# Purpose of this report

The purpose of this report is to provide feedback to the neonatal-perinatal 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 46 content areas assessed in 2021.

### MOCA-Peds content areas

In 2021, MOCA-Peds—Neonatal-Perinatal Medicine consisted of questions from a total of 46 content areas, broken down as follows:

- 45 learning objectives<sup>1</sup> Each diplomate initially received one question from each of the 45 specific content areas drawn from the neonatal-perinatal medicine content outline.
- One featured reading<sup>1</sup> Each diplomate also received two questions associated with the 2021 featured reading (eg, clinical guideline, journal article).

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 46 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).



<sup>&</sup>lt;sup>1</sup>Each 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 neonatal-perinatal medicine. It was not designed to provide the pediatric community with diagnostic feedback pertaining to specific content areas within neonatal-perinatal 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 Neonatal-Perinatal Medicine

	Learning Objective	0	Perce	ent Cor	rect 75	100
1.	Understand p values (with and without multiple comparisons) and type I and type II errors.		_			
2.	Recognize the clinical features of a neonate with an arterial vascular abnormality.		•		-	
3.	Recognize and manage systemic hypertension.				•	
4.	Understand the significance of DNA methylation and epigenetics.				•	_
5.	Know the definitions of perinatal, neonatal, postneonatal, and infant mortality.				•	
6.	Know the risk factors for development, proposed mechanisms, diagnosis, and consequences of intra– and extracranial hemorrhage.				•	
7.	Develop an evaluation and management plan for a neonate with a condition affecting myocardial performance.				-	
8.	Know the pathophysiology, risk factors, management, and outcomes of retinopathy of prematurity.				•	,
9.	Evaluate the etiology of fetal non-immune hydrops.				•	<b>-</b>
10.	Recognize the clinical characteristics, management and outcomes of congenital diaphragmatic hernias.				•	,
11.	Describe the rationale for and potential benefits of delayed cord clamping.		:	:	-	<b>)</b> —
12.	Evaluate and manage a preterm infant with a new onset of apnea episodes.				—	<b>)</b> —
13.	Know how to interpret umbilical cord blood gas and pH values.				-	<b>)</b> —
14.	Know the general mechanisms by which various drugs are metabolized and eliminated in the neonate, and					
	the clinical implications of how this changes with liver or kidney disease.					_
15.	Recognize the clinical features of and formulate a differential diagnosis for a neonate with a suspected immune deficiency.				-	•
16.	Identify and distinguish the clinical characteristics of physiologic versus non-physiologic (pathologic) jaundice.				_	•—
17.	Relate essential elements of prenatal care to specific pregnancy outcomes.					
18.	Apply knowledge of the physiologic and metabolic effects of hypothermia to the rationale for and development of infant transport guidelines.				_	•
19.	Know the maternal and perinatal risk factors for sepsis.				- : -	•
20.	Screening Examination of Premature Infants for Retinopathy of Prematurity (Featured Reading)		•	•	_	•
21.	Differentiate maternal drugs associated with neonatal abstinence syndrome by their clinical presentation (including timing).					•
22.	Develop effective strategies to prevent central line–associated bloodstream infections in the neonatal					_
	intensive care unit, and know the rationale for doing so.					•
23.	Describe changes in the neurologic exam with increasing gestational and postnatal age, and changes that occur after neurologic insults.					•
24.	Understand the development of thermoregulation and its impact on the management of neonates.		•			<b>—</b>
25.	· · · · · · · · · · · · · · · · · · ·		:	:	: -	•
26.	Recognize complications of neonatal infections that are unique to the thorax and its contents.		•			•
27.	Interpret clinical and lab data to determine hydration status.				:	
28.	Determine the effects of specific drugs on renal function.					•
29.	Know the differential diagnosis for coagulation disorders, both inherited and acquired.					
30.	Know the clinical manifestations, associated anomalies, and management of gastroschisis.					•
31.	Synthesize the mortality, short–term neonatal morbidity, and long–term outcomes of periviable infants for parent counseling.					•
32.	Recognize the clinical features and diagnostic characteristics of craniofacial anomalies.					•
33.	Evaluate the presentation, differential diagnosis, and diagnostic approach to neonatal respiratory distress.					•
34.	Compare the risks for neurodevelopmental impairment between term, late preterm, moderately preterm, and extremely preterm infants (those with and without identified neonatal risk factors).			·		•
35.	· · · · · · · · · · · · · · · · · · ·					•
36.	Demonstrate an understanding of inheritance patterns and recurrence risks for autosomal recessive disorders.					•
37.	Compare the epidemiology and prevention strategies of perinatal hepatitis B and C infections.			:	:	•
	Recognize complications of parenteral nutrition.					_
39.	<u> </u>					
40.	Recognize the causes and clinical features of large–for–gestational–age (LGA) infants.					-
41.						
42.						
43.	<u> </u>			: :		•
	Evaluate and treat newborn infants with congenital malformations that present in the delivery room (eg, hydrops, congenital diaphragmatic hernia, gastroschisis, meningomyelocele).					•
45.	Evaluate the presentation and diagnostic approach to neonatal platelet disorders, both inherited and acquired.					•
46.	Develop a management plan for bradyarrhythmias in the newborn infant.					•