




 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.	Items			
	Ethics	Cognitive Level		Total
		Recall	Integration*	
First Quarter of the Calendar				5
I. COMPETENCIES SHARED BETWEEN CRITICAL AND GENERAL CARE		3	7	10
A. Assess Patient Information		0	2	2
1. Patient history, for example, <ul style="list-style-type: none"> • immunizations • pre-existing conditions • environmental 				
2. Physical examination				
3. Laboratory, for example, <ul style="list-style-type: none"> • blood gas analyses • CBC • cultures 				
4. Imaging, for example, <ul style="list-style-type: none"> • chest radiograph • cardiac catheterization and angiography • echocardiography • fluoroscopy • MRI • CT 				
5. Indices of respiratory physiology and mechanics, for example, <ul style="list-style-type: none"> • oxygenation • work of breathing • sleep study results 				
6. Neurologic, for example, <ul style="list-style-type: none"> • respiratory function • level of consciousness 				
7. Cardiovascular, for example, <ul style="list-style-type: none"> • physical assessment • pulmonary hypertension • hemodynamics • congenital heart disease 				
8. Recognition of respiratory failure mechanisms				
a. primary pulmonary and airway diseases, for example, <ul style="list-style-type: none"> • atelectasis • pneumonia • asthma • croup 				
b. other, for example, <ul style="list-style-type: none"> • neuromuscular • respiratory control • flail chest • apnea of prematurity 				


 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.		Items			
		Ethics	Cognitive Level		Total
			Recall	Integration*	
9. Renal, metabolic, endocrine, and nutrition, for example,	<ul style="list-style-type: none"> fluid status electrolytes inborn errors of metabolism 	<ul style="list-style-type: none"> acid-base balance nutrition / feeding diabetic ketoacidosis 			
10. Gastrointestinal, for example,	<ul style="list-style-type: none"> congenital anomalies feeding tube placement 	<ul style="list-style-type: none"> abdominal distension necrotizing enterocolitis 			
11. Musculoskeletal, for example,	<ul style="list-style-type: none"> spinal cord injury myopathy 	<ul style="list-style-type: none"> scoliosis myelomeningocele 			
B. Evaluate Pulmonary Status			0	1	
1. Gas exchange, for example,	<ul style="list-style-type: none"> SpO₂ end-tidal CO₂ tension 	<ul style="list-style-type: none"> blood gases 			
2. Pulmonary function, for example,	<ul style="list-style-type: none"> spirometry MIP 	<ul style="list-style-type: none"> peak flow 			
C. Assess and Manage Airways			0	1	
1. Airway devices, for example,	<ul style="list-style-type: none"> established tracheostomy tubes oral and nasopharyngeal 				
2. Airway clearance devices and techniques, for example,	<ul style="list-style-type: none"> high-frequency chest wall oscillation PEP 	<ul style="list-style-type: none"> postural drainage IPV cough assist 			
3. Airway challenges, for example,	<ul style="list-style-type: none"> acute upper airway obstruction unplanned extubation / decannulation 	<ul style="list-style-type: none"> difficult / critical airway congenital anomalies 			


 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.	Items			Total
	Ethics	Cognitive Level		
		Recall	Integration*	
D. Select and Manage Equipment		0	1	1
1. Oxygen administration devices, for example, <ul style="list-style-type: none"> heated high flow nasal cannula patient-appropriate sizing 				
2. Aerosol delivery devices, for example, <ul style="list-style-type: none"> intermittent continuous 				
3. Airway devices, for example, <ul style="list-style-type: none"> oral and nasopharyngeal endotracheal tracheostomy tubes speaking valves LMA 				
4. Transcutaneous monitoring systems				
5. Airway clearance devices, for example, <ul style="list-style-type: none"> insufflator-exsufflator high-frequency chest wall oscillation 				
6. Home care devices, for example, <ul style="list-style-type: none"> mechanical ventilators CPAP humidifiers apnea monitor oxygen delivery portable oxygen concentrators 				
Second Quarter of the Calendar				5
E. Facilitate Procedures and Evaluate Efficacy		1	0	1
1. Bronchoscopy and associated procedures, for example, <ul style="list-style-type: none"> lavage brush biopsies 				
2. Sputum culture, for example, <ul style="list-style-type: none"> nasal swab tracheal aspirate 				
3. Blood gas sampling, for example, <ul style="list-style-type: none"> CBG 				
F. Manage and/or Anticipate Effects of Medication Administration		0	1	1
1. Aerosolized agents				
2. Sedatives, hypnotics, and analgesia				
3. Neuromuscular blocking agents				

 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.	Items			
	Ethics	Cognitive Level		Total
		Recall	Integration*	
2. Morbid obesity, for example, <ul style="list-style-type: none"> • airway management • sleep disordered breathing 				
J. Assist with or Perform Resuscitation		0	1	1
1. Selection of appropriate equipment, for example, <ul style="list-style-type: none"> • T-piece resuscitator • flow-inflating resuscitation bag 				
2. Following the appropriate protocol, for example, <ul style="list-style-type: none"> • NRP • PALS 				
K. Prepare for Disaster and Mass Casualty Events		1	0	1
1. Procedures for patient movement and protection				
2. Triage procedures				
3. Equipment and supply management				
L. Interact with Members of an Interdisciplinary Team		0	0	0
1. Suggested modifications to the care plan based on the respiratory assessment				
2. Responses to proposed care plan modifications from other team members				
M. Evaluate Patient and Family Understanding of Education		1	0	1
1. Discharge and home, for example, <ul style="list-style-type: none"> • tracheostomy care • monitoring • CPR • car seat challenge 				
2. Equipment and procedure instruction, for example, <ul style="list-style-type: none"> • set-up • operation • troubleshooting 				
3. Medication administration				
Third Quarter of the Calendar				5
II. COMPETENCIES SPECIFIC TO CRITICAL CARE		2	8	10
A. Evaluate Pertinent Information		1	0	1
1. Maternal history, for example, <ul style="list-style-type: none"> • amniotic fluid index • maternal medication 				

 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.		Items			
		Ethics	Cognitive Level		Total
			Recall	Integration*	
2. Fetal and neonatal assessments, for example,					
<ul style="list-style-type: none"> • biophysical profile • Apgar score • fetal lung maturity indices 					
3. Other diagnostic results, for example,					
<ul style="list-style-type: none"> • transillumination • oxygen challenge test 					
B. Assess and Manage Airways		0	2	2	
1. Establishment of a patent airway, for example,					
<ul style="list-style-type: none"> • bag-mask ventilation • oral / nasal airway placement 					
2. Performing or assisting intubation, for example,					
<ul style="list-style-type: none"> • equipment selection • CO₂ verification 					
3. Performing or assisting advanced intubation techniques, for example,					
<ul style="list-style-type: none"> • specialty laryngoscopic visualization devices 					
4. Artificial airways					
a. laryngeal mask airway					
b. endotracheal tube, for example,					
<ul style="list-style-type: none"> • securement • positioning 					
c. newly placed tracheostomy tube					
C. Manage Specialty Gas Administration		0	1	1	
1. Nitric oxide					
2. Helium-oxygen					
3. Other, for example,					
<ul style="list-style-type: none"> • isoflurane / sevoflurane • subambient 					
D. Manage Ventilation and Oxygenation		0	3	3	
1. Selection of initial settings					
2. Conventional modes					
3. High-frequency ventilation, for example,					
<ul style="list-style-type: none"> • HFJV • HFOV 					
4. Alternative modes, for example,					
<ul style="list-style-type: none"> • volume-targeted • NAVA • APRV 					

 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.	Items			Total
	Ethics	Cognitive Level		
		Recall	Integration*	
Fourth Quarter of the Calendar				5
5. Noninvasive, for example, <ul style="list-style-type: none"> • CPAP • bi-level 				
6. Adjunct techniques <ul style="list-style-type: none"> a. lung recruitment maneuvers b. prone positioning c. extracorporeal life support, for example, <ul style="list-style-type: none"> • ECMO • CO₂ removal • coagulation management 				
7. Monitoring <ul style="list-style-type: none"> a. measures of lung disease severity, for example, <ul style="list-style-type: none"> • PaO₂ / F_iO₂ • SaO₂ / F_iO₂ • OI b. airway pressures and volumes, for example, <ul style="list-style-type: none"> • mean airway pressure • minute ventilation c. ventilator waveforms, for example, <ul style="list-style-type: none"> • NAVA catheter positioning d. ventilator-patient interaction, for example <ul style="list-style-type: none"> • synchrony e. pulmonary mechanics, for example, <ul style="list-style-type: none"> • compliance • resistance • VD / VT • MIP f. effects of mechanical ventilation on cardiac function g. cerebral oximetry, for example, <ul style="list-style-type: none"> • near infrared spectroscopy 				
8. Strategies <ul style="list-style-type: none"> a. weaning from mechanical ventilation, for example, <ul style="list-style-type: none"> • spontaneous breathing trials • protocols b. prevention of ventilator-induced lung injury c. lung-protective ventilation, for example, <ul style="list-style-type: none"> • permissive hypercapnia 				
9. Optimizing patient-ventilator interaction				

 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.	Items			Total
	Ethics	Cognitive Level		
		Recall	Integration*	
E. Facilitate Procedures and Evaluate Efficacy		0	1	1
1. Inter-hospital or intra-hospital transport				
2. Intravascular catheter insertion, for example, <ul style="list-style-type: none"> through an umbilical or peripheral site 				
3. Intubation				
4. Extubation, for example, <ul style="list-style-type: none"> planned decannulation endotracheal tube 				
5. Chest tube management, for example, <ul style="list-style-type: none"> insertion troubleshooting 				
6. Needle decompression of pneumothorax				
7. Therapeutic hypothermia, for example, <ul style="list-style-type: none"> total body / head cooling passive / active cooling 				
F. Manage and/or Anticipate Effects of Medication Administration		0	1	1
1. Surfactant replacement therapy, for example, <ul style="list-style-type: none"> compliance changes airway obstruction 				
2. Airway instillations, for example, <ul style="list-style-type: none"> lidocaine epinephrine 				
G. Prevent Hospital-Acquired Conditions		1	0	1
1. Ventilator-associated pneumonia				
a. oral care				
b. bed position				
c. minimizing intubation time, for example, <ul style="list-style-type: none"> determining extubation readiness NPPV 				
d. ventilator circuit care, for example, <ul style="list-style-type: none"> closed suction heated wire 				
2. Device-related pressure ulcers				
H. Manage End-of-Life Care		0	0	0
1. Types of end-of-life care, for example, <ul style="list-style-type: none"> palliative advance directive hospice 				
2. Determination of brain death				
3. Withdrawal of life support				

 Credential Maintenance Program Neonatal/Pediatric Specialty Assessment Detailed Content Outline <i>Multiple-choice items are linked to open cells.</i> * Test takers will be asked to integrate (apply or analyze) information.	Items			Total
	Ethics	Cognitive Level		
		Recall	Integration*	
4. Care of organ donor				
Totals		5	15	20

* Each test form will include 1 item that engages thinking about ethics to select the best answer.

* This item also will

- include content from a task that shows an open cell under the **Ethics** column.
- be written to a cognitive level permitted for the task to which the item is linked.

Additional Specifications by Patient

Item content also will be classified by a patient's condition or disorder.

Condition or Disorder	Maximum items per form
GENERAL <i>No specific condition or disorder</i>	balance
NEO PULMONARY (Neonatal pulmonary, for example, meconium aspiration, pneumonia, PPHN)	2
INFECT DISEASE (Infectious disease, for example, pneumonia, croup)	2
CHRONIC LUNG (Chronic lung disease of prematurity)	2
ASTHMA	2
PREMATURITY (Prematurity acute phase, for example, surfactant deficiency apnea)	2
BRONCHIOLITIS	1
CON DEFECTS (Congenital defects that require surgical correction)	1
CON HRT DISEASE (Congenital heart disease)	1
NEUROLOGIC (for example, seizures, brain tumors, hydrocephalus)	1
PED AIRWAY (Pediatric airway, for example, tracheomalacia, vocal cord paralysis, vascular ring)	1
IMMUNOCOMPROMISED	1
SHOCK	1
TRAUMA	1
HEART FAILURE	1
CYSTIC FIBROSIS	1
NEUROMUSCULAR (for example, spinal muscle atrophy, muscular dystrophy)	1
SLEEP RELATED (sleep related disorders, for example, obstructive sleep apnea, central hypoventilation)	1
INHALATION (Inhalation injuries)	1
Total	20