CERTIFCATION EXAMINATION IN EPILEPSY

The American Board of Psychiatry and Neurology, Inc. (ABPN) is a not-for-profit corporation dedicated to serving the public interest and the professions of psychiatry and neurology by promoting excellence in practice through certification and continuing certification processes.

The ABPN designs and develops the initial epilepsy certification examination to assess the knowledge and reasoning skills needed to provide high quality patient care in the broad domain of the subspecialty. It utilizes two-dimensional content specifications. Within the two- dimensional format, one dimension is comprised of disorders and topics while the other is comprised of competencies and mechanisms that cut across the various disorders of the first dimension. By design, the two dimensions are interrelated and not independent of each other. All of the questions on the examination will fall into one of the disorders/topics and will be aligned with a competency/mechanism. For example, an item on focal seizures could focus on treatment, or it could focus on systems-based practice.

Candidates should use the detailed content outline as a guide to prepare for a certification examination. Please note that no single examination tests everything on the content outline.

For more information, please contact us at questions@abpn.org or visit our website at www.abpn.org.

CERTIFCATION EXAMINATION IN EPILEPSY
Content Blueprint

Number of questions: 220		
Dimension 1		
Neurologic Disorders and Topics		
01.	Epilepsy and episodic disorders	74-86%
02.	Genetic and developmental disorders	3-5%
03.	Vascular neurology	1-2%
04.	Neuroinfectious diseases	1-2%
05.	Metabolic diseases, nutritional deficiency states, and disorders due to toxins, drugs, and physical agents	1-2%
06.	Neuro-oncologic disorders	1-2%
07.	Behavioral neurology and neurocognitive disorders	1-2%
08.	Psychiatric disorders	1-2%
09.	Questions not associated with a specific neurologic disorder	6-10%
10.	Neuroimmunologic and paraneoplastic CNS disorders	1-3%

Dimension 2		
Physician Competencies and Mechanisms		
A.	Neuroscience and mechanism of disease	4-6%
B.	Clinical aspects of neurologic disease	17-23%
C.	Diagnostic procedures	31-39%
D.	Treatment/Management	31-39%
E.	Interpersonal and communication skills	1-3%
F.	Professionalism	1-2%
G.	Practice-based learning and improvement	1-2%
H.	Systems-based practice	1-2%

CERTIFCATION EXAMINATION IN EPILEPSY
Content Outline

Number of items: 220
Dimension 1
Neurologic Disorders and Topics
01. Epilepsy and episodic disorders
A. Generalized seizures
01. Tonic-clonic (in any combination)
02. Absence
a. Typical
b. Atypical
c. Absence with special features
i. Myoclonic absence
ii. Eyelid myoclonia
03. Myoclonic
a. Myoclonic
b. Myoclonic-atonic
c. Myoclonic tonic
d. Myoclonic tonic-clonic
04. Clonic
05. Tonic
06. Atonic
07. Epileptic spasms
B. Focal seizures
01. Aware
02. Impaired awareness
03. Focal to bilateral tonic-clonic
XX. Other
C. Electroclinical syndromes
01. Neonatal period
a. Self-limited neonatal seizures
b. Early myoclonic encephalopathy
c. Early infantile epileptic encephalopathy (Ohtahara syndrome)
d. Symptomatic neonatal seizures
xx. Other early infantile epileptic encephalopathy
02. Infancy
a. West syndrome (infantile spasms)
b. Myoclonic epilepsy in infancy
c. Self-limited nonfamilial infantile epilepsy
d. Self-limited familial infantile epilepsy

e. Severe myoclonic epilepsy of infancy (Dravet syndrome)
f. Myoclonic encephalopathy in nonprogressive disorders
g. Epilepsy of infancy with migrating focal seizures
h. Hemiconvulsion-hemiplegia-epilepsy syndrome
xx. Other developmental epileptic encephalopathies with onset in infancy
03. Childhood
a. Febrile seizures plus
b. Self-limited epilepsy with autonomic seizures (Panayiotopoulos syndrome)
c. Epilepsy with myoclonic-atonic seizures (Doose syndrome)
d. Childhood epilepsy with centrotemporal spikes
e. Autosomal dominant sleep-related hypermotor epilepsy
f. Childhood occipital epilepsy (Gastaut type)
g. Epilepsy with myoclonic absences
h. Lennox-Gastaut syndrome
i. Epileptic encephalopathy with continuous spike-and-wave during sleep
j. Childhood absence epilepsy
k. Acquired epileptic aphasia, including Landau-Kleffner syndrome
xx. Other developmental epileptic encephalopathies with onset in childhood
04. Adolescence through adult
a. Juvenile absence epilepsy
b. Juvenile myoclonic epilepsy
c. Epilepsy with generalized tonic-clonic seizures alone
d. Autosomal dominant epilepsy with auditory features
xx. Other familial temporal lobe epilepsies
05. Other benign
06. Other idiopathic
07. Other generalized/multifocal
D. Less specific age relationship
01. Familial focal epilepsy with variable foci
02. Reflex epilepsies
03. Progressive myoclonus epilepsies
04. Mesial temporal lobe epilepsy with hippocampal sclerosis
05. Rasmussen syndrome
06. Focal emotional (gelastic) seizures with hypothalamic hamartoma
E. Epilepsies attributed to and organized by structural-metabolic causes
01. Structural (including tumors, vascular malformations)
02. Infection
03. Trauma
04. Perinatal insults
05. Malformations of cortical development (including neurocutaneous syndromes)
06. Mitochondrial and metabolic disorders
07. Stroke

08. Genetic epilepsies
F. Epilepsies of unknown cause
G. Conditions with epileptic seizures traditionally not diagnosed as a form of epilepsy
01. Benign neonatal seizures
02. Febrile seizures
03. Provoked seizures
H. Nonepileptic paroxysmal disorders
01. 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. Hyper-cyanotic spells
02. Functional neurologic nonepileptic seizures and other behavioral, psychological, and psychiatric disorders
a. Daydreaming /inattention
b. Self-gratification
c. Tantrums and rage reactions
d. Panic attacks
e. Dissociative states
f. Nonepileptic seizures
g. Hallucinations in psychiatric disorders
h. Fabricated/factitious illness
03. 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
04. 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
05. Migraine-associated disorders
a. Migraine with visual aura
b. Familial hemiplegic migraine
c. Benign paroxysmal torticollis
d. Benign paroxysmal vertigo
e. Cyclical vomiting
f. Migraine with speech disorder
06. Miscellaneous events
a. Benign myoclonus of infancy and shuddering attacks
b. Jitteriness
c. Sandifer syndrome
d. Nonepileptic head drops
e. Spasmus nutans
f. Raised intracranial pressure
g. Paroxysmal extreme pain disorder
XX. Other
I. Status epilepticus
01. Convulsive
02. Nonconvulsive
03. Focal motor
04. Tonic status
05. Febrile
06. Refractory and super-refractory
02. Genetic and developmental disorders
A. Inherited metabolic disorders
01. Disorders of amino acid metabolism
02. Disorders of urea cycle metabolism
03. Disorders of sulfur amino acids
04. Disorders of amino acid transport
05. Disorders of carbohydrate metabolism and transport
a. Glucose transporter deficiency
06. Organic acidurias
07. Disorders of fatty acid oxidation
08. Disorders of purine metabolism
09. Porphyria
10. Disorders of iron metabolism (including pantothenate kinase-associated neurodegeneration (PKAN))

XX. Other
B. Lysosomal disorders
01. Glycogen storage diseases
02. Gangliosidoses
03. Gaucher disease
04. Fabry disease
05. Niemann-Pick disease
06. Neuronal ceroid lipofuscinosis
XX. Other
C. Leukodystrophies
D. Additional disorders
01. Rett syndrome
02. Mitochondrial disorders
03. Peroxisomal disorders
XX. Other
E. Chromosomal disorders
01. Autosomal abnormalities
a. Down syndrome (trisomy 21)
b. Trisomy 13
c. Cri du chat syndrome
d. Duplication/deletion
i. Angelman syndrome
ii. Prader-Willi
iii. Other
e. Williams syndrome
xx. Other
02. X-chromosomal disorders
a. Fragile X syndrome
b. Other
03. Other
F. Disorders of brain and spine development
01. Anencephaly
02. Myelomeningocele and encephalocele
03. Chiari malformations
04. Cerebellar malformations
05. Skull malformations, including craniosynostosis
a. Joubert syndrome
b. Dandy Walker and variants
c. Other
06. Brain malformations
a. Holoprosencephaly
b. Septo-optic dysplasia

c. Schizencephaly
d. Lissencephaly and other migrational abnormalities
e. Agenesis of the corpus callosum
f. Hemimegalencephaly
07. Microencephaly and micrencephaly
08. Macrencephaly, megalencephaly, and other overgrowth syndromes
09. Hydrocephalus
10. Cystic malformations (arachnoid, colloid, pineal, dermoid)
G. Neurocutaneous syndromes
01. Neurofibromatosis 1 and 2
02. Tuberous sclerosis
03. Sturge-Weber syndrome
04. Ataxia-telangiectasia
05. Von Hippel-Lindau disease
06. Incontinentia pigmenti
XX. Other
H. Cerebral palsy
01. Spastic
02. Dyskinetic/dystonic
03. Ataxic
XX. Other
03. Vascular neurology
A. Ischemic stroke (cerebral infarction and transient ischemic attack)
B. Intracerebral hemorrhage
C. Subarachnoid hemorrhage
D. Cerebral venous thrombosis
E. Reversible cerebrovascular constriction syndrome (RCVS) and posterior reversible encephalopathy syndrome (PRES)
XX. Other
04. Neuroinfectious diseases
A. Bacterial infections
B. Fungal infections
C. Mycobacteria, including tuberculosis
D. Viral infections
E. Protozoan infections
F. Parasitic infections
G. Prion infections (e.g., Creutzfeldt-Jakob disease (CJD), others)
05. Metabolic diseases, nutritional deficiency states, and disorders due to toxins, drugs, and physical agents
A. Metabolic diseases
01. Hypoxic-ischemic encephalopathy

02. Disorders of glucose metabolism, including hypoglycemia, diabetic ketoacidosis, and nonketotic hyperglycemia
03. Hepatic encephalopathy
04. Uremic encephalopathy, including dialysis dementia and dialysis dysequilibrium syndrome
05. Disorders of sodium, potassium, and water metabolism, including hyponatremia, hypernatremia, hypokalemia, and hyperkalemia
06. Disorders of calcium and magnesium metabolism, including hypocalcemia, hypercalcemia, hypomagnesemia, and hypermagnesemia
07. Endocrine diseases, including those of thyroid, parathyroid, adrenal, and pituitary glands (including pituitary apoplexy)
08. Drug overdose
B. Nutritional deficiency states
C. Toxins, drugs, and physical agents
01. Effects of drug abuse
02. Effects of alcohol
03. Effects of ionizing radiation
D. Iatrogenic/therapeutic drugs
06. Neuro-oncologic disorders
A. Neoplasms
01. Primary
02. Secondary
07. Behavioral neurology and neurocognitive disorders
A. Delirium, dementia, and other cognitive disorders
01. Amnestic disorders (including transient global amnesia)
B. Neurodevelopmental disorders
C. Alteration of mental status/encephalopathy/coma/brain death
01. Cerebral death criteria
D. Pseudobulbar affect/pseudobulbar palsy
XX. Other
08. Psychiatric disorders
A. Depressive disorders
B. Anxiety disorders
XX. Other psychiatric disorders
09. Questions not associated with a specific neurologic disorder
A. Normal anatomy, process, neurophysiology
B. Pharmacology
C. Medical-legal, public policy/regulatory factors, professional practice
D. Development through the life cycle: developmental processes, tasks, crises, transitions
01. Childhood (school entry, peer relations, individuation)
02. Adulthood (employment, parenting, acquisition/loss of specific capacities)
03. Late life (cognition, physical endurance, loss of specific capacities)

E. Procedures/procedural safety
F. Normal test results, findings, variants, artifacts, and methods
01. EEG
02. Evoked potentials
03. Imaging
04. Sleep studies
05. Laboratory tests
10. Neuroimmunologic and paraneoplastic CNS disorders
A. CNS vasculitis and microangiopathies
B. Neuroimmunologic/paraneoplastic CNS syndromes
01. Encephalitis/encephalomyelitis (anti-NMDA, anti-IL2, limbic, other)
02. Epilepsy

Number of items: 220
Dimension 2
Physician Competencies and Mechanisms
A. Neuroscience and mechanism of disease
01. Neuroanatomy
a. Cerebral cortex
b. Connecting systems
c. Basal ganglia/thalamus
d. Brainstem
e. Cerebellum
f. Cranial nerves
g. Spinal cord
h. Spinal roots/peripheral nerves
i. Ventricular system, CSF
j. Vascular
k. Autonomic nervous system
l. Radiologic anatomy, cerebral blood vessels (angiography or MRA)
xx. Other
02. Neuropathology
a. Basic patterns of reaction
b. Cerebrovascular disease
c. Trauma (cranial and spinal)
d. Metabolic/toxic/nutritional diseases
e. Infections
f. Demyelinating diseases/leukodystrophies
g. Neoplasms
h. Congenital/developmental anomalies
i. Malformations of cortical development
i. Degenerative/heredodegenerative disorders
j. Myopathies
k. Peripheral nerve
l. Neuromuscular junction disorders
m. Radiologic pathology pertinent to assigned pathology sections
n. Medium and large-vessel vasculitis
xx. Other
03. Neurochemistry
a. Carbohydrate metabolism
b. Lipid metabolism
c. Protein metabolism
d. Neurotransmitters
e. Axonal transport

f.	Energy metabolism
g.	Blood-brain barrier
h.	Biochemistry of membranes/receptors/ion channels
i.	Neuronal excitation
j.	Vitamins (general aspects)
k.	Inborn errors of metabolism
l.	Electrolytes and minerals
m.	Neurotoxins
n.	Free radical scavengers
o.	Excitotoxicity
p.	Normal CSF constituents and volume
xx.	Other
04.	Neurophysiology
a.	Membrane physiology
b.	Synaptic transmission
c.	Sensory receptors and perception
d.	Special senses
e.	Reflexes
f.	Segmental and suprasegmental control of movement
g.	Cerebellar function
h.	Reticular system: mechanisms of sleep and arousal, consciousness, circadian rhythms
i.	Rhinencephalon, limbic system, visceral brain
j.	Learning and memory
k.	Cortical organization and function
l.	Cerebral blood flow
xx.	Other
05.	Neuroimmunology/neuroinfectious disease
06.	Neurogenetics/molecular neurology, and neuroepidemiology
a.	Mendelian-inherited diseases
b.	Other modes of inheritance
c.	Mitochondrial disorders
d.	Nucleotide repeat disorders
e.	Channelopathies
f.	Genetics of epilepsy
g.	Risk factors in neurologic disease
h.	Demographics of neurologic disease
07.	Neuroendocrinology
a.	Thyroid gland
b.	Cushing syndrome
c.	Corticosteroids
d.	Growth hormones

e. Hypothalamic function
f. Adrenal gland
g. Pituitary gland
h. Prolactin
i. Androgen
j. Estrogen
k. Progesterone
08. Pathophysiology
a. Epilepsy
b. Vascular
B. Clinical aspects of neurologic disease
01. Epidemiology
02. Risk factors
a. Risk factors for epilepsy
03. Signs and symptoms
04. Comorbidities
a. Psychiatric issues
b. Cognitive issues
c. Mortality
d. Migraine
e. Medical complications
f. Sleep
g. SUDEP
05. Course of illness
a. First-time seizure
06. Prognosis
07. Localization
08. Pregnancy/peripartum
09. Complications of illness
a. Complications of stroke
b. Complications of epilepsy
10. Quality of life
a. Dating
b. Marriage
c. Stigma
C. Diagnostic procedures
01. Neuroimaging
a. Structural imaging (computed tomography, magnetic resonance imaging)
i. Head CT
ii. MRI of the brain
(a) MRI sequences—T1, T2, FLAIR, DWI, PWI, gradient echo, SWI, DTI
iii. Specific protocols

b. Vascular imaging (conventional angiography, computed tomographic angiography, magnetic resonance angiography, ultrasound)
c. Functional neuroimaging, including fMRI, SPECT, PET
i. SPECT
ii. PET
iii. MRS
iv. fMRI
v. Diffusion tensor imaging
02. EEG (routine EEG, LTME, subdural and cortical EEGs)
a. Methods
i. Techniques and activation
(a) Hyperventilation
(b) Photic stimulation
(c) Sleep deprivation
(d) Supplementary electrodes
(e) Video use
(f) Response testing/interviewing
(g) Reactivity
(h) Cerebral death criteria
(i) Electrode placement
(j) Trendline/quantification
(k) Montage selection
(l) MEGs
(m) Electrocorticography/cortico-mapping
(n) Scalp EEG
(i) Routine
(ii) Ambulatory
(iii) Video
(o) Instrumentation, polarity, volume conduction, and other electrical properties
(p) Intracranial recording
(i) Subdural grid electrodes
(ii) Intraoperative electrocorticography
(iii) Functional mapping
(iv) Stereo EEG and other depth electrodes
(xx) Other
ii. Artifacts
(a) Electrode pop
(b) Photoelectric
(c) Salt bridge
(d) Movement
(e) Muscle

(f) Eye movements/eye flutter
(g) Rectus muscle spikes
(h) Interelectrode distance errors
(i) Glossopharyngeal
(j) Machine/ventilator
(k) 60 Hz
(l) Dissimilar metals
(m) Bruxism
(n) Fluid collection
(o) Breach rhythm/skull defect
(p) Sweat artifact
(q) Suck artifact
(r) Pulse artifact
(s) ECG
(xx) Other (e.g., bed motion, patting, IV drip, ICU artifacts)
b. Basic patterns
i. Maturational, state, and age-related changes
(a) Premature neonate
(i) Trace discontinue
(ii) Positive temporal theta bursts
(iii) Delta brush
(iv) Synchrony
(v) Inter burst interval duration
(b) Term neonate
(i) Trace alternant/quiet sleep
(ii) Activitè moyenne/wakefulness
(iii) Multifocal sharps/quiet sleep
(iv) High voltage slow/quiet sleep
(v) Central apnea
(vi) Active sleep
(vii) Wakefulness
(viii) Encoches frontales
(c) Infant patterns
(i) Sleep spindles
(ii) Non-REM sleep: other
(iii) REM sleep
(iv) Waking posterior rhythm
(d) Childhood
(i) Waking posterior rhythm
(ii) Central theta
(iii) Non-REM sleep: hypnogogic
(iv) Non-REM sleep: arousals

(v) Posterior slow waves of youth
(e) Adult
(i) Posterior waking rhythm
(ii) Mu
(iii) Beta
(iv) Non-REM
(v) REM
(vi) Lambda
(vii) POSTs
(viii) Normal sleep findings
(f) Elderly
(i) Temporal theta
(ii) Slowing of alpha rhythm
(iii) Diminished amplitude
ii. Variants—normal and uncommon
(a) Benign epileptiform sharp transients
(i) Rhythmic midtemporal theta burst of drowsiness/psychomotor variant
(ii) Small sharp spikes/ Benign epileptiform transients of sleep
(iii) Wicket spikes
(iv) 6 and 14 Hz
(v) Subclinical rhythmic electrographic discharges in adults
(vi) Midline theta rhythm
(b) Alpha rhythm variants
(i) Slow and fast
(ii) Squeak
(iii) Asymmetry
c. Clinical correlations
i. Seizures and other paroxysmal events
(a) Focal
(i) By EEG findings
aa. Ictal discharges
bb. Interictal discharges
xa. Focal spikes
xb. Temporal intermittent rhythmic delta activity
xc. Occipital intermittent rhythmic delta activity
cc. Neonatal seizures
(b) Generalized
(i) By EEG findings
aa. Photoparoxysmal responses

bb. Polyspike and wave
cc. Generalized fast activities/tonic seizures
dd. Electrodecremental seizures
ee. 3-Hz spike-and-wave
ff. Hypsarrhythmia
gg. Slow spike-and-wave
hh. Continuous spike-and-wave during sleep
ii. Focal lesions
(a) Intermittent rhythmic delta activity
(b) Arrhythmic delta activity
(c) Sporadic theta/delta
(d) Focal suppression
iii. Diffuse encephalopathies: coma, death
(a) Alpha rhythm slowing
(b) Reactive theta/delta
(c) Triphasic waves
(d) Intermittent rhythmic delta activity
(e) Arrhythmic delta activity
(f) Alpha/theta coma
(g) Spindle coma
(h) Burst-suppression
(i) Cerebral death
(j) Frontal intermittent rhythmic delta activity
(k) Extreme delta brushes
(l) Neonatal encephalopathies. including periventricular hemorrhage
iv. Drugs and treatment effects
(a) Enhanced beta
(b) Slowing
(c) Epileptiform/seizure activation
(d) Hypothermic therapy effects
v. Periodic and uncertain patterns
(a) Focal or lateralized periodic
(i) Herpes simplex virus
(ii) Stroke
(iii) Glioblastoma
(xx) Other
(b) Generalized or bilateral periodic
(i) Hypoxia/anoxia (adult/neonate)
(ii) Prion
(iii) Neonatal brief electroencephalography rhythmic discharges
(xx) Other (e.g., subacute sclerosing panencephalitis)

(c) Status epilepticus
(d) ICU-EEG terminology/ictal-interictal continuum
03. Magnetoencephalography
04. CSF examination/lumbar puncture
05. Laboratory studies
a. Hematologic studies
i. Blood count
ii. Platelet count
iii. Special coagulation studies
iv. Antiplatelet (aspirin, clopidogrel) resistance studies
b. Immunological studies
i. Inflammatory markers
ii. Other autoimmune studies (multisystem)
iii. Serologic studies
c. Biochemical studies
i. Glucose
ii. Cholesterol
iii. Blood gases
iv. Hepatic and renal tests
v. Toxicology screen
d. Infectious studies
i. Cultures
ii. PCR or other molecular studies
iii. Other
e. Urine tests
06. Neuropsychological and cognitive testing
a. Memory testing
b. Language
c. Executive function
d. Attention
e. Visuospatial
07. Cardiac testing
a. Electrocardiography
i. Monitoring
ii. Holter and event monitors
b. Transthoracic and transesophageal echocardiography (TTE and TEE)
08. Skin/nerve/muscle biopsy
09. Genetic testing
XX. Other
D. Treatment
01. General principles of neuropharmacology
a. Neuropharmacokinetics/neuropharmacodynamics

b. Drug toxicity/side effects/idiosyncratic reactions/medication withdrawal/contraindications
c. Drug interactions
d. Pregnancy
i. Teratogenicity/neurodevelopmental effects in offspring
ii. Drug level fluctuations
iii. Breastfeeding
e. Age, gender, and ethnicity issues
f. Pharmacogenomics
g. Mechanisms of action
h. Drug management decisions (initiation, continuation, discontinuation)
02. Pharmacotherapy
a. Drugs for migraine and other headache syndromes
b. Analgesics (nonnarcotic, narcotic, etc.)
c. Antiseizure medications
i. Acetazolamide
ii. Carbamazepine
iii. Clonazepam
iv. Clorazepate
v. Diazepam (oral and rectal gel)
vi. Divalproex sodium
vii. Ethosuximide
viii. Felbamate
ix. Gabapentin
x. Lacosamide
xi. Lamotrigine
xii. Levetiracetam
xiii. Lorazepam
xiv. Oxcarbazepine
xv. Phenobarbital
xvi. Phenytoin
xvii. Pregabalin
xviii. Primidone
xix. Rufinamide
xx. Tiagabine
xxi. Topiramate
xxii. Valproate
xxiii. Vigabatrin
xxiv. Zonisamide
xxv. Clobazam
xxvi. Eslicarbazepine
xxvii. Midazolam

xxviii. Perampanel
xxix. Cannabidiol
xxx. Brivaracetam
xxxi. Stiripentol
xxxii. Cenobamate
xxxiii. Other
d. Drugs for sleep disorders
e. Drugs for psychiatric disorders (sedative-hypnotics, antianxiety agents, antidepressants, antipsychotics)
f. Vitamins/minerals/nutrients
g. Immunomodulatory agents, including oral medications, prednisone, IV Ig, and plasma exchange
h. Antimicrobial agents
i. Drugs used for increased intracranial pressure and for brain/spinal cord edema
j. Drugs for autonomic dysfunctions
k. Drugs for dementia/cognition/alertness
l. Spasticity treatments
i. Botulinum toxin
m. Antineoplastic agents
n. Monotherapy vs polytherapy
i. New onset seizure
ii. Acute seizure
o. Hormonal therapies
i. ACTH
ii. Other steroidal therapies
iii. Progesterone therapies
xx. Other
03. Neuromodulation
a. Vagus nerve stimulation (VNS)
b. Deep brain stimulation (DBS)
c. Transcranial magnetic stimulation (TMS)
d. Electroconvulsive therapy (ECT)
e. Responsive neurostimulation (RNS)
xx. Other
04. Critical care
05. Surgical treatment/interventions
a. Epilepsy surgery
i. Indications for referral
(a) Definition of intractable epilepsies
(b) Duration of epilepsy and failure of response to medication
ii. Evaluation for possible surgery
(a) Wada testing and special neuropsychological evaluation

iii. Types of surgical procedure
(a) Focal resections
(i) Temporal lobe
(ii) Frontal lobe
(iii) Parieto-occipital
(b) Hemispherectomies
(c) Laser ablation
(d) Corpus callosotomies
(e) Repeat surgical procedures
(f) Other (including multiple subpial transections)
iv. Complications
v. Outcomes
b. Other
06. Rehabilitation
07. Psychotherapy, biofeedback etc.
08. Reassurance, observation, lifestyle modification, etc.
09. Specific dietary treatment
10. Genetic counseling
11. Complications of management
12. Gene therapy/enzyme replacement therapy/stem cell replacement
13. Non-surgical/non-pharmacological
XX. Other
E. Interpersonal and communications skills
01. Communication with patients
a. Communication of progress
02. Communication with patients' families
03. Communication with other professionals
04. Communication with the healthcare team
05. Communication with the public
06. Management of conflict
07. Common errors in communication
08. 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
d. School and work situations

i. IEPs
ii. ADA
iii. Disability
iv. School/work action plans
F. Professionalism
01. Professional behavior
02. Adherence to ethical principles (e.g., informed consent, research issues, clinical care)
03. Participation in the professional community
04. Sensitivity to diverse patient populations
05. End-of-life issues and brain death
06. Fatigue management/burnout
G. Practice-based learning and improvement
01. Development and execution of lifelong learning
a. Self-assessment and self-improvement
b. Use of evidence-based guidelines
c. Critical review of scientific literature
02. Formal practice-based quality improvement
H. Systems-based practice
01. Patient safety and the healthcare team
a. Medical errors and their prevention
b. Communication in patient safety
c. Regulatory and educational activities related to patient safety
i. General electrical
ii. EMG morbidity/complications
iii. EEG/monitoring morbidity and complications
iv. Electrode/neuroimaging safety
v. Driving
(a) Personal
(b) Business (e.g. truck driving, piloting)
vi. Employment
(a) Armed forces
02. Resource management
a. Parity
b. Access to care
c. Negotiation with payers
03. Community-based care
a. Community-based programs
b. Prevention
c. Recovery and rehabilitation
d. Knowledge of the legal aspects of neurological practice
04. Referral for appropriate consultation/decision making
05. Working with local and national disease-based and advocacy groups