United Council for Neurologic Subspecialties
Behavioral Neurology & Neuropsychiatry
Recertification Examination
Content Outline

REV 10/22/15

The UCNS Behavioral Neurology & Neuropsychiatry (BNNP) examination was established to determine the level of competence for Behavioral Neurologists and Neuropsychiatrists.

The following content outline is provided to examination candidates interested in the recertification examination. The content outline consists of four primary categories followed by subcategories. A complete description of the core content required of Behavioral Neurologists and Neuropsychiatrists can be found in the BNNP Core Curriculum at http://www.ucns.org/globals/axon/assets/3636.pdf.

The written recertification examination consists of 150 multiple choice questions.

Content Area	Percentage of Questions
I. Structural and Functional Neuroanatomy	**10%**
II. Neuropsychiatric Assessment	**30%**
III. Treatments	**30%**
IV. Neurobehavioral and Neuropsychiatric Syndromes	**30%**

I. Structural and Functional Neuroanatomy

A. Brain Organization
   1. Cerebral cortex and its parts
   2. Limbic and paralimbic structures
   3. Basal ganglia
   4. Diencephalon
   5. Brainstem
   6. Cerebellum
   7. White matter
   8. Cortico-cortical and cortical-subcortical circuits
   9. Regional cerebral specialization
   10. Neurochemistry – neurotransmitters, neuropeptides, neurohormones
   11. Cerebrovascular and ventricular systems

B. Cognition, Emotion, and Behavior

1. Cognition (e.g., arousal, perception, attention, recognition, memory, language, praxis, visuospatial function, executive function)
2. Emotion (e.g., mood, affect, affective prosody)
3. Behavior (e.g., sleep, motivation, comportment, personality)

II. Neuropsychiatric Assessment

A. Neurological Examination
   1. Elemental neurological function
   2. Neurological "soft-signs"
   3. Standardized rating scales

B. Mental Status Examination
   1. General assessment of cognition, emotion, and behavior
   2. Cognitive examination, including quantified clinical assessments
   3. Standardized assessments of neuropsychiatric symptoms and syndromes
   4. Clinical interpretation of mental status examination findings

C. Neuropsychological Assessment
   1. Indications for neuropsychological testing in evaluation and treatment planning
   2. Content, sensitivity, and specificity of neuropsychological testing
   3. Factors that influence test performance
   4. Relationship between neuropsychological tests and bedside or office-based quantified clinical assessments
   5. Clinical interpretation of neuropsychological test results

D. Neuroimaging
   1. Principles and applications of structural and functional imaging
   2. Correlation between neuroimaging and clinical examination
   3. Neuroimaging biomarkers of neurobehavioral and neuropsychiatric conditions, including neurodegeneration and neurotrauma

E. Electrophysiologic Testing
   1. Principles and applications of electrophysiologic recordings
   2. Correlation between electrophysiologic findings and clinical examination
   3. Electrophysiologic biomarkers of neurobehavioral and neuropsychiatric conditions, including neurodegeneration and neurotrauma

F. Laboratory Studies
   1. Indications for serum and urine studies
   2. Indications for and interpretation of results from CSF examinations
   3. Neurogenetics of neurobehavioral and neuropsychiatric conditions
   4. Neuropathology of neurobehavioral and neuropsychiatric conditions, including neurodegenerative diseases, cerebrovascular disorders, and neurotrauma

III. Treatments

A. Somatic Therapies
   1. Neuropharmacologic agents
   2. Adverse effects of neuropharmacologic agents and drug-drug interactions
   3. Non-invasive neurmodulation, including electroconvulsive therapy, transcranial magnetic stimulation, transcranial direct current stimulation

4. Neurosurgical interventions, including deep brain stimulation, vagal nerve stimulation, and lesional procedures

B. Psychosocial Interventions
   1. Supportive therapy
   2. Cognitive-behavioral therapy
   3. Cognitive rehabilitation
   4. Family and systems therapy
   5. Environmental interventions
   6. Behavioral management strategies

IV. Neurobehavioral and Neuropsychiatric Syndromes [exam does not necessarily, but may include material in the following areas]

A. Focal Neurobehavioral Syndromes, including disorders of:
   1. Arousal (e.g., coma, vegetative states, minimally conscious states)
   2. Perception (e.g., illusions, hallucinations, sensory impairments)
   3. Attention (e.g., delirium/acute confusional states, hemispatial inattention/neglect)
   4. Language (e.g., aphasias, affective aprosodias)
   5. Memory (e.g., amnesias)
   6. Praxis (e.g., apraxias)
   7. Recognition (e.g., agnosias)
   8. Executive function
   9. Social cognition (e.g., comportment, emotional recognition, theory of mind)
   10. Motivation (e.g., apathy, abulia, akinetic mutism)

B. Neuropsychiatric Syndromes
   1. Intellectual disabilities
   2. Communication disorders
   3. Autism spectrum disorder
   4. Attention-deficit/hyperactivity disorder
   5. Specific learner disorder
   6. Motor disorders, including developmental coordination disorder and stereotypic movement disorder
   7. Tic disorders, including Tourette syndrome
   8. Schizophrenia spectrum and other psychotic disorders
   9. Mood disorders, including bipolar, depressive, and related disorders
   10. Disorders of affect, including pathological laughing and crying (also known as pseudobulbar affect)
   11. Anxiety disorders
   12. Obsessive-compulsive and related disorders
   13. Trauma and stress-related disorders
   14. Dissociative disorders
   15. Somatic symptom and related disorders
   16. Sleep-wake disorders
   17. Disruptive, impulse-control, and conduct disorders
   18. Substance-related and addictive disorders
   19. Neurocognitive disorders, including delirium, mild cognitive impairment (i.e., Mild Neurocognitive Disorder) and dementia (i.e., Major Neurocognitive Disorder)

20. Paraphilic disorders
21. Personality disorders, including personality change due to neurological conditions

C. Cognitive, Emotional, and Behavioral Manifestations of Neurological Disorders
    1. Neurodegenerative disorders
    2. Stroke and other cerebrovascular diseases
    3. Epilepsy
    4. Multiple sclerosis and other demyelinating diseases
    5. Traumatic brain injury
    6. Hypoxic-ischemic brain injury
    7. Hydrocephalus, including obstructive and normal pressure types
    8. Primary and secondary brain tumors
    9. Central nervous system infections
    10. Neuroendocrine disorders
    11. Toxic exposures/ingestions
    12. Metabolic disorders, including solid organ failure and transplantation and inborn errors of metabolism
    13. Movement disorders, including neurodegenerative, acquired, medication-induced, and psychogenic (functional) types
    14. Headache
    15. Acute and chronic pain
    16. Autoimune disorders affecting the central nervous system, including autoimmune encephalopathies