



TRAINING CURRICULA

YOUNG NEUROLOGIST — PROFESSIONAL CAREER PLANNING COURSE

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Disclosures

- I have received compensation from the American Academy of Neurology (AAN) as Editor-in-Chief of *Continuum: Lifelong Learning in Neurology* and as Section Editor for the journal *Neurology*
- I have received royalties from Wiley Blackwell as Editor of the book *Neurological Disorders due to Systemic Disease*, and from Lippincott Williams & Wilkins for the book *Field Guide to the Neurologic Examination*
- I am Chair of the World Federation of Neurology (WFN) Education Committee and a Co-Opted Trustee of WFN

Objectives

- Discuss the concept of a neurologic curriculum
- Summarize the development and theory behind the Neurology Milestones
- Recognize the importance of developing a global neurologic curriculum
- Develop a personal curricular plan for neurologic training and lifelong learning



What is a Curriculum?



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-Wikipedia, accessed 10-16-2015



When is our Neurologic Curriculum?

- Undergraduate
- Medical School
- Residency Training
- Practice



What is a Neurologist?

- Not well defined (at least not in the US)

What is a Neurologist?

- What things should all neurologists be able to do after standard neurological training?
- What additional things can some neurologists be able to do after standard neurological training?
- What things should some neurologists be able to do *only* after additional dedicated training (ie, post-residency fellowship)?

The Neurology Milestones

- Joint project of the (U.S.) Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS)
- To define competencies expected of neurology residents at graduation from training
- To define developmental steps that trainee passes through en route to development of those competencies
- No previous attempt to define neurologic competencies in the U.S.



The Neurology Milestones

The Neurology Milestones

- 2011: Neurology Residency Review Committee (RRC) tasked with developing Milestones for Adult Neurology
- There had been no previous attempt to define neurologic competencies
- Neurology Work Group and Advisory Group
- Work completed over 3 meetings over 2 years



The Neurology Milestone Domains

Competency domains

- Global domains (6)
- Disease category domains (11)
- Technical/Procedural domains (4)

Global Domains

- History
- Neurologic Examination
- Localization
- Formulation
- Diagnostic Investigation
- Management

Disease Category Domains

- Movement Disorders
- Neuromuscular Disease
- Cerebrovascular Disease
- Cognitive Behavioral Disorders
- Epilepsy
- Demyelinating Disease
- Headache
- Neurology of Systemic Disease
- Child Neurology
- Neuro-Oncology
- Psychiatry

Technical/Procedural Domains

- Neuroimaging
- EEG
- EMG
- Lumbar Puncture

Developmental Milestone Levels*

- **Level 1**
 - Level of ability within a domain that a neurology resident has when entering PGY2 training (or will soon acquire)
- **Levels 2 and 3***
 - Levels of ability within domain that resident should pass through as he/she progresses through program
- **Level 4***
 - Minimum level of competence within that domain required for resident to enter unsupervised practice
- **Level 5***
 - Extra level of competence within that domain some neurologists may acquire, even without subspecialty training

*ACGME Milestone Levels not intended to correlate with any specific year of training.

Movement Disorders

	L1	L2	L3	L4	L5
Movement Disorders	Recognizes when a patient may have a movement disorder	Recognize movement disorder phenomenology and categories (hypokinetic and hyperkinetic)	Diagnose and manage common movement disorders	Recognize uncommon movement disorders	Diagnose and manage uncommon movement disorders
		Recognize movement disorder emergencies	Manage movement disorder emergencies	Recognize when to refer a movement disorder patient for a surgical evaluation or other interventional therapies	Engage in scholarly activity in movement disorders (e.g. teaching, research)

NCS/EMG

	L1	L2	L3	L4	L5
NCS/EMG	Explain an NCS/EMG procedure in nontechnical terms	Understands and uses appropriate terminology related to NCS/EMG	Describes NCS/EMG data	Interprets NCS/EMG data in common disorders	Performs, interprets and creates a report for EMG and nerve conduction studies
			Lists NCS/EMG findings in common disorders	Recognizes common pitfalls to NCS/EMG	
				Articulates basic plan for NCS/EMG assessment for common clinical presentation	

What the U.S. ACGME Milestones Are

- An attempt to define specific, practical, relevant, and manageable domains of clinical neurological competence
- An attempt to describe levels of competency development during training, leading to unsupervised neurology practice
- A way to better inform trainees of some of the expectations of training
- Not everything a graduating neurologist needs to know or be able to do
- Not a mandate for specific rotations or durations of experience

Development of a Global Curriculum

- No current worldwide standards for neurologic training
- WFN Education Committee initiative
- To develop curriculum for neurology training
- Currently in development
- Will recognize regional differences in needs, resources

Setting Your Own Curricular Plan

- Consider what makes a neurologist a neurologist
- Recognize that “rare” neurologic diseases may not be so rare
- Keep your training experiences broad
- Take advantage of as many learning and patient care opportunities as possible in training
- Consider subspecialty training *if* needed, based on subspecialty interest (including research interest) or need for additional technical expertise
- Prepare for lifelong learning



Thank you!



Questions?

Reference

- Lewis SL, Jozefowicz RF, Kilgore S, Dhand A, Edgar L. Introducing the neurology milestones. J Grad Med Educ 2014;6:102-104.