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 47 content areas assessed in 2020.
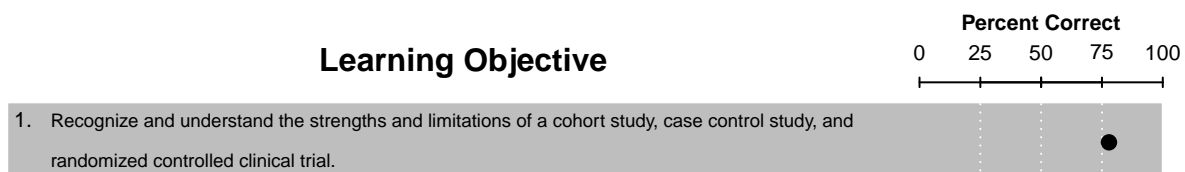
MOCA-Peds content areas

In 2020, *MOCA-Peds—Neonatal-Perinatal Medicine* consisted of questions from a total of 47 content areas, broken down as follows:

- *45 learning objectives*[1] — Each diplomate initially received one question from each of the 45 specific content areas drawn from the neonatal-perinatal medicine content outline.

- *Two featured reading*s[1] — Each diplomate also received two questions per featured reading (eg, clinical guidelines, journal articles) for a total of four 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 2020 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 47 content areas assessed in 2020. 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).

Learning Objective	Percent Correct
1. Recognize and understand the strengths and limitations of a cohort study, case control study, and randomized controlled clinical trial.	•

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[1]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.

2020 Content Area Feedback Report
Neonatal–Perinatal Medicine

Learning Objective

Percent Correct

No.	Learning Objective
1.	Recognize and understand the strengths and limitations of a cohort study, case control study, and randomized controlled clinical trial.
2.	Develop a management plan for a preterm or term infant exposed to a communicable disease such as varicella (using knowledge of placental immunoglobulin transfer).
3.	Know how to interpret arterial blood gas measurements and noninvasive methods for estimating arterial oxygenation.
4.	Recognize the association of cholestasis with parenteral nutrition and describe its management.
5.	Formulate a differential diagnosis for a cyanotic newborn infant.
6.	Know how to set up and conduct a quality improvement (QI) project, and how to determine whether it is successful or not.
7.	Randomized Trial of Platelet–Transfusion Thresholds in Neonates (Featured Reading)
8.	Know the risk factors for development, proposed mechanisms, diagnosis, and consequences of intraventricular hemorrhage in the preterm infant.
9.	Know the treatment and complications of group B streptococcal infections.
10.	Review the evaluation and management of common arrhythmias in the fetus and newborn infant.
11.	Identify the clinical, laboratory, and imaging features of neuroblastoma in the newborn infant.
12.	Describe best practices for management of a newborn with persistent pulmonary hypertension (PPHN).
13.	Formulate an evaluation and management plan for a neonate with acute kidney injury.
14.	Compare the indications for and limitations of various neuroimaging studies; recognize normal and abnormal findings that occur during development and after brain injury.
15.	Association Between Oxygen Saturation Targeting and Death or Disability in Extremely Preterm Infants in the Neonatal Oxygenation Prospective Meta–analysis Collaboration (Featured Reading)
16.	Recognize the significance of abnormalities in fetal heart rate patterns during labor.
17.	Discuss current recommendations regarding suctioning meconium from the newborn infant airway.
18.	Understand the fetal/neonatal significance of oligohydramnios or polyhydramnios.
19.	Develop an evaluation and management plan for an infant whose newborn screen was positive for congenital hypothyroidism.
20.	Recognize the effects of environmental factors (for example: maternal bonding, socioeconomic conditions, media exposure) on infant outcomes.
21.	Explain the clinical and echocardiographic features of a physiologically significant patent ductus arteriosus in a preterm neonate.
22.	Describe the indications for and proper administration of supplemental oxygen immediately after birth.
23.	Recognize the skin manifestations of common neonatal infections including cytomegalovirus, candidiasis, herpes, staphylococcus.
24.	Recognize the effects of fetal programming and nutrition on the prevalence and types of adult onset disorders.
25.	Relate the protein requirements of preterm and term infants to parenteral and enteral nutrition guidelines.
26.	Demonstrate an understanding of inheritance patterns and recurrence risks for autosomal dominant disorders.
27.	Know the factors associated with increased bilirubin production and decreased serum bilirubin excretion in the neonate.
28.	Know the maternal factors, incidence, clinical manifestations, common complications, and prognosis of Down syndrome.
29.	Describe an evaluation and management plan for an infant with suspected choanal stenosis/atresia.
30.	Recognize the clinical features of a neonate with a left–sided cardiac obstructive lesion.
31.	Differentiate the clinical manifestations of disorders of amino acid metabolism from other causes of serious neonatal illness.
32.	Describe indications for use, clinical effects, side effects, and toxicity for classes of drugs commonly used in the neonate (eg, antibiotics, analgesics, anticonvulsants).
33.	Understand the clinical manifestations, diagnostic criteria, treatment, and complications of coxsackievirus, echovirus, and enterovirus infections.
34.	Know the evolution of neurodevelopmental impairments over time, and when and with what tools they are best assessed.
35.	Know the indications for phototherapy and exchange transfusion in the preterm and term neonate.
36.	Develop a management plan for an infant born to a mother with active genital herpes or with a history of genital herpes.
37.	Recognize the characteristics and consequences of congenital defects with non–genetic etiologies (such as amniotic band syndrome).
38.	Describe the prognosis and long–term complications of bronchopulmonary dysplasia.
39.	Explain the pathophysiologic effects of maternal diabetes on the newborn.
40.	List the most effective therapeutic interventions for decreasing insensible water loss.
41.	Discuss best practices for management of a newborn infant with respiratory distress syndrome (RDS).
42.	Know the clinical and diagnostic features, evaluation, management, and complications of necrotizing enterocolitis.
43.	Recognize the neonatal systemic complications of perinatal asphyxia.
44.	Know the causes, diagnosis, management, and outcomes of hypoxic–ischemic encephalopathy.
45.	Explain the indications for and techniques, effects, and risks of extracorporeal membrane oxygenation (ECMO).
46.	Analyze the potential causes and treatment options for neonatal anemia in preterm and term neonates.
47.	Know the clinical manifestations, associated anomalies, and management of omphalocele.

Sample: Included in the sample were all diplomates who currently have a Part 3 (exam) requirement that could be fulfilled through MOCA–Peds and answered at least one question in 2019 (N = 552).