



The American Board of  
Anesthesiology

# MOCA Minute<sup>®</sup>: Longitudinal Assessment for Continuing Certification

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# MOCA Minute®

## Longitudinal Assessment

- MOCA Minute is a longitudinal assessment of the diplomate's knowledge
- MOCA Minute allows:
  - diplomates to demonstrate their proficiency and enhance their knowledge
  - the Board to identify diplomates who may not be keeping their knowledge current and require remediation

# MOCA Minute®

## Initial Pilot Requirements

- MOCA Minute® initially piloted in 2014
- Purpose was to help diplomates prepare for the traditional Part III Exam
- Participating diplomates:
  - Received 1 MOCA Minute question per week for 16 weeks
  - Responding to the question was optional
  - Feedback provided for those who responded
  - Included spaced repetition of some questions

# Types of MOCA Minute® Questions

- **Core** — covers content that forms the general anesthesia knowledge base that all ABA diplomates are expected to know
- **Practice-specific** — covers content based on the diplomate's practice profile
- **New knowledge** — covers new information that all ABA diplomates need to learn quickly (i.e., Ebola, Zika Virus)
- **Subspecialty** — covers content based on the diplomate's subspecialty certification(s), if any

# MOCA Minute® Pilot

- Pilot expanded to **all diplomates in MOCA** in 2016
- **Interactive learning tool** that helps diplomates continuously assess and refresh knowledge
  - More relevant and personalized approach to lifelong learning
  - Can inform diplomates' learning choices

# Research Published on Initial MOCA Minute® Pilot

## ORIGINAL INVESTIGATIONS IN EDUCATION

### Association between Participation in an Intensive Longitudinal Assessment Program and Performance on a Cognitive Examination in the Maintenance of Certification in Anesthesiology Program®

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#### ABSTRACT

**Background:** As part of the Maintenance of Certification in Anesthesiology Program® (MOCA®), the American Board of Anesthesiology (Raleigh, North Carolina) developed the MOCA Minute program, a web-based intensive longitudinal assessment involving weekly questions with immediate feedback and links to learning resources. This observational study tested the hypothesis that individuals who participate in the MOCA Minute program perform better on the MOCA Cognitive Examination (CE) compared with those who do not participate.

# MOCA Minute® Study Results

- Diplomates who voluntarily participated in the MOCA Minute had higher scores on their MOCA Cognitive Examination
  - Performance improved both in areas covered by the MOCA Minute items and other areas
- High levels of diplomate satisfaction



# MOCA Minute® Pilot

- Longitudinal assessment data will allow us to **identify knowledge gaps** across the diplomate corps that we can strategically help address
  - **Positively impact patient care** across anesthesia practice spectrum
  - Not possible with once-every-10-years MOCA Exam
- **Knowledge Gaps Report:** Provides details on the MOCA Minute questions answered incorrectly, peer performance and links to related CME to help you address gaps.



# Knowledge Gaps Report



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## 2017 MOCA Minute® Knowledge Gaps Report

Please click on a tab to view.

2017

2016

### Performance by Topic Area

[Print Full Report](#)

This report provides details about the questions you answered incorrectly and CMEs that can help you address knowledge gaps.

» **HIDE**

#### FUNDAMENTAL TOPICS IN ANESTHESIOLOGY

# Incorrect: 3

##### Question and Key point

Peer Performance  
(% Correct on First Attempt)

Available CME Activities \*

During general anesthesia for a laparoscopic appendectomy, fresh gas...(See More)  
**Key point:** Causes of anesthesia machine low pressure alarm include circuit leaks (pinhole, CO2 absorber, and malpositioned vaporizer). Faulty one-way circuit valves do not result in circuit leaks.

65%

None

Shortly after an uneventful induction and intubation, the inspirator...(See More)  
**Key point:** An elevated inspiratory baseline on capnography is most commonly indicative of an incompetent expiratory valve or exhausted carbon dioxide absorbent.

65%

[Click Here](#)

Which of the following is INCREASED when using acceleromyography com...(See More)

**Key point:** Acceleromyography has been shown to reduce the risk of residual neuromuscular blockade in the postanesthesia care unit.

88%

[Click Here](#)

» **SHOW**

#### PHARMACOLOGY

# Incorrect: 3

» **SHOW**

#### CLINICAL SCIENCES: ANESTHESIA PROCEDURES, METHODS AND TECHNIQUES

# Incorrect: 8



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# MOCA 2.0® / MOCA Minute® Goal

- Identify **knowledge gaps** among diplomates, as a group and as individuals
- Connect diplomates to **targeted educational opportunities** based upon knowledge gaps
- Utilize intensive **longitudinal assessment** and dynamically summative education tools to improve the fund of knowledge of participants
- Generate a learning and assessment resource that is **relevant** to many different practice types

# MOCA Minute® Standard

- Using **Measurement Decision Theory (MDT)** to evaluate whether diplomates are maintaining medical knowledge
- MDT is used **to classify individuals** into groups based on responses to a series of items
  - Group 1: **Keeping** knowledge current
  - Group 2: **Not keeping** knowledge current

# Measurement Decision Theory (MDT) Overview

MDT is based on **Bayes' Rule**:

*By updating our initial belief about something with objective new information, we get a new and improved belief.*

Every MOCA Minute™ question answered lets the ABA (and diplomates) dynamically update our **data** about whether the diplomate is keeping their knowledge current

# Measurement Decision Theory (MDT) Overview

- That new information lets us update our belief about whether the diplomate continues to meet our standard.
- Over time, the diplomate's response pattern will either confirm or disconfirm our initial belief and the ABA to make judgments and take action accordingly.

# Future Research Directions

- How best to utilize the rich dataset provided by the MOCA Minute to maximize its efficacy as a learning tool?
  - Approximately 3 million responses annually
- How to validate the use of the MOCA Minute in continuing certification decisions?
  - Ongoing research utilizing DANS alerts
- How to validate the ability of MOC as a whole to predict/improve physician performance?
- How to collaborate with other Boards?



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Questions?