CPC Assessment (CPCA) and MAC Check Content Outline

Effective: 1/1/2021

The following content outline is provided as a guide to topics included on the CPCA. Examples are provided to help clarify topic content. *They are neither exhaustive nor all-inclusive*.

Category	Examples for Review	Notes
I. Airway Management (34%)		
I.A. Physiological concepts		
I.A.1. Normal physiological concepts	superior laryngeal nerve function, recurrent laryngeal nerve function, normal function	
I.A.2. Variants in physiological concepts	changes with head & neck radiation, trauma	
I.B. Pathophysiological concepts		
I.B.1.Pathophysiological diseases impacting airway management	epiglottitis, abscess, injury to trachea, bronchitis, tumor/lesion, rheumatoid arthritis	
I.C. Airway equipment		
I.C.1. Indications and contraindications associated with the use of airway equipment	full stomach/rapid-sequence induction, cervical spine precautions	
I.C.2. Failure and corrective actions of airway management	alternative airway techniques and emergency equipment	
I.D. Management concepts		

8725 W. Higgins Rd.
Suite 525
Chicago, IL 60631
NBCRNA
855-285-4658
www.NBCRNA.com
708-669-7636 :: fax

I.D.1. Airway assessment, including normal and variants in anatomic structure	dentition, neck mobility, Mallampati class, micrognathia, thyromental distance, large tongue, previous tracheostomy	
I.D.2. Risks and benefits of airway techniques	selection related to awake or asleep intubation, laryngeal mask airways, oropharyngeal airways, nasopharyngeal airways, fiberoptic techniques, endotracheal intubation, adjunct airway	
I.D.3. Identification and management of urgent and/or emergent airways	angioedema, anaphylaxis, traumatic laryngeal injuries, blunt or penetrating trauma	
I.D.4. Identification and management of an anticipated difficult airway and ventilation	history of difficult airway, surgical history involving or distorting the mouth or airway, patient & equipment preparation	
I.D.5. Emergence/extubation/reintubation	neuromuscular blockade reversal/train-of-four, clinical extubation criteria, causes for reintubation	
I.D.6. Airway complications	difficult airway, laryngospasms, airway edema, negative-pressure pulmonary edema, bronchospasm, trauma to the airway	
II. Applied Clinical Pharmacology (24%)		
II.A. Factors influencing medication selection, including pharmacokinetics, pharmacodynamics, pharmacogenetics of anesthetics, and adjunct medications		

8725 W. Higgins Rd.
Suite 525
Chicago, IL 60631

NBCRNA

855-285-4658
www.NBCRNA.com
708-669-7636 :: fax

II.A.1. Physiological factors	age, fluid volume status	
II.A.2. Pathophysiological/comorbidity factors	neurological disease, end-organ disease, malignant hyperthermia trigger/management, obstructive sleep apnea	
II.A.3. Utilization, actions, interactions, benefits, side effects	American Society of Regional Anesthesia [ASRA] anticoagulant guidelines, anesthetic selection, considerations for substance use disorder, multimodal analgesia	
II.B. Medication safety/infection prevention	safe injection standards, storage, reconciliation, documentation	
II.C. Adverse pharmacological reactions	anaphylaxis, local anesthetic systemic toxicity, hypotension, respiratory depression	
III. Applied Physiology and Pathophysiology (24%)		
III.A. Cardiovascular		
III.A.1. Physiologic processes and anesthetic considerations	implanted devices, cardiac dysrhythmias, autoregulatory mechanisms	
III.A.2. Pathophysiologic disease processes and associated disorders	coronary artery disease, low ejection fraction/heart failure	
III.B. Respiratory		
III.B.1. Physiologic processes and anesthetic considerations	ventilation strategies, ventilation-perfusion mismatch [V/Q], effect of positioning	
III.B.2. Pathophysiologic disease processes and associated disorders	obstructive and restrictive diseases, aspiration pneumonitis, pulmonary	

8725 W. Higgins Rd.
Suite 525
Chicago, IL 60631

NBCRNA

855-285-4658
www.NBCRNA.com
708-669-7636 :: fax

	hypertension/obstructive sleep apnea	
III.C. Neurological		
III.C.1. Physiologic processes and anesthetic considerations	cerebral perfusion pressure, positioning/nerve injury, placement and management of regional techniques, post–dural puncture headache	
III.C.2. Pathophysiologic disease processes and associated disorders	cerebrovascular accident, chronic pain, seizure disorders	
III.D. Renal/genitourinary		
III.D.1. Physiologic processes and anesthetic considerations	renal function, TURP syndrome	
III.D.2. Pathophysiologic disease processes and associated disorders	renal failure/dialysis, strategies for renal protection	
III.E. Gastrointestinal		
III.E.1. Physiologic processes and anesthetic considerations	gastric bypass, bowel preparation/fluid management, NPO guidelines	
III.E.2. Pathophysiologic disease processes and associated disorders	gastroesophageal reflux disease, small bowel obstruction, hiatal hernia, gastroparesis	
III.F. Hematological		
III.F.1. Physiologic processes and anesthetic considerations	blood component therapy, altered coagulation states	
III.F.2. Pathophysiologic disease processes and associated disorders	sickle cell disease, anemia, thrombocytopenia	
III.G. Endocrine		
III.G.1. Physiologic processes and anesthetic considerations	surgical stress response, corticosteroid management	

8725 W. Higgins Rd.
Suite 525
Chicago, IL 60631

NBCRNA

855-285-4658
www.NBCRNA.com
708-669-7636 :: fax

III.G.2. Pathophysiologic disease processes and associated disorders	pheochromocytoma, diabetes, thyroid disorders	
III.H. Musculoskeletal		
III.H.1. Physiologic processes and anesthetic considerations	surgical positioning, neuromuscular junction	
III.H.2. Pathophysiologic disease processes and associated disorders	spinal cord injury, osteoarthritis, compartment syndrome	
III.I. Factors influencing anesthetic approach, technique, and management		
III.I.1. Indications, contraindications, complications, and alternatives	patients with sleep apnea, morbidly obese patients	
III.I.2. Assessment and interpretation of perioperative data	monitor patient responses using invasive and noninvasive techniques, postoperative & discharge evaluation	
III.I.3. Ordering and interpretation of laboratory and diagnostic studies, and consultation as appropriate		
IV. Anesthesia Equipment, Technology, and Safety (18%)		
IV.A. Proper function, malfunction, and troubleshooting complications	carbon dioxide absorbent exhaustion, supply gas failure, machine power failure	
IV.B. Anesthetic delivery and clinical monitoring devices		
IV.B.1. Selection, risks, benefits, and alternatives	malignant hyperthermia precautions, general versus regional anesthesia, ultrasonography, thermal regulation	

8725 W. Higgins Rd.
Suite 525
Chicago, IL 60631

NBCRNA

855-285-4658
www.NBCRNA.com
708-669-7636 :: fax

IV.B.2. Complications	loss of ability to ventilate, electrical hazards, airway fire	
IV.C. Assess, analyze, interpret, and use perioperative data	selection of ventilatory modes, airway pressure monitoring, hemodynamic waveform interpretation	
IV.D. Safety and ethical/medicolegal	time-out procedure, impaired provider/diversion, provider wellness, quality assurance/quality improvement	

8725 W. Higgins Rd.
Suite 525
Chicago, IL 60631

NBCRNA

855-285-4658
www.NBCRNA.com
708-669-7636 :: fax