

Supplemental Materials

Inclusion criteria to receive invitation to participate:

All pediatrics residents who had completed at least one of the following 4-week rotation at either hospital site in which they provided clinical care for children with neurological conditions:

- Lucile Packard Children's Hospital
 - Inpatient General Pediatrics
 - Inpatient Neonatal Intensive Care Unit
 - Inpatient Pediatric Intensive Care Unit
 - Outpatient Developmental and Behavioral Pediatrics
- Santa Clara Valley Medical Center
 - Inpatient Pediatrics
 - Inpatient Pediatric Intensive Care Unit

Supplemental Materials

List of Codes

Seizure/epilepsy/status epilepticus/infantile spasms	Respect for neurology team (attitude of intellectual curiosity/skills)
Headaches/migraines	Fear of neurology
Extraocular movements/visual fields	Understanding that neurology exam impacts management decisions
Developmental delay	Understanding expectation from expert
Cerebellar signs and symptoms	More teaching leads to less inappropriate consults
Concussion management	Need for more neurology teaching beyond learning from experience
Head trauma (hemorrhage/hematoma)	Neurology fellows are teachers
Encephalopathy/encephalitis (bacterial, viral, autoimmune, NMDR)	Attendings at Madera are teachers
Cerebral palsy	Bedside nurse are teachers
Brain death	NICU NNPs are teachers
Hyperammonemia/encephalopathy	All pediatric residents should be teachers
Frontal signs	Neurology attending should be teachers
PANS	Primary non-neurology should be teachers
Hypoxic injury	Neurology clinic as location for learning
Stroke	Make neurology a required rotation
Functional disorders	DBP as location for learning
Cauda Equina Syndrome	HRIF as location for learning
Tethered cord	Teaching senior rotation as location for learning
Spina Bifida	Complex care clinic on primary care rotation as location for learning
Medication management/side effects	Allow neurology to be 2-week selective
Monitoring labs for medications	Learning from experience
Knowing relationship of inpatient and outpatient care	Indirect or direct feedback of physical exam
Anticipatory guidance/prognosis/long term consequences	Working directly with/observing fellow is helpful
Don't know localization	Being part of decision-making with neurology
Building framework for approaching neurology	Explanation of thoughts
Red flags that require urgent action	Integration into neurology team
Lack of neurology vocabulary/terminology	Neurology's expertise in clinical management
Knowing how to document	Asking questions in safe environment
Resources available for patients with neurological conditions	Learning from volume of neurology patients
AEEG	Learning from fellow notes
BRUE	Being on rounds
Knowing general neurology physical exam	Asking for help
Neuropathy	All team members should communicate
Mini Mental Status Exam	YouTube videos
Neonatal/Infant neurological exam	UpToDate
Reflexes	Physical proximity to fellows may help learning
Tone	Self-driven learning

List of Codes (continued)

Abnormal movements/sensory exam	Medical school experience affects resident experiences
Adapting exam to age and condition (intubated, sedated, obtunded)	Bedside teaching
Exam tips/maneuvers/tools	Video primer
Unable to elicit subtle exam findings	Reference guide
Developing a differential	Short and brief teaching points/didactics/on the fly teaching
Appropriate work-up/tests/imaging/orders	Need to include all levels of learners in curriculum
How to triage outpatient neurological problems	Repeating topics
Outpatient work up	Online modules
Communication with family	Opportunities to practice to learn
Communication with specialty about care/different plans	Physical finding rounds
How to navigate outpatient neurology referrals	Standardized patients
Unprepared	10 most common neurological conditions
Frontline provider	Podcast
Unsure how to do a more focused exam	Khan Academy-style teaching
Passiveness/devaluation of own skills	Patients with chronic neurological conditions can be difficult to see/disheartening
Lack of autonomy	Loss of skill without practice
Low expectation of self	Social/medical complexity
Lack of confidence in neurological skills/exam findings/initial management	Lack of direct/indirect supervision/feedback on exam findings
Unsure how to interpret exam	Lack of didactics
Embarrassing for seniors to not know neurology	Neurology-directed management
Prepared with performing exam	Neurology is taught in fragments across residency
Prepared with general knowledge	Teacher's attitude affects learner's experience
Experiences develop trust in own exam	Neuro exam not part of standard exam
Experiences develop comfort with recognizing sick vs non-sick	Exam is burdensome for examiner and patient
Experiences develop comfort with ruling out dangerous things	Variation of exam findings based on examiner
Experiences develop comfort with managing seizures	Difficulty with exam at multiple levels of providers
"Call neuro"/instant response	Lack of exposure/experience
Dependence on neurology	Patient volume as barrier
Variation of dependence on neurology based on institution	Time pressure as barrier to detailed neurological exam/learning neurology
Perception that others are not comfortable with your exam skills	Neurology patients can be ignored
Perceived shotgun approach to ordering labs give negative attitude towards neurology	Fellows can be intimidating
[Power of] Empowering residents to create plan	Fellows' approachability affects consults
Need for focused/appropriate consult question	Fellows' approachability affects patient care

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Focus Group Questions

- 1) During residency, in what ways did you feel prepared or unprepared to care for a patient with a neurological problem?
- 2) If anything, what neurological knowledge or skill did you learn from this patient care experience?
- 3) If you were an advisor hired to help develop child neurology education for pediatric residents, what advice would you give?
- 4) How have the experiences you've had thus far shaped your attitudes towards learning and practicing neurology?