Purpose of this report

The purpose of this report is to provide feedback to the pediatric critical care medicine community regarding content areas of strength and weakness, information which may be useful for identifying potential gaps in knowledge and guiding the development of educational materials. Using data from the American Board of Pediatrics' (ABP) Maintenance of Certification Assessment for Pediatrics (MOCA-Peds), this report summarizes diplomate performance on the questions within each of the 48 content areas assessed in 2021.

MOCA-Peds content areas

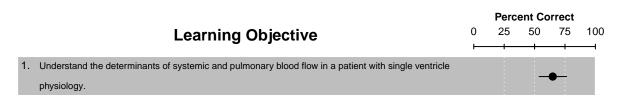
In 2021, MOCA-Peds—Pediatric Critical Care Medicine consisted of questions from a total of 48 content areas, broken down as follows:

- 45 learning objectives¹ Each diplomate initially received one question from each of the 45 specific content areas drawn from the pediatric critical care medicine content outline.
- Three featured readings¹ Each diplomate also received two questions per featured reading (eg, clinical guidelines, journal articles) for a total of six featured reading questions.

A pool of questions was developed for each learning objective and for each featured reading. Questions were then drawn from the pool and administered to diplomates throughout 2021 according to the specifications described in the bulleted list above.

Understanding this report

This report provides a graphical summary of diplomate performance on each of the 48 content areas assessed in 2021. Within the graphic and in the example below, the point (•) reflects the average percent correct for all questions within that learning objective or featured reading. The bar (—) reflects the range of percent correct values for the questions within that learning objective or featured reading. More specifically, the bar's lower endpoint indicates the most difficult question (ie, answered correctly by the lowest percentage of diplomates) and the bar's upper endpoint indicates the easiest question (ie, answered correctly by the highest percentage of diplomates).



¹Each diplomate also received 15 "repeat" questions selected from their original subset of learning objective and featured reading questions. Performance on the repeat administrations is not included in this report.

A note of caution

Many factors (eg, specific content of the question, wording of the question, plausibility of the incorrect answers) can impact diplomate performance on any question. It is thus difficult to determine if poor performance on a single question, or small set of questions, within a given content area reflects a true gap in diplomate knowledge or if the question(s) associated with that content area were difficult for other reasons (or some combination of both). Collectively, the entire set of MOCA-Peds questions (across all content areas) constitutes a psychometrically valid assessment of the diplomate's overall level of knowledge. Performance within a given content area is based on fewer questions, however, and is therefore less useful for making inferences about diplomate knowledge in that specific content area.

It is important to note again that for security reasons, a pool of questions was developed for each content area so that each diplomate received a unique set of questions. In addition, the number of questions can vary from one content area to the next. In cases where a content area had a relatively large pool of questions, the number of diplomates who answered each question was reduced, which diminished the statistical precision of each question's percent correct value. In cases where a content area had a relatively small number of questions, each question was answered by a larger number of diplomates, but the overall breadth of the content being assessed within that content area was constrained, which limits the generalizability of the results.

In other words, MOCA-Peds was designed to assess individual diplomates with respect to their overall level of knowledge in pediatric critical care medicine. It was not designed to provide the pediatric community with diagnostic feedback pertaining to specific content areas within pediatric critical care medicine. The results within this report may be informative and useful for that secondary purpose, but they should be interpreted with a degree of caution.

Additional notes

- To protect the security of the content of the assessment, the questions themselves, along
 with information about the number of questions in the pool for any particular learning
 objective or featured reading, are not provided in this report.
- This report contains data aggregated across many diplomates participating in the MOCA-Peds program and cannot be used to make inferences or draw conclusions regarding any particular diplomate.

2021 Content Area Feedback Report Pediatric Critical Care Medicine

	Learning Objective	Percen 0 25	t Correct	100
1		 	+ +	
1.	Understand the determinants of systemic and pulmonary blood flow in a patient with single ventricle physiology.		•	
2.	Understand the various pathophysiologies leading to acute kidney injury.		-	_
3.	Understand the joint influences of ADH and aldosterone on salt and water balance.		_	
4. 5.	Identify mechanisms of pathogen identification and clearance by the immune system. Pediatric post–cardiac arrest care: a scientific statement from the American Heart Association (Featured	:		_
	Reading)		•	_
6.	Recognize unique diagnostic characteristics consistent with abusive head trauma in infants and young children.		-	
7.	Management of pediatric severe traumatic brain injury: 2019 consensus and guidelines–based algorithm for first and second tier therapies (Featured Reading)		-	-
8.	Manage complications resulting from hematopoietic stem cell transplantation.	•	-	
9.	Identify the effects of end-organ dysfunction on drug metabolism in critically ill children.			
10.	Identify complications of the use of transplant rejection prophylaxis medications.		_	_
	Understand the principles of detoxification, including the indications for gastric emptying, toxin			
	binding, enhanced renal excretion, whole bowel irrigation and surface decontamination.		-•	-
12.	Manage hyperactive delirium in the critically ill adolescent.		-4	_
13.			_	
14.	Know the synthetic functions of the liver.	•		-
15.		:	: :	
	Understand potential complications of endotracheal intubation.	•		
	Distinguish the differences in clinical findings between upper and lower airway obstruction.		`	•- •-
	Develop a plan for airway control of a child with multiple traumatic injuries.			
	Tight glycemic control in critically ill pediatric patients: A meta–analysis and systematic review of	:	: :	
13.	randomized controlled trials (Featured Reading)		-	•-
20	Plan the management of acute liver failure.	:		
	Understand the role of neuromuscular blocking agents at the time of withdrawal of mechanical		-	
	ventilation.		-	•
22.	Recognize key neurological examination findings in critically ill children with acute neurological			•
	disorders, including signs of brain herniation.			_
23.	Understand factors necessary for spontaneous breathing and assess readiness for extubation in mechanically ventilated patients.			•-
24.	Understand how to perform a rapid sequence intubation.		-	•
25.	Know the risks associated with interhospital or intrahospital transport of the critically ill or injured patient.			•
26.	Diagnose and manage inborn errors of metabolism.			•
	Distinguish key differences between spontaneous breathing and positive–pressure ventilation on intrathoracic pressure.			•
28	Understand the determinants of cerebral flood flow.	:	: :	
	Understand the determinants of cerebral mood now. Understand the effects of altered cardiac physiology, including dysrhythmias, on the central venous			_
29.	waveform.			•
30.		:	: : : : : : : : : : : : : : : : : : : :	
	Understand the principles and applications of study designs.		: _	
	Describe the principles of mass casualty and disaster preparedness for the pediatric ICU.	:	: -	
33.	Know the effect of positive pressure ventilation on cardiac preload and afterload.	:	: : :	
34.	Manage oxygen delivery for a patient in shock.	:	: :	
	Develop a diagnostic plan for children presenting with acute coma.	:	: :	
	Plan the management of toxic shock syndrome.	:		
	<u> </u>			
	Understand the indications for and risks of neuromuscular blocking agents.	: :		
	Understand the complications of hepatic failure.			_
	Describe the clinical findings associated with impending respiratory failure in status asthmaticus.			•
	Determine the changes required in mechanical ventilator settings for worsening hypoxemia.			•
	Understand the difference in physiology between SIADH and cerebral salt wasting.			-
	Know the management of complications of central venous access placement.			•
43.	, ,		: :	
44.	Evaluate the appropriate use of sedatives and analgesics in end-of-life care in the PICU.			•
45.	,			•
46.	•			•
47.	Understand when and why artificial nutrition may be withdrawn in a child.			•
48.	Recognize pericardial tamponade.			•