American Board of Psychiatry and Neurology, Inc.

A Member Board of the American Board of Medical Specialties (ABMS)

CONTINUING CERTIFICATION COMBINED EXAMINATION IN EPILEPSY
Content Blueprint

Number of questions: 100	
1. Clinical aspects of epilepsies	13-17%
2. Routine EEG	8-12%
3. Evaluation	25-29%
4. Management	41-45%
5. System-based practice issues	1-3%
6. Mechanisms of the epilepsies	2-4%
TOTAL	**100%**

Note: A more detailed content outline is shown below.

CONTINUING CERTIFICATION COMBINED EXAMINATION IN EPILEPSY
Content Outline

Content Areas
01. Clinical aspects of epilepsies
A. Classification of seizures
1. Generalized
a. Tonic-clonic (in any combination)
b. Absence
i. Typical
ii. Atypical
iii. Absence with special features
a) Myoclonic absence
b) Eyelid myoclonia
c. Myoclonic
i. Myoclonic
ii. Myoclonic atonic
iii. Myoclonic tonic
iv. Myoclonic-tonic-clonic
d. Clonic
e. Tonic
f. Atonic
2. Focal onset
a. Without impairment of consciousness/responsiveness
i. With observable motor or autonomic components (roughly corresponds to the concept of focal aware with motor onset seizure)

			ii.	Nonmotor onset involving subjective sensory or psychic phenomena only (corresponds to the concept of focal aware with non-motor onset seizure)
			iii.	Focal to bilateral tonic clonic
		b.		With impairment of consciousness/ responsiveness (roughly corresponds to the concept of focal impaired awareness seizure)
		c.		Evolving to a bilateral, convulsive seizure (involving tonic, clonic, tonic and clonic, or focal to bilateral tonic-clonic components)
	3.			May be focal, generalized, or unclear
		a.		Epileptic spasms
		b.		Atonic
B.				Electro-clinical syndromes and other epilepsies
	1.			By age of onset
		a.		Neonatal period
			i.	Self-limited neonatal seizures
			ii.	Self-limited familial neonatal epilepsy
			iii.	Symptomatic neonatal seizures
			iv.	Early myoclonic encephalopathy (EME)
			v.	Early infantile epileptic encephalopathy (Ohtahara syndrome)
			vi.	Other early infantile epileptic encephalopathy (EIEE)
		b.		Infancy
			i.	Epilepsy of infancy with migrating focal seizures
			ii.	West syndrome
			iii.	Myoclonic epilepsy in infancy (MEI)
			iv.	Self-limited non-familial infantile epilepsy
			v.	Self-limited familial infantile epilepsy
			vi.	Severe myoclonic epilepsy of infancy (Dravet syndrome)
			vii.	Myoclonic encephalopathy in non-progressive disorders
			viii.	Hemiconvulsion-hemiplegia-epilepsy syndrome

		c.	Childhood (1-15 years)
			i. Febrile seizures plus, genetic epilepsy with febrile seizures plus
			ii. Panayiotopoulos syndrome
			iii. Epilepsy with myoclonic-atonic seizures (Doose syndrome)
			iv. Childhood epilepsy with centrotemporal spikes (CECTS)
			v. Autosomal dominant nocturnal frontal lobe epilepsy (ADNFLE)
			vi. Late-onset childhood occipital epilepsy (Gastaut type)
			vii. Epilepsy with myoclonic absences (Tassinari syndrome)
			viii. Lennox-Gastaut syndrome
			ix. Epileptic encephalopathy with continuous spike-and-wave during sleep (CSWS)
			x. Childhood absence epilepsy (CAE)
			xi. Acquired epileptic aphasia (Landau-Kleffner syndrome (LKS))
		d.	Adolescence to Adult
			i. Juvenile absence epilepsy (JAE)
			ii. Juvenile myoclonic epilepsy (JME)
			iii. Epilepsy with generalized tonic-clonic seizures alone
			iv. Autosomal dominant partial epilepsy with auditory features (ADPEAF)
			v. Other familial temporal lobe epilepsies
C.	Less specific age relationship		
	1. Familial focal epilepsy with variable foci (childhood to adult)		
	2. Reflex epilepsies		
	3. Progressive myoclonus epilepsies (PME)		
D.	Distinctive constellations		

1.	Mesial temporal lobe epilepsy with hippocampal sclerosis (MTLE with HS)
2.	Rasmussen syndrome
3.	Focal emotional seizures with hypothalamic hamartoma
E.	Epilepsies attributed to and organized by structural-metabolic causes
1.	Structural (including tumors, vascular malformations)
2.	Infection
3.	Trauma
4.	Perinatal insults
5.	Stroke
6.	Malformations of cortical development
a.	Neurocutaneous disorders
7.	Mitochondrial and metabolic disorders
8.	Autoimmune/paraneoplastic/inflammatory
F.	Epilepsies of unknown cause
G.	Conditions with epileptic seizures traditionally not diagnosed as a form of epilepsy
1.	Benign neonatal seizures (BNS)
2.	Febrile seizures (FS)
H.	Nonepileptic paroxysmal disorders
1.	Syncope and anoxic seizures
a.	Vasovagal syncope
b.	Reflex anoxic seizures
c.	Breath-holding attacks
d.	Hyperventilation syncope
e.	Compulsive valsalva
f.	Neurological syncope
g.	Imposed upper airways obstructions
h.	Orthostatic intolerance
i.	Long QT and cardiac syncope

	j.	Hypercyanotic spells
2.	Behavioral, psychological, and psychiatric disorders	
	a.	Daydreaming/inattention
	b.	Self gratification
	c.	Eidetic imagery
	d.	Tantrums and rage reactions
	e.	Out of body experiences
	f.	Panic attacks
	g.	Dissociative states
	h.	Nonepileptic seizures
	i.	Hallucinations in psychiatric disorders
	j.	Fabricated/factitious illness
3.	Sleep related conditions	
	a.	Sleep related rhythmic movement disorders
	b.	Hypnogogic jerks
	c.	Parasomnias
	d.	REM sleep disorders
	e.	Benign neonatal sleep myoclonus
	f.	Periodic leg movements
	g.	Narcolepsy-cataplexy
4.	Paroxysmal movement disorders	
	a.	Tics
	b.	Stereotypies
	c.	Paroxysmal kinesigenic dyskinesia
	d.	Paroxysmal nonkinesigenic dyskinesia
	e.	Paroxysmal exercise induced dyskinesia
	f.	Benign paroxysmal tonic upgaze
	g.	Episodic ataxias
	h.	Alternating hemiplegia
	i.	Hyperekplexia
	j.	Opsoclonus-myoclonus syndrome
5.	Migraine associated disorders	
	a.	Migraine with visual aura
	b.	Familial hemiplegic migraine

		c.	Benign paroxysmal torticollis
		d.	Benign paroxysmal vertigo
		e.	Cyclical vomiting
	6.	Miscellaneous events	
		a.	Benign myoclonus of infancy and shuddering attacks
		b.	Jitteriness
		c.	Sandifer syndrome
		d.	Non-epileptic head drops
		e.	Spasmus nutans
		f.	Raised intracranial pressure
		g.	Paroxysmal extreme pain disorder
I.	Epidemiology		
J.	Status epilepticus (SE)		
	1.	Convulsive	
	2.	Myoclonic	
	3.	Focal motor	
	4.	Tonic status	
	5.	Hyperkinetic	
	6.	Nonconvulsive with coma	
	7.	Nonconvulsive without coma	
	8.	Refractory and super-refractory	
02.	**Routine EEG**		
A.	Normal		
	1.	Activation and procedures	
	2.	Benign variants	
	3.	Artifacts and technical issues	
B.	Interictal epileptiform patterns		
C.	Ictal patterns (localization, status, hypsarrhythmia, ictal neonatal seizures)		
D.	Encephalopathic patterns		
03.	**Evaluation**		
A.	History, examination, and semiology		
B.	Chemical and metabolic screening		

	C.	Specialized EEG	
		1.	Other supplementary and ambulatory
		2.	Video EEG
		3.	Invasive EEG recordings
			a. Stereo EEG and other depth electrodes
			b. Subdural grid electrodes
			c. Corticography
			i. Functional mapping
	D.	Imaging	
		1.	Choice of structural imaging (CT, MRI)
			a. Specific protocols
		2.	Functional imaging
			a. SPECT
			b. PET
			c. MEG
			d. MRS
			e. fMRI
			f. Diffusion tensor imaging
	E.	Neuropsychological testing	
	F.	Spinal fluid analysis (lumbar puncture)	
	G.	Genetic analysis	
04.	**Management**		
	A.	Principles of management	
		1.	History of new-onset seizure(s)
		2.	Acute seizure management
		3.	Monotherapy vs. polytherapy
		4.	Anti-seizure drug selection
		5.	Dosing and drug monitoring
		6.	Special situations
			a. Neonate

		b.	Developmental delay
		c.	Cognitively impaired
		d.	Elderly
		e.	Systemic illness
			i. Hypoxia-ischemia
	7.	Gender issues in epilepsy	
		a.	Fertility and impotence
		b.	Catamenial epilepsy
		c.	Epilepsy in pregnancy
	8.	Discontinuation of medication	
B.	Anti-seizure therapies		
	1.	Specific drugs (regular and extended-release formulations)	
		a.	Acetazolamide
		b.	ACTH
		c.	Carbamazepine
		d.	Clonazepam
		e.	Clorazepate
		f.	Diazepam (oral and rectal gel)
		g.	Divalproex sodium
		h.	Ethosuximide
		i.	Felbamate
		j.	Gabapentin
		k.	Lacosamide
		l.	Lamotrigine
		m.	Levetiracetam
		n.	Lorazepam
		o.	Oxcarbazepine
		p.	Phenobarbital
		q.	Phenytoin
		r.	Pregabalin

		s.	Primidone
		t.	Rufinamide
		u.	Tiagabine
		v.	Topiramate
		w.	Valproate
		x.	Vigabatrin
		y.	Zonisamide
		z.	Clobazam
		aa.	Eslicarbazepine
		bb.	Midazolam
		cc.	Perampanel
		dd.	Cannabidiol
		ee.	Brivaracetam
		ff.	Stiripentol
		gg.	Cenobamate
		hh.	Other
2.	Mechanisms of action of above drugs		
3.	Drug interactions (pharmacokinetic/pharmacodynamic)		
4.	Drug toxicities and teratogenicity		
5.	Monitoring principles		
6.	Other therapies		
	a.	Diet therapies	
		i.	Indications
		ii.	Patient selection
		iii.	Monitoring
		iv.	Duration
	b.	Hormonal therapies	
		i.	ACTH
		ii.	Other steroidal therapies
	c.	Immunoglobulin therapy	

		d.	Vagus nerve stimulation
		e.	Other forms of stimulation
		f.	Alternative and complementary therapies
C.	Surgical therapies		
	1.	Indications for referral	
		a.	Definition of intractable epilepsies
		b.	Duration of epilepsy and failure of response to medication
	2.	Evaluation for possible surgery	
		a.	Wada testing and special neuropsychological evaluation
	3.	Types of surgical procedure	
		a.	Focal resections
			i. Temporal lobe
			ii. Frontal lobe
			iii. Parieto-occipital
		b.	Hemispherectomies
			i. Neocortical
			ii. Standard anterior temporal lobectomy
			iii. Selective mesial resections
		c.	Multiple subpial transections
		d.	Corpus callosotomies
		e.	Repeat surgical procedures
		f.	Other
	4.	Complications of surgery	
		a.	Outcome
D.	Status epilepticus		
	1.	Acute management	
	2.	Drug therapy	
		a.	First-line
		b.	Second-line
		c.	Third-line

3.	Anesthetic therapies
4.	Continuous EEG monitoring
5.	Systemic complications
6.	Outcome
E.	Psychosocial management
1.	Patient and family education
a.	Drug information
b.	Compliance
c.	Safety issues
i.	Sleep deprivation
ii.	Sports participation
iii.	Drug and alcohol risks
iv.	Driving regulations
v.	Piloting regulations
vi	Bathing
2.	School and work situations
a.	IEPs
b.	ADA
c.	Disability
3.	Quality of life
a.	Dating
b.	Marriage
c.	Stigma
4.	Sleep and epilepsy
5.	Prognosis and counseling
F.	Comorbidities and adverse outcomes including SUDEP
1.	Psychiatric issues
2.	Cognitive issues
3.	Mortality
4.	Migraine

	5.	Medical complications
	6.	Sleep
05.	**Systems-based practice issues**	
	A.	Public policy issues (education, driving, research funding)
	B.	Working with educational systems
	C.	Employment issues
	D.	Clinical trials of new therapies
	E.	Forensic epilepsy
	F.	Ethics
06.	**Mechanisms of the epilepsies**	
	A.	Pathophysiology of the epilepsies
	B.	Physiological basis of epileptic EEG patterns
	C.	Pathology of the epilepsies