the program director, and are provided with written feedback regarding progress and attainment of objectives. Deficiencies are addressed if necessary. Residents are asked to sign the evaluations following any necessary corrections. The evaluations are then placed in their permanent files. Residents may append a written response to their evaluations. Residents are also evaluated formally at the end of the program. This final evaluation addresses and verifies the resident’s possesses sufficient professional ability to practice competently and independently.

A sample form is attached in Appendix 3.

Evaluations are kept with the resident’s permanent record. This record is available for resident review.

Clinical Competency Committee
The Child Neurology Residency Clinical Competency Committee (CCC), is appointed by the Program Director, meets semi-annually, and assesses and provides input to the Program Director regarding Resident performance to be incorporated into the review process.

CCC Membership:
- Dr. Julie Parsons (Chair)
- Dr. Timothy Bernard (Program Director)
- Dr. Padmini Palat (Medical Clerkship Director)
- Dr. Kelly Knupp (Research Mentor)
- Dr. Teri Schreiner (Associate Director of the Adult Neurology Residency)
- Dr. Ricka Messer (Neurohospitalist)

Residents do not serve on the CCC.

CCC Responsibilities include, but are not limited to:

The committee assesses the Resident’s performance based on the Skills, Goals and Objectives of the overall program. Additional sources reviewed by the CCC include, but are not limited to:

- Multi-source evaluations (peers, staff, self, patient, students, faculty)
- End of Rotation Evaluations
- Procedural observations
- In-Training Exams and/or Mock Orals
- Case Logs
- Conference attendance and participation
- Research and scholarly activity
- Quality Improvement and Patient Safety projects
- Compliance with duty hour requirements

The CCC follows the GME Evaluation & Promotion Policy and makes recommendations to the Program Director on Resident progress, including promotion, remediation and dismissal. The CCC identifies Resident strengths and areas for improvement and will assign an average score to the Resident for each of the Milestones. This average score takes into consideration the Resident’s evaluations as well as the committee’s discussion on Resident performance. The CCC ensures the reporting of Milestones to ACGME.

The Program Director meets with the Resident semi-annually to review the CCC report and design a learning plan for the Resident. Minutes for the CCC will be taken and kept on file.

Leave Policy
Leave Policy

In addition to complying with the GME Leave Policy, the Child Neurology Residency program’s policies and procedures are:

Per the ABPN (American Board of Psychiatry and Neurology) guidelines found https://www.abpn.com/wp-content/uploads/2016/11/2017_Neurology_CERT_IFA.pdf on page 5, “ABPN will allow the candidate to sit for Certification Examination provided all required training is completed and all ACGME requirements have been satisfied by September 30th in the year of the Certification Examination”.

Moonlighting Policy

Moonlighting Policy

The Child Neurology Residency program recognizes that moonlighting is not an activity associated with part of the formal educational experience; thus, residents are not allowed to participate in moonlighting activities.

Professionalism Policy

Professionalism Policy

All residents/fellows must also abide by the professionalism principles and guidelines as stated by the ACGME program requirements.

Monitoring Resident Professionalism

In addition to complying with the GME Professionalism Policy, the training program’s policies and procedures are as follows:

The program director and faculty monitor resident professionalism by:
- Direct observation in the following settings
  - Outpatient Clinics
  - Inpatient service
  - Family meetings
  - Interaction with other teams while rounding
  - Interaction with Staff
- Surveys
Professionalism Education

The program provides the following professionalism education to residents:

Residents and fellows are provided professionalism education via GME New Resident Orientation and modules, DISC profiles, program didactic conferences and department grand rounds.

Program Evaluation

Program Evaluation Committee

The Child Neurology Residency Program Evaluation Committee (PEC) documents formal, systematic evaluation of the curriculum on an annual basis and is responsible for the Annual Program Evaluation (APE). The PEC follows the GME Evaluation & Promotion Policy.

PEC Membership:

- Dr. Timothy Bernard (Program Director)
- Dr. Kristen Park (Epilepsy Fellowship Program Director, director of Journal Club)
- Dr. Padmini Palat (Clerkship Director)
- Dr. Julie Parsons (Former PD)
- Dr. Teri Schreiner (Associate PD - Adult Neurology; liaison between Child & Adult Neurology)
- Dr. Scott Demarest (Chair of SOC)
- Dr. Jan Martin (Member)
- Chelsey Stillman PA-C (APP Representative)
- Dr. Timothy Luebbert (Current Resident, PGY 5)
- Dr. Alicia Henriquez (Current Resident, PGY 4)

PEC Responsibilities include, but are not limited to:

- Planning, developing, implementing, & evaluating educational activities of the program
- Reviewing & making recommendations for revision of competency-based curriculum goals & objectives
- Addressing areas of non-compliance with ACGME standards
- Reviewing the program annually using evaluations of faculty, residents, and others
At a minimum, the PEC monitors and tracks the following areas:
- Resident performance
- Faculty development
- Graduate performance, including performance of program graduates on the certification examination
- Program quality:
  - Resident & Faculty confidential, annual evaluation of the program
  - Use of these assessments of the program with other program evaluation results to improve the program
- Progress on the previous year’s action plan(s)

The PEC prepares an Action Plan (per GME Template) documenting initiatives to improve the program, as well as how the initiatives are monitored & measured. The Action Plan serves as the minutes for the PEC and should be reviewed by the teaching faculty.

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**Quality Improvement/Patient Safety Policy**

Quality Improvement and Patient Safety Policy

In addition to complying with the GME [Quality Improvement and Patient Safety Policy](#), the [Child Neurology Residency](#) program’s policies and procedures are:

Each resident is responsible for a quality improvement/patient safety project during his/her residency. The following QI/PS opportunities are underway within the Program:
- Participation in institutional Quality Management Committees
- Grand Rounds
- Patient Satisfaction Surveys
- Core Measures
- Utilization Management
- Elective Quality Improvement rotations (e.g., LEAN)
- Scholarly activity resulting in implementation of initiatives to improve patient quality and safety of care
- M&M conferences

The Program also participates in Quality Improvement/Patient Safety Conferences (e.g., Morbidity and Mortality). Participants complete the prescribed Patient Safety/M&M/ Occurrence Review Form if applicable to the institution.

The resident, along with faculty and relevant staff, helps to identify the quality improvement issue, develops a process to address the issue and then provides follow-up. The results are then presented to the department.

---

**Supervision Policy**
Supervision Policy
In addition to complying with the GME Supervision Policy, the Child Neurology Residency program’s policies and procedures are:

**Program Supervision Policy**

Resident supervision during the adult year is outlined in the adult neurology core manual. (See Appendix 1 for policy on direct supervision of invasive procedures as outlined in the Adult Neurology Program Manual)

During the pediatric years, residents will continue to be directly supervised by teaching staff. During clinical working hours, all patients seen by the resident are to be staffed by the attending physician. After-hours, new inpatient, outside phone-calls and emergency room consultations are to be staffed with the attending physician. The timing of staffing depends on level of training and patient acuity. An attending physician who is a member of the teaching staff is available while on overnight call. Documentation of all calls is to be made for later inclusion in patient charting; inclusion in this documentation of staffing by attending is necessary.

**Process**
The program maintains current call schedules with accurate information enabling residents at all times to obtain timely access and support from a supervising faculty member.

The Program Director will ensure that all program policies relating to supervision are distributed to residents and faculty who supervise residents. A copy of the program policy on supervision is included in the official Program Manual and provided to each resident upon matriculation into the program.

**Progressive Authority & Responsibility, Conditional Independence, Supervisory Role in Patient Care**

The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each fellow must be assigned by the program director and faculty members.

The program director must evaluate each fellow’s abilities based on specific criteria. When available, evaluation should be guided by specific national standards-based criteria.

Faculty members functioning as supervising physicians should delegate portions of care to fellows, based on the needs of the patient and the skills of the fellows.

Senior residents or fellows should serve in a supervisory role of junior residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident or fellow.
Guidelines for When Residents Must Communicate with the Attending

Critical Events Policy
A critical event is defined as:
1. When a patient is transferred into the PICU or NICU
2. When a stroke is suspected or a stroke alert is called
3. Patient experiences or is suspected of experiencing a serious side effect to medication
4. When a patient dies
5. Legal threat made by a patient or family member towards a resident or institution
6. Suicidal threats, gestures and attempts
7. Injury of resident during work

Residents whose patient experiences fall within these Critical Events shall:

Event 1, 2, 3 and 6: Contact the patient’s attending. The attending will help the resident determine appropriate next steps.

Event 4: Immediately call the patient’s attending. Appropriate steps will be taken including meeting with the resident as soon as possible.

Event 5: Contact the attending. The attending and resident will determine next steps including whether legal representatives from the institution should be involved.

Event 7: Report to the program director and program coordinator as soon as possible, to determine appropriate next steps.

Clinical Responsibilities by PGY Levels for Supervision

When to communicate with the on-call attending overnight – resident guidelines
Residents are encouraged to call attending in any situation where they need assistance with patient management. Residents will also document on every patient for whom advice is given and route to the attending (in addition to other appropriate parties).

At a minimum, Adult and PGY3 residents are expected to do the following:
- Resident and attending will touch base about any non-urgent calls/consults around 10 pm each night
- Communicate all phone and in-person consults with the attending except:
  - Medication refills
- EEG findings overnight –
  - Discuss any EEGs with the attending prior to discharging patient or disconnecting EEG
  - Notify attending of any unexpected EEG findings (i.e. status epilepticus, new onset seizures) and discuss treatment plan
  - Discuss all new neonatal EEGs and EEGs performed on children with underlying intractable epilepsy with attending after hook-up
At a minimum, PGY4 and PGY5 residents are expected to do the following:

- Resident and attending will touch base about any non-urgent calls/consults around **10 pm each night**
- Communicate with attending for:
  - In person full consult
  - Child discharging from CHCO or OSH ED
    - Exceptions include conditions for which there is a clear clinical guideline or routine standard practice (i.e. first time seizure, isolated breakthrough seizure or febrile seizure)
  - Any child with a focal or new neurologic deficit or positive imaging findings
- EEG findings overnight
  - Discuss any EEGs with the attending prior to discharging patient or disconnecting EEG
  - Notify attending of any unexpected EEG findings (i.e. status epilepticus, new onset seizures) and discuss treatment plan

**Transitions of Care Guidelines – Hand-off Process**

**Transitions of Care (Structured Patient Hand-off) Policy**

In addition to complying with the GME Transitions of Care (Structured Patient Hand-off) Policy, the Child Neurology Residency program’s transition of care process that is used is:

Transition of Care (hand-off) will occur in the designated neurology workroom which minimizes distractions/interruptions. The residents utilize the electronic medical record system (EPIC) for appropriate handouts. Electronic documentation includes patient name, medical record number, age, sex room, service, weight, neurologic history, medications, required actions and assigned primary neurologist. The receiving physician is given the opportunity to ask questions; thus, verbal and written handoffs occur. The Pediatric Neurology Residency Program is responsible for monitoring this process to ensure continuity of care and patient safety.

1. Written documentation for residents in a consultative role includes patient name, medical record number, age, sex room, service, weight, neurologic history, medications, required actions and assigned primary neurologist. This is sufficient information to address active problems likely to arise during a brief period of temporary coverage or to assume care without error or delay when care is transferred.

2. All patients for whom a resident is responsible are included in the handoff.

3. Residents are on a minimum of one month inpatient neurology rotation. During which time, each resident assumes responsibilities for their assigned patients which assures continuity of care.

4. The Program Director will:
   a. Ensure assignments will be structured to minimize the number of transitions in patient care.
b. Ensure residents and fellows are competent in communicating to the team members in the hand-over process.

c. Work with the sponsoring institutions to ensure the availability of schedules that inform all members of the health care team of attending physicians and fellows currently responsible for each patient’s care.

5. As a consultative service, the neurology residents are not primarily responsible for documentation of a transfer note.

USMLE (and COMLEX) Examinations

Policy on USMLE (and COMLEX) Examinations
The Child Neurology Residency complies with the GME Policy on USMLE (and COMLEX) Examinations.

ACGME Specific Program Requirements

The program will incorporate the current Accreditation Council for Graduate Medical Education program requirements within this Program Manual annually.

ACGME program requirements
# Appendix 3
## Sample Evaluations

**Evaluation Form - MedHub**

**Printed on Jun 27, 2017**

**University of Colorado School of Medicine**
**Child Neurology**

**Appendix 3**
**Sample Evaluations**

---

**Section 1: Epilepsy - Patient Care**

### Level 1
- Recognizes and interprets minor ictal and ictal events
- Identifies etiology, medications, and classification of seizures and epilepsy
- Diagnoses convulsive status epilepticus

### Level 2
- Diagnoses and manages patients with common seizure disorders and provides antiepileptic drug treatment
- Diagnoses patients with non-convulsive status epilepticus
- Manages patients with convulsive and non-convulsive status epilepticus
- Identifies short- and long-term effects of antiepileptic therapies

### Level 3
- Manages patients with unconvoluted seizure disorders
- Appropriately refers an individual patient for more advanced therapies and interventions
- Manages short and long-term effects of antiepileptic therapies

### Level 4
- Manages patients with uncommon seizure disorders

### Level 5
- Engages in advanced epilepsy (e.g., telemetry, research in epilepsy)

---

**Section 2: Epilepsy - Technical Skills**

### Level 1
- Describes an EEG procedure in nonmedical terms
- Uses appropriate terminology related to EEG (e.g., montage, amplitude, frequency)

### Level 2
- Describes normal EEG features of alpha and beta states
- Recognizes normal EEG variants

### Level 3
- Recognizes normal EEG variants
- Recognizes common EEG abnormalities

### Level 4
- Interprets common EEG abnormalities and creates a report

### Level 5
- Interprets uncommon EEG abnormalities

---

**https://ucdenver.medhub.com/u/a/evaluations_forms_print.html?evaluationID=21759**

6/27/2017
## Evaluation Form - MedHub

### 2. EEG

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<tr>
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<th>Level 5</th>
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<tbody>
<tr>
<td>Has some knowledge, but cannot perform this skill</td>
<td>Can perform the skill with direct supervision</td>
<td>Can perform the skill with indirect supervision</td>
<td>Can perform independently with no oversight</td>
<td>Expert can teach and supervise others</td>
<td>Not enough contact to evaluate</td>
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### 3. Informed diagnostic and therapeutic decision making.

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### 4. Displaying good clinical judgment.

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### 5. Correlating EEG findings with a likely anatomical localization

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### 6. Comprehensive understanding of complex relationships, mechanisms of disease.

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### Resident demonstrates the following:

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# Evaluation Form - MedHub

**University of Colorado School of Medicine**  
**Child Neurology**

## 7. Respect, compassion, integrity and honesty with patients, colleagues and the community.*

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<tr>
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## 8. Understands how the larger medical system affects practice options and patterns.*

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<td>Not enough contact to evaluate</td>
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## 10. Self-directed learning: Identify strengths, deficiencies, and limits in one's knowledge and expertise; Set learning and improvement goals; Identify and perform appropriate learning activities; Use information technology to optimize learning*

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**General**

11. Please comment on resident's overall clinical competence and share any pertinent comments.*

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## Milestone Mapped - Continuity Clinic

Evaluator: __________________________

Evaluation of: ______________________

Date: ______________________________

This is the continuity clinic evaluation for the preceptors. Please evaluate the resident and provide feedback below:

### Patient Care

<table>
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<tr>
<th>Obtains a perinatal and developmentally appropriate neurologic and behavioral history</th>
<th>Obtains a complete and relevant perinatal and developmentally appropriate neurologic and behavioral history</th>
<th>Obtains a complete, relevant, and organized perinatal and developmentally appropriate neurologic and behavioral history</th>
<th>Efficiently obtains a complete, relevant, and organized perinatal and developmentally appropriate neurologic and behavioral history</th>
<th>Incorporates information from sources difficult to access external to the encounter (e.g., medical records)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acquires an accurate and relevant, focused history*</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
<td>5.</td>
</tr>
</tbody>
</table>

### Patient Care

<table>
<thead>
<tr>
<th>Performs a complete, developmentally appropriate neurological exam on patients ranging across the lifespan</th>
<th>Performs a complete, developmentally appropriate neurological exam on patients ranging across the lifespan</th>
<th>Performs a complete, developmentally appropriate neurological exam on patients ranging across the lifespan</th>
<th>Efficiently performs a complete, relevant, developmentally appropriate neurological exam accurately, incorporating all additional appropriate maneuvers</th>
<th>Consistently demonstrates mastery in performing a complete, relevant, organized, and developmentally appropriate neurological exam across all age groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrates a high level of respect and compassion in performing an exam across gender and cultural differences</td>
<td>2. Performs a complete, developmentally appropriate neurological exam on patients ranging across the lifespan</td>
<td>3. Examines for common signs and patterns of dysmorphology and dermatologic findings</td>
<td>4. Visualizes important findings on the funduscopic exam, including papilledema, choroiditis, and cherry red spots</td>
<td>5. Accuracy performs a neurological exam on the patient with depressed level of consciousness (e.g., coma, vegetative state)</td>
</tr>
</tbody>
</table>
2. Performs an accurate general and neurological examination:

- Demonstrates basic knowledge of management of patients with neurologic disease ranging across the lifespan
- Discusses the general approach to initial treatment of common neurologic disorders, including risks and benefits of treatment
- Identifies neurologic emergencies
- Individualizes treatment for specific patients
- Initiates management for neurologic emergencies, and triages patients to the appropriate level of care
- Appropriately requests consultations from nonneurologic care providers for additional evaluation and management
- Adapts treatment based on patient response
- Identifies and manages complications of therapy
- Independently directs management of patients with neurologic emergencies
- Appropriately requests consultations from a neurologic subspecialist for additional evaluation or management

3. Formulates a diagnostic and/or treatment plan based on history, physical examination, neuroanatomic localization, knowledge of development and establishes an accurate and complete differential diagnosis:

4. Manage a patient seen in clinic for chronic neurological condition; incorporating evidence-based national guidelines where appropriate:

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Has some knowledge but cannot perform the skill</td>
<td>☐ Can perform the skill with direct supervision</td>
<td>☐ Can perform the skill with indirect supervision</td>
<td>☐ Can perform independently with no oversight</td>
<td>☐ Expert, can teach and supervise others</td>
<td>☐</td>
</tr>
</tbody>
</table>

5. Manages EHR including follow up diagnostic testing, patient inquiries/calls, prescription refills, or other administrative tasks associated with an outpatient practice in a timely and efficient manner:

| ☐ Has some knowledge but cannot perform the skill | ☐ Can perform the skill with direct supervision | ☐ Can perform the skill with indirect supervision | ☐ Can perform independently with no oversight | ☐ Expert, can teach and supervise others | ☐ |

6. Educates families effectively including giving written instructions and establishes a therapeutic relationship with patients and families:

| ☐ Has some knowledge but cannot perform the skill | ☐ Can perform the skill with direct supervision | ☐ Can perform the skill with indirect supervision | ☐ Can perform independently with no oversight | ☐ Expert, can teach and supervise others | ☐ |
7. Demonstrates appropriate time management in new and follow-up visits

- □ Has some knowledge but cannot perform the skill
- □ Can perform the skill with direct supervision
- □ Can perform the skill with indirect supervision
- □ Can perform independently with no oversight
- □ Expert, can teach and supervise others

---

**Epilepsy**

Chronic management in the outpatient setting

8. Diagnoses and classifies epilepsy using ILAE criteria and documents epilepsy severity including intractability.*

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Has some knowledge but cannot perform the skill</td>
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<td>□ Can perform the skill with indirect supervision</td>
<td>□ Can perform independently with no oversight</td>
<td>□ Expert, can teach and supervise others</td>
<td>□</td>
</tr>
</tbody>
</table>

9. Prescribes appropriate epilepsy medications based on seizure type and current guidelines (including clinical and neurophysiological data) and involves advanced specialists in the appropriate situations.*

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
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<td>□ Can perform independently with no oversight</td>
<td>□ Expert, can teach and supervise others</td>
<td>□</td>
</tr>
</tbody>
</table>

---

**Developmental Delay**

10. Understands the appropriate parameters for development of gross motor, fine motor, speech and language, and social skills from infancy onwards.*

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
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<td>□ Can perform independently with no oversight</td>
<td>□ Expert, can teach and supervise others</td>
<td>□</td>
</tr>
</tbody>
</table>

11. Diagnoses developmental delay, recognizes developmental regression, and understands the appropriate diagnostic evaluation based on evidence based guidelines.*

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
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<td>□ Expert, can teach and supervise others</td>
<td>□</td>
</tr>
</tbody>
</table>

12. Initiates appropriate referrals for medical and school-based services: Physical, Occupational, Speech, other Therapies.*

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
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<td>□ Expert, can teach and supervise others</td>
<td>□</td>
</tr>
</tbody>
</table>
## Evaluation Form - MedHub

<table>
<thead>
<tr>
<th>13. Diagnoses and classifies headaches using AHS criteria and documents severity by efficiently performing an accurate history and physical.*</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
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<td>☐ Can perform the skill with indirect supervision</td>
<td>☐ Can perform independently with no oversight</td>
<td>☐ Expert, can teach and supervise others</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. Incorporates lifestyle counseling, prescribes appropriate abortive and/or preventive medications based on current guidelines and involve psychological or psychiatric services in the appropriate situations*</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
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</tr>
</tbody>
</table>

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**OVERALL COMMENTS:**

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Evaluation Form - MedHub

Evaluation Form
Printed on Jun 27, 2017

University of Colorado School of Medicine
Child Neurology

Patient Care

The following questions cover basic principles of patient care in neurology in an inpatient setting:

<table>
<thead>
<tr>
<th>Milestone Mapped - Inpatient Service</th>
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<th>Milestone Mapped - Inpatient Service</th>
<th>Milestone Mapped - Inpatient Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain a perinatal and developmentally appropriate neurologic and behavioral history</td>
<td>Obtain a complete and relevant perinatal and developmentally appropriate neurologic and behavioral history</td>
<td>Obtain a complete, relevant, and organized perinatal and developmentally appropriate neurologic and behavioral history</td>
<td>Obtain a complete, relevant, and organized perinatal and developmentally appropriate neurologic and behavioral history</td>
</tr>
<tr>
<td>Elicits patient and family contribution, as appropriate, based on cognitive level and cultural norms</td>
<td>Integrates patient and parent/care giver contribution into history</td>
<td>Incorporates information from available sources external to the encounter (e.g., medical records)</td>
<td>Synthesizes patient, parent/care giver, and external source contribution into history</td>
</tr>
<tr>
<td>Incorporates information from available sources external to the encounter (e.g., medical records)</td>
<td>Efficiently obtains a complete, relevant, and organized perinatal and developmentally appropriate neurologic and behavioral history</td>
<td>Synthesizes patient, parent/care giver, and external source contribution into history</td>
<td>Consistently demonstrates mastery in performing a complete, relevant, organized, and developmentally appropriate neurological examination across all age groups</td>
</tr>
</tbody>
</table>

1. Performs a detailed neurological and developmental history

- [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

2. Performs an appropriate neurological examination

- [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]
Evaluation Form - MedHub

3. Localization

4. Acute encephalitis encephalopathy: Recognizes, generates differential diagnosis, manages appropriate workup and treatment

5. Demyelinating and inflammatory disease: Recognizes, generates differential diagnosis, manages appropriate workup and treatment

6. Cerebrovascular Disorders: Diagnoses and understands appropriate workup for pediatric stroke according to CHOC protocols and national pediatric stroke guidelines

7. Neuromuscular diseases: Diagnoses and manages children with acute, subacute, chronic, and emergency presentations of weakness due to diseases of the nerves, junction, or muscle

8. Are there any other Neurological disorders that you would like to rate the resident using the scale above?

---

Observable Practice Activities (Patient Care)

These are specific practice activities in neurology which may occur on this rotation. The goal is to rate the level at which the resident can be entrusted to perform this activity.

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognize Common Presentations</td>
<td>Diagnose Common Presentations</td>
<td>Manage Acute and Recognize Uncommon Presentations</td>
<td>Diagnose Uncommon Presentations</td>
<td>Manages Uncommon Presentations</td>
<td></td>
</tr>
<tr>
<td>Evaluation Form - MedHub</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>-------------------------</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9. EEG:</strong> interprets common EEG abnormalities, normal variants, recognizes patterns and is able to create reports and manage patients based on the EEG.</td>
<td><strong>Level 1</strong></td>
<td><strong>Level 2</strong></td>
<td><strong>Level 3</strong></td>
<td><strong>Level 4</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Neuroimaging: understands indications, interprets results**</th>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
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<td>-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Lumbar Puncture: understands indications, performs, interprets results</th>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
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<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Interpersonal Skills and Communication**

<table>
<thead>
<tr>
<th>12. Creates documentation that is correct, accurate, complete, and timely.*</th>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
<th><strong>Level 5</strong></th>
<th><strong>N/A</strong></th>
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<td>-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. Provides a clear and concise presentation to the attending physician**</th>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
<th><strong>Level 5</strong></th>
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<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Professionalism**

Regards compassion, sensitivity including cultural sensitivity, and relations with colleagues

<table>
<thead>
<tr>
<th>14. Interacts in an effective, professional, and collegial manner with all members of the healthcare team.*</th>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
<th><strong>Level 5</strong></th>
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<td>-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. Communicates with patients in a clear, compassionate, respectful, and culturally sensitive manner*</th>
<th><strong>Level 1</strong></th>
<th><strong>Level 2</strong></th>
<th><strong>Level 3</strong></th>
<th><strong>Level 4</strong></th>
<th><strong>Level 5</strong></th>
<th><strong>N/A</strong></th>
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<td>-</td>
<td></td>
</tr>
</tbody>
</table>
### Evaluation Form - MedHub

<table>
<thead>
<tr>
<th>16. Manages transitions of care safely and effectively, including daily handoffs, cross-service (e.g. floor to intensive care transfers, rotation ending-transfers, and hospital discharges).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level</strong></td>
</tr>
<tr>
<td><strong>Has some knowledge but cannot perform the skill</strong></td>
</tr>
<tr>
<td><strong>Can perform the skill with direct supervision</strong></td>
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<tr>
<td><strong>Can perform the skill with indirect supervision</strong></td>
</tr>
<tr>
<td><strong>Can perform independently with no oversight</strong></td>
</tr>
<tr>
<td><strong>Expert, can teach and supervise others</strong></td>
</tr>
</tbody>
</table>

### Systems Based Practice

The following questions involve quality, cost-effective, and safe care.

<table>
<thead>
<tr>
<th>17. Cost- and risk-effective practice: provides value-based care by ordering appropriate tests and minimizing unnecessary ones</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level</strong></td>
</tr>
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<td><strong>Can perform the skill with indirect supervision</strong></td>
</tr>
<tr>
<td><strong>Can perform independently with no oversight</strong></td>
</tr>
<tr>
<td><strong>Expert, can teach and supervise others</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18. Works in inter-professional teams to enhance patient safety</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level</strong></td>
</tr>
<tr>
<td><strong>Has some knowledge but cannot perform the skill</strong></td>
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<tr>
<td><strong>Expert, can teach and supervise others</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>19. Self-directed learning: review the primary literature related to assessment and recommendations and include if appropriate in note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level</strong></td>
</tr>
<tr>
<td><strong>Has some knowledge but cannot perform the skill</strong></td>
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<td><strong>Can perform independently with no oversight</strong></td>
</tr>
<tr>
<td><strong>Expert, can teach and supervise others</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20. Did the resident perform a brain death exam.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td><strong>No</strong></td>
</tr>
<tr>
<td><strong>N/A</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>21. Can the resident reliably recognize papilledema</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td><strong>No</strong></td>
</tr>
<tr>
<td><strong>N/A</strong></td>
</tr>
</tbody>
</table>

### Practice Habit 1 - Resident responds to patient calls in a timely manner.

<table>
<thead>
<tr>
<th><strong>Level</strong></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leaves work unattended and doesn’t follow-up</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Often behind and struggles to keep up with work</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Completes in a timely manner</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Works at the pace expected for an Attending</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Is proactive and an example to other residents and faculty</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Evaluation Form - MedHub

23. Practice Habit 2 - Resident provides appropriate education to their patients

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaves work undone and doesn’t follow-up</td>
<td>Often behind and struggles to keep up with work</td>
<td>Completes in a timely manner</td>
<td>Works at the pace expected for an attending</td>
<td>Is proactive and an example to other residents and faculty</td>
<td></td>
</tr>
</tbody>
</table>

24. Practice Habit 3 - Resident completes charts in a timely fashion

| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

25. COMMENTS ON THE ROTATION:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________