

Neuroanesthesiology Milestone Reporting Worksheet

The Neuroanesthesiology Milestones Reporting Worksheet is the result of the work of the task force appointed by the Society for Neuroscience in Anesthesiology & Critical Care (SNACC). The task force was supported by an advisory committee.

This document presents milestones designed for use in the review of resident performance on Neuroanesthesiology rotation during Anesthesiology residency. These milestones are the targets for resident performance on the Neuroanesthesiology rotation. The task force recommends that ideally, each resident would undergo 2 Neuroanesthesiology rotations – a junior rotation in the CA2 year and a senior rotation in the CA3 year and the target should be to accomplish Level 3 or higher milestones at the end of the junior Neuroanesthesiology rotation and Level 4 or higher milestones at the end of the senior Neuroanesthesiology rotation. However, it is up to the individual programs to decide the timing of these rotations. The task force recognizes that the power of using the milestones is that the residents can be identified accomplishing a certain “level” of milestones irrespective of the timing of the rotation. The individual program should decide the consequences of not meeting the desirable level of milestones. Please note that according to the ACGME, Level 4 is designed as the graduation *target* but does *not* a graduation *requirement*. The decision of readiness for graduation is the purview of the Residency Program Director. The Neuroanesthesiology Rotation Supervisor should decide in communication with the Residency Program Director, the implications of a resident not meeting expected milestones.

A summative reporting of the performance during the Neuroanesthesiology rotation should involve the selection of a level for each milestone that the resident consistently and substantially demonstrates, as well as those in lower. According to the ACGME, a general interpretation of levels for anesthesiology is below:

Level 1: The resident demonstrates milestones expected of a resident who has completed one post-graduate year of education in either an integrated anesthesiology program or another preliminary education year prior to entering the CA1 year in anesthesiology.

Level 2: The resident demonstrates milestones expected of a resident in anesthesiology residency prior to significant experience in the subspecialties of anesthesiology.

Level 3: The resident demonstrates milestones expected of a resident after having experience in the subspecialties of anesthesiology.

Level 4: The resident substantially fulfills the milestones expected of an anesthesiology residency, and is ready to transition to independent practice. This level is designed as the graduation target.

Level 5: The resident has advanced beyond performance targets defined for residency, and is demonstrating “aspirational” goals, which might describe the performance of someone who has been in practice for several years. It is expected that only a few exceptional residents will reach this level for selected milestones.

Patient Care 1: Pre-anesthetic Patient Evaluation, Assessment, and Preparation										
Level 1	Level 2	Level 3	Level 4	Level 5						
<p>Performs general histories and physical examinations</p> <p>Identifies clinical issues relevant to anesthetic care with direct supervision</p>	<p>Identifies disease processes and medical issues relevant to anesthetic care.</p> <p>Obtains necessary laboratory tests and radiologic studies. Recognizes need for blood and blood products and orders appropriately.</p> <p>On the day of surgery examines patient and reviews the chart for important changes. Updates preoperative evaluation and discusses with attending physician.</p>	<p>Performs basic neurological examination of the level of consciousness, cranial nerves, motor and sensory function.</p> <p>Identifies disease processes and medical or surgical issues relevant to neuroanesthesia including but not limited to:</p> <ul style="list-style-type: none"> - myelopathy/cord compression vs radiculopathy - elevated ICP/impending brain herniation - high baseline MAP and its significance. - extracranial manifestations of intracranial disease (e.g. cardiac complications in SAH, endocrine and electrolyte imbalance disorders) <p>Reviews relevant neuroimaging (CT, MRI, Angiogram etc.) with assistance.</p> <p>Anticipates need for neurophysiologic monitoring based on patient's pathology and planned procedure.</p> <p>Seeks guidance in identifying unusual clinical problems and their implications for anesthesia care.</p>	<p>Performs assessment, risk stratification and optimization (with consultation as indicated) of complex or critically-ill neurosurgical patients without missing major issues that impact anesthesia care with conditional independence</p> <p>Incorporates relevant neurological grading systems in preoperative assessment (e.g. Glasgow Coma Scale score, Hunt & Hess grade, Fisher grade)</p>	<p>Independently performs comprehensive assessment for all patients</p> <p>Independently serves as a consultant to other members of the health care team regarding optimal pre-anesthetic preparation</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments:							Unable to determine milestone performance level <input type="checkbox"/>			

Patient Care 2: Anesthetic Plan and Conduct										
Level 1		Level 2			Level 3			Level 4		Level 5
<p>Formulates patient care plans that include consideration of underlying clinical conditions, past medical history, and patient, medical, or surgical risk factors.</p> <p>Adapts to new settings for delivery of patient care.</p>		<p>Formulates anesthetic plans for patients undergoing routine procedures</p> <p>Conducts routine anesthetics, including management of commonly encountered physiologic alterations associated with anesthetic care, with indirect supervision</p>			<p>Formulates anesthetic plans for patients undergoing <u>common</u> neurosurgical procedures. Plans for:</p> <ul style="list-style-type: none"> - invasive monitoring - appropriate hemodynamic and ventilation goals - intraoperative brain relaxation and ICP control - neurophysiologic monitoring - patient position and equipment needed to accomplish positioning (table type, frame, chest rolls, prone view, etc.) - table rotation - special equipment, drugs, blood products, and techniques that may be needed (e.g. induced hypertension, EEG burst suppression, adenosine cardiac standstill) - emergence with neurological assessment <p>Conducts simple neuroanesthetics with indirect supervision, but may require direct supervision for more complex procedures and patients.</p>			<p>Formulates anesthetic plans for patients with complex medical issues undergoing complex neurosurgical / interventional neuroradiology procedures with conditional independence</p> <p>Conducts complex neuroanesthetics with conditional independence; may supervise others in the management of complex clinical problems</p>		<p>Independently formulates anesthetic plans that include consideration of medical, anesthetic, and surgical risk factors, as well as patient preference, for complex patients and procedures</p> <p>Conducts complex anesthetics independently</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments:								Unable to determine milestone performance level <input type="checkbox"/>		

Simple neuroanesthetics:

1. Diagnostic cerebral angiography
2. Ventriculo-peritoneal shunt placement
3. Deep Brain Stimulator lead placement (MAC)
4. Lumbar discectomy and decompression without fusion
5. Evacuation of chronic subdural hematoma
6. Transsphenoidal tumor resection
7. Uncomplicated supratentorial tumor resection

Complex neuroanesthetics:

1. Interventional Neuroradiological procedures for aneurysms, AVMs, tumors and stroke
2. Awake craniotomy for tumor or epileptic focus resection
3. Urgent or emergent acute subdural or epidural hematoma evacuation
4. Posterior fossa craniotomy including sitting craniotomy
5. Complex multi-level spinal fusion surgery with intraoperative neurophysiological monitoring, potential use of wake-up test and need for multi-modal perioperative analgesic plan.
6. Intracranial vascular surgery including cerebral aneurysm clipping, resection of AVMs, ECIC bypass

Patient Care 3: Peri-procedural Pain Management									
Level 1		Level 2		Level 3		Level 4		Level 5	
Recognizes and initiates management of common pain states; seeks advice for management of pain that does not respond to routine therapies		Manages uncomplicated peri-procedural pain with indirect supervision; requires direct supervision for complex pain situations		<p>Recognizes post-operative pain management goals accounting for the neurological condition.</p> <p>Obtains accurate history of the patient's preoperative opioid and sedative medication use. Plans for management of the patient's acute surgical pain and chronic pain with indirect supervision.</p> <p>Employs multimodal analgesia (e.g. gabapentin, ketamine, NSAIDs etc.) before, during and after surgery as appropriate.</p> <p>Demonstrates understanding of scalp block anatomy.</p>		<p>Manages complex peri-procedural pain for all patients, including those with chronic pain (e.g. patients undergoing complex spinal fusion surgery and microvascular decompression for trigeminal neuralgia), with conditional independence</p> <p>Performs scalp block for awake neurosurgical procedures independently.</p> <p>Requests pain medicine consultation when appropriate, to address complex pain management issues or co-existing chronic pain states that are not responsive to usual management strategies.</p>		Independently manages peri-procedural pain states	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:						Unable to determine milestone performance level <input type="checkbox"/>			

Patient Care 4: Crisis Anticipation and Management											
Level 1		Level 2			Level 3			Level 4		Level 5	
<p>Recognizes acutely ill or medically deteriorating patients; initiates basic medical care for common acute events; calls for help appropriately.</p>		<p>Constructs prioritized differential diagnoses that include the most likely etiologies for acute clinical deterioration:</p> <ul style="list-style-type: none"> - Hypotension, hypertension - Bradycardia, tachycardia - Hypoxemia - Unexpected hyper- or hypocapnia - Dysrhythmia, ECG ischemia - Patient movement <p>Initiates treatment with indirect supervision and seeks direct supervision appropriately.</p>			<p>Anticipates, identifies and manages clinical crises with indirect supervision; may require direct supervision in complex situations including:</p> <ul style="list-style-type: none"> - Intraoperative brain swelling and increased intracranial pressure. - Neuromonitoring signal changes - Hemodynamic changes due to manipulation of the brainstem or carotid sinus - Aneurysm rupture in the operating room or interventional radiology - Venous air embolism - Massive hemorrhage during intracranial or spine procedures. - Perioperative seizures - Postoperative complications (e.g. respiratory failure and acute changes in neurological status) <p>Uses cognitive aids appropriately in crisis management.</p>			<p>Identifies and manages clinical crises appropriately with conditional independence; assumes increasing responsibility for leadership of crisis response team.</p> <p>Understands what clinical crisis is likely to occur and prepares appropriately.</p>		<p>Coordinates crisis team response.</p> <p>Designs and implements protocols for the management of clinical crises.</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:								Unable to determine milestone performance level <input type="checkbox"/>			

Patient Care 5: Management of the Critically Ill Patient during Transport.										
Level 1		Level 2			Level 3		Level 4		Level 5	
<p>Performs a focused evaluation of the critically-ill patient; monitors patient's clinical status to identify acute changes and trends; communicates pertinent findings to supervisor.</p> <p>Participates in development and initiation of a management plan as directed by supervisor.</p>		<p>Identifies relevant critical disease processes requiring urgent or emergent intervention (hemodynamic instability, extreme ventilation requirements, combative patient etc.)</p> <p>Develops, implements, and appropriately modifies management plan based on patient's response with direct supervision.</p>			<p>Identifies critical neurosurgical disease processes that require attention during transport (critical ICP elevation temporized with hyperventilation, high MAP requirements in vasospasm or cord compression etc.)</p> <p>Identifies appropriate support personnel, equipment and medications necessary for safe patient care.</p> <p>Prioritizes management of clinical problems with indirect supervision.</p>		<p>Identifies appropriate procedures and coordinates transport of the complex neurosurgical patient efficiently with conditional independence.</p> <p>Defines clinically appropriate priorities in emergencies, and when resources are limited.</p> <p>Supervises other members of the health care team.</p>		<p>Independently coordinates the urgent transport of the neurosurgical patient in critical condition; sets clinically appropriate priorities when resources are limited.</p> <p>Serves as a consultant to other members of the health care team regarding transport and transfer of care considerations.</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							Unable to determine milestone performance level <input type="checkbox"/>			

Patient Care 6: Technical skills: Airway Management										
Level 1		Level 2		Level 3		Level 4		Level 5		
<p>Recognizes airway patency and adequacy of ventilation based on clinical assessment.</p> <p>Positions patient for airway management; places oral and nasal airways; performs bag-valve-mask ventilation.</p>		<p>Applies knowledge of the ASA difficult airway algorithm to prepare equipment and supplies for airway management.</p> <p>Performs basic airway management in patients with normal airways, including endotracheal intubation, supraglottic airways, and video laryngoscopy.</p> <p>Assesses for and recognizes mainstem intubation after change in positioning.</p> <p>Recognizes need for advanced airway management and seeks appropriate help.</p>		<p>Manages airway with specific attention to the neurological condition (avoiding hypoxia / prolonged hypercarbia, deleterious hemodynamic responses and ICP changes during intubation)</p> <p>Prepares appropriate equipment and supplies for management of difficult airways. Has appropriate back-up plan.</p> <p>Recognizes when awake intubation is needed. Prepares patient for and performs awake intubation techniques (e.g. fiberoptic).</p> <p>Recognizes need for and applies in-line stabilization correctly.</p> <p>Secures airway considering patient position during surgery</p> <p>Extubates appropriately while avoiding coughing, straining and hemodynamic changes.</p>		<p>Identifies and corrects problems and complications associated with airway management (e.g., airway hemorrhage) with conditional independence.</p> <p>Manages all airways, including under special situations (e.g. trauma, loss of airway), with conditional independence.</p>		<p>Independently assesses and manages the airway for all clinical situations utilizing appropriate advanced airway techniques, including cricothyroidotomy.</p> <p>Independently supervises and provides consultation to other members of the health care team for airway management.</p>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							Unable to determine milestone performance level <input type="checkbox"/>			

Patient Care 7: Technical skills: Use and Interpretation of Monitoring and Equipment										
Level 1	Level 2	Level 3	Level 4	Level 5						
<p>Demonstrates the correct use of standard monitoring devices, including blood pressure (BP) cuff, electrocardiogram (ECG), pulse oximeter, and temperature monitors.</p> <p>Interprets data from standard monitoring devices, and recognizes artifacts.</p>	<p>Performs pre-anesthetic equipment and machine checks</p> <p>Inserts arterial and central venous catheters with direct supervision. Demonstrates use of ultrasound for placement of arterial and venous catheters. Interprets data from arterial and central venous catheters.</p> <p>Recognizes and appropriately troubleshoots malfunctions of standard ASA monitoring equipment and anesthesia machines.</p>	<p>Inserts arterial catheters with conditional independence and central venous catheters with indirect supervision.</p> <p>Performs appropriate management of CSF drainage devices. Knows how and when to turn off, and how to calibrate an EVD.</p> <p>Knows how to use commonly utilized CNS monitors and precordial Doppler.</p> <p>Uses data from neuromonitoring devices EEG, SSEP, MEP, EMG to adjust anesthetic management (drugs, BP, etc.) with indirect supervision.</p> <p>Recognizes and appropriately troubleshoots malfunctions of advanced monitoring equipment.</p>	<p>Obtains vascular access in complex or difficult situations with conditional independence.</p> <p>Independently recognizes when MEP, SSEP, EEG signal changes may have an anesthetic management related component.</p> <p>Supervises other members of the health care team in the placement, interpretation and troubleshooting of monitoring techniques.</p>	<p>Independently selects and uses basic and advanced monitoring techniques</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments:					Unable to determine milestone performance level <input type="checkbox"/>					

Medical Knowledge 1: Knowledge of biomedical, clinical, epidemiological, and social-behavioral sciences as outlined in the American Board of Anesthesiology Content Outline

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of the etiology, pathophysiology, diagnosis, and treatment of common neurologic and neurosurgical problems.	Demonstrates knowledge of CNS anatomy and CSF physiology. Demonstrates understanding of the following key concepts in neuroanesthesia: - Effects of carbon dioxide on the cerebral circulation - Cerebral autoregulation: how to assess, when it is likely impaired, implications of impaired autoregulation. - Pathophysiology and assessment of elevated ICP	Demonstrates knowledge of the following key concepts and implications of each: - Effects of common anesthetic agents on neurophysiology - Radiculopathy and myelopathy - Common types of brain tumors - Endocrine manifestations of pituitary tumors - Traumatic brain injury including systemic manifestations and current recommendations of the Brain Trauma Foundation guidelines - Recognition and treatment of venous air embolism - Endovascular treatment of acute ischemic stroke - Fluid, electrolyte, and glycemic management in neurologically ill patients	Demonstrates knowledge of the following key concepts and implications of each: - Subarachnoid hemorrhage: systemic effects, treatment of vasospasm, Hunt-Hess and Fischer classifications - Open and endovascular treatment of cerebral aneurysms and AVM's. - Posterior fossa procedures - Epilepsy and awake craniotomy - The use, anesthetic requirements, and interpretation of each neurophysiologic monitoring modality. - Theory and practice of brain protection Demonstrates understanding of controversies surrounding some neuroanesthesia interventions e.g. brain protection.	Possesses consultant level knowledge to support neuroanesthesia practice.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Are you concerned that this resident lags behind peers and needs extra help? Unable to determine milestone performance level

Comments:

Medical Knowledge 2: Knowledge of Neuroimaging and Multimodality Neurologic Monitoring in Operating Room and Critical Care										
Level 1	Level 2	Level 3	Level 4	Level 5						
<p>Demonstrates knowledge of the anatomy and physiology of intraoperative neurophysiologic monitoring (i.e. evoked potentials and EEG).</p> <p>Interprets basic radiological anatomy relevant to neuroanesthesiology.</p> <p>Demonstrates knowledge of the determinants of ICP and CPP.</p>	<p>Demonstrates understanding of the indications for, and the effect of anesthetics on intraoperative neurophysiologic monitoring.</p> <p>Recognizes epidural vs subdural hematoma, cerebral edema, midline shift, and spinal stenosis.</p> <p>Describes conditions that increase ICP and the consequences of elevated ICP.</p>	<p>Identifies preexistent disease states (diabetes, myelopathy etc.) and intraoperative pathophysiologic changes (Hct, temperature, hypotension etc.) that influence neurophysiologic monitoring.</p> <p>Identifies basic vascular intracranial abnormalities, myelopathy on neuroimaging.</p> <p>Describes treatment options for elevated ICP. Compares methods of ICP assessment.</p>	<p>Interprets common neurophysiologic monitoring waveform changes independently.</p> <p>Utilizes data from neuroimaging and multimodality monitoring to make clinical decisions with conditional independence.</p> <p>Understands pathophysiology of multimodality monitoring (i.e. TCD, CBF/brain tissue oxygen tension monitors, microdialysis) and can utilize data obtained to make clinical decisions in regards to maximizing brain metabolism, perfusion and oxygenation.</p>	<p>Possesses consultant level knowledge of intraoperative neuromonitoring and multimodality monitoring and serves as an expert resource.</p> <p>Able to independently recommend and utilize intraoperative and intensive care monitors to analyze intracranial compliance and brain metabolic, perfusion and oxygenation demands.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Are you concerned that this resident lags behind peers and needs extra help?</p> <p>Comments:</p>							<p>Unable to determine milestone performance level <input type="checkbox"/></p>			

Systems-based Practice: Patient Safety and Quality Improvement									
Level 1		Level 2		Level 3		Level 4		Level 5	
<p>Describes common causes of errors (drug errors, wrong site surgery).</p> <p>Describes team-based actions and techniques designed to enhance patient safety.</p> <p>Follows institutional safety policies, including reporting of problematic behaviors or processes, errors, near misses, and complications.</p> <p>Incorporates national standards and guidelines into patient care.</p>		<p>Uses the safety features of medical devices.</p> <p>Uses sound infection control practices.</p> <p>Participates in team-based actions designed to enhance patient safety, (e.g., briefings, closed-loop communication, handovers and time-outs)</p> <p>Identifies problems in the quality of health care delivery within one's institution and brings this to the attention of supervisors.</p> <p>Incorporates anesthesiology-specific national standards and guidelines into patient care.</p>		<p>Describes and participates in systems and procedures that promote patient safety.</p> <p>Demonstrates understanding of the radiation hazard in the IR suite and during intraoperative imaging.</p> <p>Identifies opportunities to improve quality of care and patient safety.</p> <p>Participates in quality improvement activities as a member of an interprofessional team.</p>		<p>Applies advanced team techniques designed to enhance patient safety (e.g., 'assertiveness').</p> <p>Participates in formal analysis (e.g., root cause analysis, failure mode effects analysis) of medical error and sentinel events with direct supervision.</p> <p>Carries out most steps of a quality improvement project.</p>		<p>Leads multidisciplinary teams (e.g., human factors engineers, social scientists) to address patient safety issues.</p> <p>Provides consultation to organizations to improve personal and patient safety.</p> <p>Proactively participates in educational sessions prior to using new advanced medical devices for patient care.</p> <p>Defines and constructs process and outcome measures, and leads quality improvement projects.</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments:							Unable to determine milestone performance level <input type="checkbox"/>		

Practice-based Learning and Improvement: Analysis of practice to identify areas in need of improvement. Incorporation of feedback and new evidence based information into practice improvement.

Level 1	Level 2	Level 3	Level 4	Level 5
<p>Identifies critical incidents or potentially harmful events pertaining to one's patients, and brings them to the attention of the supervisor.</p> <p>Completes assigned readings and prescribed learning activities.</p> <p>Uses clinical opportunities as they occur, to direct self-learning.</p>	<p>Identifies adverse events and near misses, and analyzes personal practice to determine the reason they occurred.</p> <p>Modifies personal practice to minimize likelihood of recurrence of adverse events related to routine anesthesia care.</p> <p>Reviews the literature and information relevant to specific clinical assignment. (List locally required reference materials)</p>	<p>Identifies adverse events and near misses related to the neuroanesthesia rotation.</p> <p>Modifies personal practice to minimize likelihood of recurrence of adverse events related to neuroanesthesia care.</p> <p>Examples of common mistakes:</p> <ul style="list-style-type: none"> - MAP too low - Too much volatile agent for neuromonitoring - Bite block not inserted - Positioning problems. <p>Differentiates evidence based information from non-evidence-based resources to address specific patient management needs.</p>	<p>Analyzes personal practices to determine potential risk of adverse outcomes and develops strategies to reduce likelihood of recurrence.</p> <p>Uses multi-source feedback to independently improve practice.</p> <p>Incorporates evidence based medicine practices into patient management.</p>	<p>Uses comparative benchmark data about outcomes and clinical practice patterns within the department, facility, or health system to analyze performance of self and group.</p> <p>Independently evaluates published medical research and refines clinical practice based on the conclusions.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments:			Unable to determine milestone performance level <input type="checkbox"/>	

Professionalism 1: Ethical behavior and responsibility to patients, institution and society									
Level 1		Level 2		Level 3		Level 4		Level 5	
<p>Completes most assigned clinical tasks on time, but may occasionally require direct supervision.</p> <p>Demonstrates basic professional responsibilities, such as reporting for work rested, prepared and appropriately groomed.</p> <p>Is truthful in all forms of communication.</p> <p>Takes responsibility for the care they provide and seeks help appropriately.</p> <p>Complies with institutional policies and regulations, including work hour rules.</p>		<p>Completes routine tasks reliably in uncomplicated circumstances with indirect supervision.</p> <p>Addresses ethical issues common to anesthesiology with direct supervision (e.g., Jehovah's Witnesses).</p> <p>Demonstrates the ability to balance personal, institutional, and societal goals with professional responsibilities.</p>		<p>Completes tasks reliably in complex clinical situations or unfamiliar environments.</p> <p>Addresses ethical issues in complex and challenging circumstances (e.g. Jehovah's witnesses, DNR orders etc.)</p> <p>Reports concerns about the health or well-being of colleagues to a more experienced individual.</p>		<p>Completes all work assignments reliably and supports other providers to ensure patient care is optimized.</p> <p>Serves as a resource and counselor to junior residents regarding their professional choices and behaviors.</p> <p>Reinforces to junior colleagues the importance of compliance with systems to prevent impairment.</p>		<p>Serves as a role model and mentors others about bioethical principles.</p> <p>Manages the health care team in a manner that is respectful of patient confidentiality, privacy, and autonomy, and ensures that patients and their families are treated with compassion and respect.</p> <p>Serves as a resource for the development of organizational policies and procedures regarding professional responsibilities.</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Do you have concerns about this resident's honesty, integrity, reliability or character? Comments: Very responsible, very attentive to patients needs</p>							<p>Unable to determine milestone performance level <input type="checkbox"/></p>		

Professionalism 2: Receiving and giving feedback									
Level 1		Level 2		Level 3		Level 4		Level 5	
Accepts constructive feedback, but occasionally demonstrates resistance to feedback while providing patient care.		Provides constructive feedback in a tactful and supportive way to medical students to enhance patient care. Accepts feedback readily from faculty members and incorporates suggestions into practice.		Consistently seeks feedback, correlates it with self-reflection, and incorporates it into lifelong learning to enhance patient care. Seeks out feedback from faculty members and other members of the care team.		Provides constructive feedback in a tactful and supportive way to physician and non-physician members of the patient care team to enhance patient care.		Effectively provides feedback in challenging situations (e.g. when there is resistance, there are adverse outcomes , or an experienced practitioner is involved).	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are you concerned about this resident's openness to teaching and improvement? Comments:							Unable to determine milestone performance level <input type="checkbox"/>		

Interpersonal and Communication Skills 1: Communication with patients and families; informed consent, conflict management and disclosure of errors									
Level 1		Level 2		Level 3		Level 4		Level 5	
<p>Discusses medical plans and responds to questions from patients and their families. Recognizes situations where communication of information requires the assistance of another individual and asks for help.</p> <p>Demonstrates empathy for patients and their families.</p> <p>Recognizes patient and family conflicts and seeks assistance appropriately.</p> <p>Understands the importance of disclosing medical errors or complications to patients and/or families.</p>		<p>Obtains informed consent for routine anesthetic care; discusses likely risks, benefits, and alternatives using language appropriate to the patient's and family's level of understanding. Responds appropriately to patient's or surrogate's questions.</p> <p>Uses appropriate resources (e.g., translator) to optimize communication</p> <p>Recognizes that institutional resources are available to assist with disclosure of medical errors.</p>		<p>Effectively explains neuroanesthesia care to patients and their families, and obtains informed consent with indirect supervision. Addresses when appropriate:</p> <ul style="list-style-type: none"> - need for awake intubation - need for awake surgery - post-op intubation risk - post-op pain and how it will be managed - risk of visual loss - special monitoring considerations. <p>Manages patient and family conflicts in complex situations with direct supervision.</p> <p>Discloses medical errors or complications to patients and/or families with direct supervision.</p>		<p>Effectively explains neuroanesthesia care to patients and their families, and obtains informed consent with conditional independence.</p> <p>With conditional independence, manages patient and family conflicts in complex situations.</p> <p>With indirect supervision, discloses medical errors or complications to patients and/or families.</p>		<p>Consistently ensures that informed consent is comprehensive and addresses patient and family needs.</p> <p>Independently manages patient and family conflicts in all situations.</p> <p>Independently, or with other members of the health care team, discloses medical errors or medical complications to patients and/or families.</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are you concerned about this resident's communication skills? Comments:							Unable to determine milestone performance level <input type="checkbox"/>		

Interpersonal and Communications Skills 2: Communication with other professionals									
Level 1		Level 2		Level 3		Level 4		Level 5	
<p>Communicates effectively and with respect for the skills and contributions of other members of the health care team.</p> <p>Communicates patient status to supervisors and other providers effectively, including during hand-offs and transitions of patient care. Provides accurate, complete, and timely documentation.</p> <p>Identifies and discloses medical errors or complications to the healthcare team.</p> <p>Identifies interpersonal conflicts and ineffective communication with other members of the health care team, and participates in their resolution as appropriate to level of education.</p>		<p>Effectively communicates relevant patient issues during transitions or transfers of care.</p> <p>Calls attending the day before surgery and presents the case succinctly.</p> <p>Documents medical decision making clearly, addressing key issues relevant to the care of the patient.</p> <p>Identifies institutional resources to assist in conflict resolution.</p>		<p>Discusses perioperative management concerns (equipment, monitoring, positioning, brain condition, BP target, etc.) with surgeon, nursing and technical staff.</p> <p>Adapts communication to the unique circumstances, such as crisis management and coordination of help from non-anesthesiology personnel in remote locations (e.g., interventional radiology).</p> <p>Uses institutional resources to assist in conflict resolution.</p>		<p>Communicates effectively in crises and contentious situations.</p> <p>Participates in conflict resolution with conditional independence.</p>		<p>Mentors other members of the health care team to improve communication skills.</p> <p>Effectively manages conflict in all situations.</p>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Are you concerned about this resident's communication skills? Comments:</p>							<p>Unable to determine milestone performance level <input type="checkbox"/></p>		