Purpose of this report
The purpose of this report is to provide feedback to the pediatric gastroenterology 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 49 content areas assessed in 2019.

MOCA-Peds content areas
In 2019, MOCA-Peds—Pediatric Gastroenterology consisted of questions from a total of 49 content areas, broken down as follows:

- **45 learning objectives** — Each diplomate received a total of 60 questions associated with the set of 45 specific content areas drawn from the pediatric gastroenterology content outline. Those 60 questions consisted of 45 “new” questions (one for each learning objective) and 15 identical “repeat” questions selected from the original set of 45 new questions.

- **4 featured readings** — Each diplomate also received 8 questions (2 questions per featured reading) associated with the 4 featured readings (eg, clinical guidelines, journal articles).

It is important to note that 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 2019, adhering to the specifications described above (1 new question per learning objective, 2 new questions per featured reading, 15 repeat questions).

Understanding this report
This report provides a graphical summary of diplomate performance on each of the 49 content areas assessed in 2019. 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).

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Percent Correct</th>
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<tr>
<td>1. Recognize systemic disorders that can cause gastroduodenitis.</td>
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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 gastroenterology. It was not designed to provide the pediatric community with diagnostic feedback pertaining to specific content areas within pediatric gastroenterology. 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.
2019 Content Area Feedback Report
Pediatric Gastroenterology

1. Recognize systemic disorders that can cause gastroduodenitis.
2. Know how to interpret esophageal pH and impedance studies.
3. Understand the pathogenesis and treatment of parasitic liver disease.
4. Understand the technique and interpretation of breath testing in gastrointestinal disease.
5. Know the pathophysiology and treatment of caustic and medication–related injury of the upper gastrointestinal tract.
6. NASPGHAN clinical practice guideline for the diagnosis and treatment of nonalcoholic fatty liver disease in children: Recommendations from the expert committee on NAFLD (ECON) and the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) (Featured Reading)
7. Recognize the gastrointestinal manifestations of immunodeficiency disorders.
8. Understand the mechanism of immediate and late intestinal adaptation in short–bowel syndrome.
9. Understand the informed−consent process for gastrointestinal procedures.
10. Calculate and interpret sensitivity and specificity.
11. Recognize the psychological characteristics of children with functional gastrointestinal disorders.
12. Know the extraintestinal manifestations of inflammatory bowel disease.
13. Understand the pathophysiology of chronic diarrhea.
14. Understand the risk factors for Helicobacter pylori infection.
15. Know the mechanism of action and common complications of the drugs most frequently used to treat patients who have undergone liver transplantation.
17. Understand the mechanism of blood supply to the liver and the extrahepatic biliary tree.
18. Interpret the laboratory findings associated with protein–losing enteropathy.
19. ESPEN−ESPGHAN−ECFS guidelines on nutrition care for infants, children, and adults with cystic fibrosis (Featured Reading)
20. Understand the management of short−bowel syndrome.
21. Understand the mechanisms of intestinal fluid and electrolyte transport.
22. Pediatric gastroesophageal reflux clinical practice guidelines: joint recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) (Featured Reading)
23. Know the disorders of the esophagus associated with systemic diseases.
24. Know how to manage complications associated with parenteral nutrition.
25. Differentiate disorders of defecation based on anorectal manometry findings.
26. Understand the nutritional requirements of term and preterm infants, children, and adolescents.
27. Identify the clinical signs and symptoms associated with vitamin, trace metal, and micronutrient deficiency.
28. Guideline for the evaluation of cholestatic jaundice in infants: joint recommendations of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition and the European Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) (Featured Reading)
29. Plan the nutritional management for a child with malabsorption.
30. Recognize and manage congenital anomalies of the pancreas.
31. Plan the management of both symptomatic and asymptomatic gallstones in children, and be able to recognize gallstones on imaging studies.
32. Know the clinical presentation, evaluation, and management of congenital anomalies of the esophagus, stomach, and duodenum.
33. Understand the histologic and laboratory findings associated with liver failure.
34. Recognize the clinical presentation of corrosive gastritis.
35. Recognize the complications of diagnostic and therapeutic endoscopy.
36. Understand the absorption of vitamins.
37. Identify disorders causing dysmotility of the upper gastrointestinal tract.
38. Understand the physiology of gastrointestinal motility, including roles of the enteric and central nervous system.
39. Recognize the gastrointestinal complications of eating disorders.
40. Recognize endoscopic abnormalities of the gastrointestinal tract.
41. Recognize the gastrointestinal manifestations of systemic disorders.
42. Differentiate the pathogenesis, histology, and clinical manifestations of congenital disorders of bilirubin metabolism.
43. Understand the diagnosis and treatment of eosinophilic esophagitis.
44. Plan the management of an infant born to a mother who tests positive for hepatitis B surface antigen (HBsAg).
45. Understand the clinical manifestations and management of hepatitis.
46. Plan evaluation and management of rectal bleeding.
47. Know the clinical manifestations of pseudomembranous enterocolitis.
48. Know the pathogenesis of gastroesophageal reflux.
49. Know the clinical symptoms of parasitic infections in immunodeficiency syndromes.

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 = 113).