

UNITED COUNCIL
FOR
NEUROLOGIC
SUBSPECIALTIES

UCNS Behavioral Neurology & Neuropsychiatry Milestones

For definitions and instructions to complete milestones, please visit the [ACGME website](#).

- UCNS Common Milestones for Interpersonal & Communication Skills, Practice-based Learning and Improvement, Professionalism, and Systems-based Practice, adopted from the ACGME Clinical Neurophysiology milestones
- *BNNP-specific language in the common milestones is shown in italics.* Common language is shown in regular typeface.

1. Systems thinking, including cost- and risk-effective practice – Systems-based Practice				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> Identifies and describes the roles of other team members <i>involved in the care of persons with neurobehavioral and neuropsychiatric disorders.</i> Identifies obvious or critical causes of error. 	<ul style="list-style-type: none"> Minimizes unnecessary diagnostic and therapeutic tests. Advocates for cost-conscious utilization of resources. Reports system errors that contribute to patient safety. 	<ul style="list-style-type: none"> Practices cost-effective <i>BNNP subspecialty-focused</i> patient care. Advocates for safe patient care and optimal patient care systems <i>for persons with neurobehavioral and neuropsychiatric disorders.</i> Participates in quality assurance or improvement activities to improve patient safety <i>relevant to the practice of BNNP.</i> 	<ul style="list-style-type: none"> Leads quality assurance or improvement activities <i>relevant to the practice of BNNP.</i> Initiates care delivery models to mitigate barriers to cost-effective and high-quality care <i>for persons with neurobehavioral and neuropsychiatric disorders.</i> 	<ul style="list-style-type: none"> Mentors others in quality improvement activities <i>relevant to the practice of BNNP.</i> Mentors others in developing care delivery models <i>for persons and families with neurobehavioral and neuropsychiatric disorders.</i>
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Comments: Not Applicable <input type="checkbox"/>				

2. Self-directed learning – Practice-based Learning and Improvement				
<ul style="list-style-type: none"> Identify strengths, deficiencies, and limits in one’s knowledge and expertise Set learning and improvement goals Identify and perform appropriate learning activities 				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> Engages in self-reflection when asked to do so. Responsive to feedback when offered. 	<ul style="list-style-type: none"> Welcomes unsolicited feedback. Engages in self-reflection routinely. Receptive to feedback from multiple sources. 	<ul style="list-style-type: none"> Recognizes sub-optimal performance as an opportunity for self-improvement. Consistently incorporates feedback in learning plan. 	<ul style="list-style-type: none"> Demonstrates proficiency in reconciling disparate or conflicting feedback. Continuously self-reflects and incorporates self-improvement opportunities to maximize practice improvement. Seeks 360-degree feedback. 	<ul style="list-style-type: none"> Mentors others on self-reflection. Mentors others on the process of self-improvement. Provides constructive feedback to others in a non-judgmental manner.
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Comments: Not Applicable <input type="checkbox"/>				

3. Compassion, integrity, accountability, and respect for self and others – Professionalism				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Demonstrates compassion, sensitivity and responsiveness to patients and families. • Demonstrates non-discriminatory behavior in all interactions, including <i>interactions with</i> diverse and vulnerable populations. • Consistently demonstrates professional behavior, including boundaries, <i>attire</i>, and timeliness in all activities. 	<ul style="list-style-type: none"> • Demonstrates appropriate steps to address impairment in self. • Demonstrates compassionate practice of <i>BNNP</i>, even in context of disagreement with patient beliefs. • Incorporates patients' socio-cultural needs and beliefs into patient care. 	<ul style="list-style-type: none"> • Demonstrates appropriate steps to address impairment in colleagues. • <i>Demonstrates commitment to managing</i> conflicts of interest with sponsors and/or for-profit industries. • <i>Supports quality patient care for persons with neurobehavioral and neuropsychiatric disorders.</i> 	<ul style="list-style-type: none"> • Mentors others in the compassionate practice of <i>BNNP</i>, even in context of disagreement with patient beliefs. • Mentors others in sensitivity and responsiveness to diverse and vulnerable populations. • <i>Advocates to reduce institutional and/or local healthcare disparities experienced by persons with neurobehavioral and neuropsychiatric disorders.</i> 	<ul style="list-style-type: none"> • Engages in scholarly activity regarding professionalism in <i>BNNP</i>. • Advocates for quality patient care <i>for persons with neurobehavioral and neuropsychiatric disorders</i> at a regional or national level. • <i>Advocates at a regional or national level to reduce healthcare disparities experienced by persons with neurobehavioral and neuropsychiatric disorders.</i>
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Comments: Not Applicable <input type="checkbox"/>				

4. Knowledge about, respect for, and adherence to the ethical principles relevant to the practice of medicine, remembering in particular that responsiveness to patients that supersedes self-interest is an essential aspect of medical practice – Professionalism				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • <i>Consistently displays responsiveness to patients that supersedes self-interest.</i> • Demonstrates ability to identify common ethical dilemmas encountered in the practice of BNNP, and to identify the ethical principles relevant to their consideration. 	<ul style="list-style-type: none"> • <i>Obtains healthcare ethics consultations in a timely and effective manner.</i> • <i>Applies healthcare ethics consultation findings to the care of patients with neurobehavioral and neuropsychiatric conditions and to the interactions with their families.</i> 	<ul style="list-style-type: none"> • Analyzes and manages common ethical issues in straightforward clinical situations that arise in the practice of BNNP. • Collaborates with healthcare ethics consultants on analyzing and managing common ethical issues in straightforward clinical situations that arise in the practice of BNNP. 	<ul style="list-style-type: none"> • Analyzes and manages ethical issues in complex clinical situations <i>independently and in collaboration with healthcare ethics consultants.</i> • Analyzes and manages uncommon ethical issues arising in the practice of BNNP <i>independently and in collaboration with healthcare ethics consultants.</i> 	<ul style="list-style-type: none"> • Demonstrates <i>team leadership and mentorship with junior colleagues in relation to applying ethical principles to the care of patients and families encountered in the practice of BNNP.</i> • Actively participates on hospital ethics committee.
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5. Relationship development, teamwork, and managing conflict – Interpersonal and Communication Skills				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Develops a therapeutic relationship with <i>persons with neurobehavioral and neuropsychiatric disorders patients and their family members/caregivers</i> in uncomplicated situations. • Actively participates in team-based care <i>provided to persons with neurobehavioral and neuropsychiatric disorders.</i> 	<ul style="list-style-type: none"> • Manages simple patient, family, and caregiver related conflicts. • Engages <i>persons with neurobehavioral and neuropsychiatric disorders and their caregivers</i> in shared decision making. • Consistently demonstrates respect for all <i>healthcare</i> team members. 	<ul style="list-style-type: none"> • Manages <i>clinical and healthcare systems</i> conflicts in complex situations. • Uses easy-to-understand language in all phases of communication (avoids “medicalese”) and considers the health literacy of <i>persons with neurobehavioral and neuropsychiatric disorders, their family members/caregivers, and other healthcare team members.</i> • Consistently demonstrates respect for healthcare providers from other departments and organizations. 	<ul style="list-style-type: none"> • Manages conflict across specialties and systems of care <i>providing services to persons with neurobehavioral and neuropsychiatric disorders and their family members/caregivers.</i> • Leads <i>subspecialty-oriented</i> team-based patient care activities. 	<ul style="list-style-type: none"> • Engages in scholarly activity regarding teamwork and conflict management <i>relevant to the practice of BNNP.</i> • Is proficient in crucial conversations.¹
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<p>Comments:</p> <p>1. A crucial conversation is defined as “A discussion between two or more people where the stakes are high, opinions vary, and emotions run strong” (Patterson et al. 2012).</p>				

6. Demonstrates communication skills which result in effective information exchange and collaboration with patients, their families and other healthcare professionals – Interpersonal and Communication Skills				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Completes documentation in a timely fashion. • Describes how to communicate respectfully with persons of different socioeconomic and cultural backgrounds. • Follows through on patient, <i>caregiver</i>, and <i>other healthcare team member</i> communications. • Forwards notes to appropriate providers. 	<ul style="list-style-type: none"> • Educates patients about their diseases and management including risks and benefits of treatment options. • Effectively communicates the results of a neurologic consultation in a timely manner. • Effectively communicates with other healthcare professionals. 	<ul style="list-style-type: none"> • Effectively gathers information from collateral sources when necessary. • Demonstrates synthesis, formulation, and thought process in documentation. • Demonstrates effective non-verbal communication skills. 	<ul style="list-style-type: none"> • Mentors <i>junior</i> colleagues in timely, accurate and efficient documentation. • Consistently uses teach-back in <i>encounters with patients and their family members/caregivers</i>.¹ • Models cross-cultural communication and establishes therapeutic relationships with persons of diverse socioeconomic and cultural backgrounds. 	<ul style="list-style-type: none"> • Consistently receives patient/family feedback <i>in the highest decile</i> on communication skills on standardized validated assessments. • Develops patient education materials related to <i>neurobehavioral and neuropsychiatric disorders</i>. • Engages in scholarly activity regarding interpersonal communication in <i>BNNP</i>.
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<p>Comments:</p> <p>1. NOTE: <i>Teach-back is a method of confirming that the patient understands the information provided by the clinician in which the patient demonstrates that understanding to the clinician by explaining the information provided by the clinician.</i></p>				

7. Research and other scholarly activity				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Reads <i>BNNP</i> articles, books, and other subspecialty-specific literature. • Demonstrates a foundational understanding of scientific inquiry and scholarly productivity. • Performs a literature search using relevant scholarly sources to identify pertinent articles. • Demonstrates fundamental conceptual and communication skills required to effectively disseminate knowledge in <i>BNNP</i>. 	<ul style="list-style-type: none"> • Is aware of basic clinical study designs and statistical concepts. • Critically evaluates and presents results of published research in <i>BNNP</i> at a journal club or in a similar setting, including strengths and flaws of the published research. 	<ul style="list-style-type: none"> • Writes a case report, review article, or chapter suitable for publication in the subspecialty, or • Presents an abstract or lecture in field of the subspecialty at an institutional, local, or regional professional meeting, clinical conference, or quality improvement meetings. • Discusses practice standards, quality improvement, patient safety initiatives, education, and/or research in <i>BNNP</i> • Identifies areas worthy of scholarly investigation and formulates a plan under supervision of a mentor. 	<ul style="list-style-type: none"> • Designs and initiates original research in <i>BNNP</i>. • Writes a case report, review article, or chapter suitable for publication in the <i>BNNP</i>. • Presents <i>BNNP</i>-oriented clinical research, a case report, or a literature review poster or lecture at a national professional meeting. • Understands and is able to apply basic statistical concepts, and can identify potential analytic methods for data or problem assessment. • Develops an educational curriculum in <i>BNNP</i> for use at the institutional, local, or regional level. 	<ul style="list-style-type: none"> • Designs and initiates a project related to clinical practice, quality improvement, patient safety, education, or research in <i>BNNP</i> • Publishes original peer-reviewed research in <i>BNNP</i>. • Serves as a research mentor to junior colleagues in <i>BNNP</i>. • Develops an educational curriculum in <i>BNNP</i> for use at the regional and/or national level.
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8. Medical Knowledge - Structural and Functional Neuroanatomy				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Describes the lobes of the brain and their functional specializations. • Describes the structures comprising the basal ganglia. • Describes the structures comprising the diencephalon. • Describes the brainstem and its major divisions. • Describes the cerebral vascular territories. • Describes the structure and function of the ventricular system. 	<ul style="list-style-type: none"> • Identifies the subdivisions of the prefrontal cortex. • Describes frontal-subcortical circuits and their functional correlates. • Identifies the major white matter pathways in the human brain. • Describes the location and trajectories of the major neurotransmitter systems in the human brain. 	<ul style="list-style-type: none"> • Describes the neuroanatomy of cognition. • Describes the neuroanatomy of emotion and behavior. • Describes the structure and function of limbic and paralimbic areas. • Describes structure and neurobehavioral functions of the cerebellum. • Describes neuropeptides and neurohormones and their influence on neurobehavioral function. 	<ul style="list-style-type: none"> • Describes the structure and function of the default-mode network, central executive network, and salience network. • Describes the neuroanatomy of social cognition. • Explains structural and functional neuroanatomy in relation to neurobehavioral health and disease. 	<ul style="list-style-type: none"> • Integrates understanding of structural and functional neuroimaging into descriptions of the neurology of cognition, emotion, and behavior. • Integrates understanding of neuroanatomy into neurobiological hypotheses for and explanations of neurobehavioral and neuropsychiatric disorders.
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Comments:				Not Applicable <input type="checkbox"/>

9. Patient Care – Neuropsychiatric Assessment – Clinical Assessments				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> Obtains a complete and relevant clinical history. Performs a complete elemental neurological examination. Performs a complete general and cognitive mental status examination. Describes common cognitive screening tests, their strengths, and their limitations. 	<ul style="list-style-type: none"> Interprets findings on the elemental neurological examination in relation to the differential diagnosis for neuropsychiatric and neurobehavioral disorders. Performs an examination for subtle neurological signs, including primitive reflexes (“frontal release signs”). Examines patients using standardized measures of neurological function, cognition, emotion, and behavior. Identifies common neuropsychological tests and their indications. 	<ul style="list-style-type: none"> Adjusts clinical assessments in a manner sensitive to the patient’s abilities and impairments. Uses the history and findings from clinical assessments and neurodiagnostic studies to develop a differential diagnosis. Integrates findings from clinical assessments and neurodiagnostic studies to formulate a diagnosis. Explains the significance of findings from clinical assessments and neurodiagnostic studies to patients, their caregivers, and other healthcare providers. 	<ul style="list-style-type: none"> Understands the relationship between neuropsychological tests and cognitive screening tests. Performs domain-specific cognitive assessments to refine the differential diagnosis for neuropsychiatric and neurobehavioral disorders. Collaborates with other healthcare providers to gather and integrate information that refines the differential diagnosis for neuropsychiatric and neurobehavioral disorders. 	<ul style="list-style-type: none"> Engages in research focused on the development and application of clinical assessments relevant to the practice of BNNP. Teaches and supervises junior colleagues and/or other healthcare providers on the clinical assessment of persons with neuropsychiatric and neurobehavioral disorders.
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Comments: Not Applicable <input type="checkbox"/>				

10. Patient Care – Neuropsychiatric Assessment – Neurodiagnostic Studies				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Demonstrates knowledge of the clinical indications for structural neuroimaging (computed tomography [CT] of the head, magnetic resonance imaging [MRI] of the brain). • Demonstrates knowledge of the clinical indications for functional neuroimaging (positron emission tomography [PET], single photon emission computed tomography [SPECT]). • Demonstrates knowledge of the clinical indications for routine clinical neurophysiologic testing (electroencephalography [EEG], polysomnography [PSG]). • Demonstrates knowledge of the clinical indications for laboratory studies (serum, urine, cerebrospinal fluid [CSF]) relevant to the practice of BNNP. 	<ul style="list-style-type: none"> • Demonstrates the ability to visually inspect and interpret structural neuroimaging of the brain. • Demonstrates the ability to visually inspect and interpret EEG. • Demonstrates the ability to review and interpret results of serum, urine, and cerebrospinal fluid studies. • Demonstrates the ability to review and interpret reports describing PSG. • Recognizes indications for and clinical implications of genetic testing in persons and families with neuropsychiatric and neurobehavioral disorders. 	<ul style="list-style-type: none"> • Correlates neuroimaging, neurophysiological, and laboratory test results findings with other clinical assessments. • Identifies neuroimaging, neurophysiological, and laboratory biomarkers of neurobehavioral and neuropsychiatric conditions, including neurodegeneration and neurotrauma, where such are known. • Describes the neuropathology of neurobehavioral and neuropsychiatric conditions, including neurodegenerative diseases, cerebrovascular disorders, and neurotrauma. 	<ul style="list-style-type: none"> • Refines the differential diagnosis for neuropsychiatric and neurobehavioral disorders based on structural and functional neuroimaging findings. • Refines the differential diagnosis for neuropsychiatric and neurobehavioral disorders based on neurophysiological testing. • Refines the differential diagnosis for neuropsychiatric and neurobehavioral disorders based on laboratory study findings, including serum, urine, CSF, genetic, and neuropathological results. 	<ul style="list-style-type: none"> • Identifies emerging clinical uses of structural and functional neuroimaging, advanced neurophysiologic testing, and laboratory studies in the evaluation, management, and study of neuropsychiatric and neurobehavioral disorders. • Applies neuroimaging, neurophysiologic testing, and laboratory studies in clinical research relevant to the BNNP subspecialty. • Provides mentoring to junior colleagues on the role of neurodiagnostic studies in the evaluation and study of neuropsychiatric and neurobehavioral disorders.
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Comments:

Not Applicable

11. Patient Care – Treatment – Somatic Therapies (Pharmacotherapies and Neurostimulation)				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> • Describes commonly used somatic therapies for the treatment of cognitive, emotional, and behavior symptoms in persons with psychiatric and neurological conditions. • Reviews the indications for and explains adverse effects of commonly prescribed medications and other somatic therapies to patients and/or their surrogate decision-makers. • Obtains informed consent from patients and/or their surrogate decision-makers for somatic therapies. • Identifies key baseline assessments necessary to ensure patient safety before initiating somatic therapies. • Recognizes neurological and psychiatric emergencies requiring intervention. 	<ul style="list-style-type: none"> • Obtains baseline assessments necessary before initiating treatment with commonly used somatic therapies. • Uses educational resources to optimize patient and/or surrogate decision-maker understanding of and adherence to treatment. • Appropriately prescribes commonly used somatic therapies for neuropsychiatric and neurobehavioral disorders. • Assesses for and addresses adverse effects throughout treatment. • Appropriately requests consultations from other healthcare providers for additional evaluation and management. 	<ul style="list-style-type: none"> • Researches, cites, and starts to apply practice guidelines and peer-reviewed evidence when developing treatment plans that include somatic therapies. • Explains somatic therapies to patients and/or surrogate decision-makers in terms their clinical indications, benefits, risks, and the evidence supporting their use. • Integrates somatic therapies into a comprehensive treatment plan. • Provides consultations to other healthcare providers caring for persons with neuropsychiatric and neurobehavioral disorders. 	<ul style="list-style-type: none"> • Consistently applies relevant practice guidelines and other peer-reviewed evidence when developing treatment plans that include somatic therapies, including those patients with complex or treatment-refractory conditions. • Manages complex combinations of somatic therapies and considers novel treatment approaches. • Describes the proposed mechanisms of action of commonly used somatic therapies for the treatment of neuropsychiatric and neurobehavioral disorders. 	<ul style="list-style-type: none"> • Engages in research, patient safety initiatives, professional and consumer education, or other healthcare systems-related and advocacy projects on somatic therapies for persons with neuropsychiatric and neurobehavioral disorders. • Leads the development of new patient educational processes or materials on somatic therapies for persons with neuropsychiatric and neurobehavioral disorders and their families.
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Comments:

Not Applicable

12. Patient Care – Treatment – Psychosocial Interventions				
Level 1	Level 2	Level 3	Level 4	Level 5
<ul style="list-style-type: none"> Identifies the importance of psychoeducation and supportive therapy in the care of persons with psychiatric and neurological conditions. Identifies psychiatric, psychological, rehabilitative, social, patient and caregiver support services, and advocacy organizations in the local practice environment and surrounding community. 	<ul style="list-style-type: none"> Identifies the principles and clinical applications of supportive, cognitive-behavioral, family, and environmental and behavioral therapies in the care of persons with neuropsychiatric and neurobehavioral disorders. Identifies the principles and clinical applications of cognitive rehabilitation (including compensatory strategy development and related interventions) in the care of persons with neuropsychiatric and neurobehavioral disorders. Facilitates referral to psychiatric, psychological, rehabilitative, social, patient and caregiver support services, and advocacy organizations in the local practice environment and surrounding community. 	<ul style="list-style-type: none"> Analyzes the evidence base for combining psychosocial interventions and somatic therapies. Demonstrates the ability to provide psychoeducational and supportive therapy to persons with neuropsychiatric and neurobehavioral disorders and their families. Demonstrate the ability to work in a collaborative care model with clinicians providing psychosocial interventions to patients with neuropsychiatric and neurobehavioral disorders and their families. 	<ul style="list-style-type: none"> Demonstrates sufficient knowledge of evidence-based psychosocial interventions for neuropsychiatric and neurobehavioral disorders to teach others about such interventions. Provides evidence-informed psychosocial intervention recommendations to healthcare providers, patients, families, and other stakeholders to the care of persons with neuropsychiatric and neurobehavioral disorders. 	<ul style="list-style-type: none"> Engages in research, patient safety initiatives, professional and consumer education, or other healthcare systems-related and advocacy projects on psychosocial interventions for persons with neuropsychiatric and neurobehavioral disorders and their families. Leads the development of new patient educational processes or materials on psychosocial interventions for persons with neuropsychiatric and neurobehavioral disorders and their families.
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Comments: Not Applicable <input type="checkbox"/>				