



WHAT IS MEASUREMENT DECISION THEORY?

MOCA Minute® is an innovative way to assess and enhance specialty-specific knowledge. Given this innovation, we are using a new method to analyze diplomates' MOCA Minute performance. It's called Measurement Decision Theory (MDT). We use MDT to estimate the probability that diplomates are keeping their knowledge up-to-date based on their pattern of responses to MOCA Minute questions.

HERE'S HOW IT WORKS:



Using this model, diplomates fall into one of two groups – an “up-to-date” or a “not up-to-date” group.

When Initially Certified



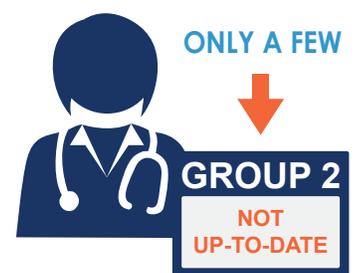
When initially certified, every diplomates' knowledge is up-to-date and no one is in the not up-to-date group.

Throughout Their Career



Most diplomates remain in the up-to-date group throughout their careers. We know this because the vast majority of diplomates historically pass the MOCA Exam.

Over Time



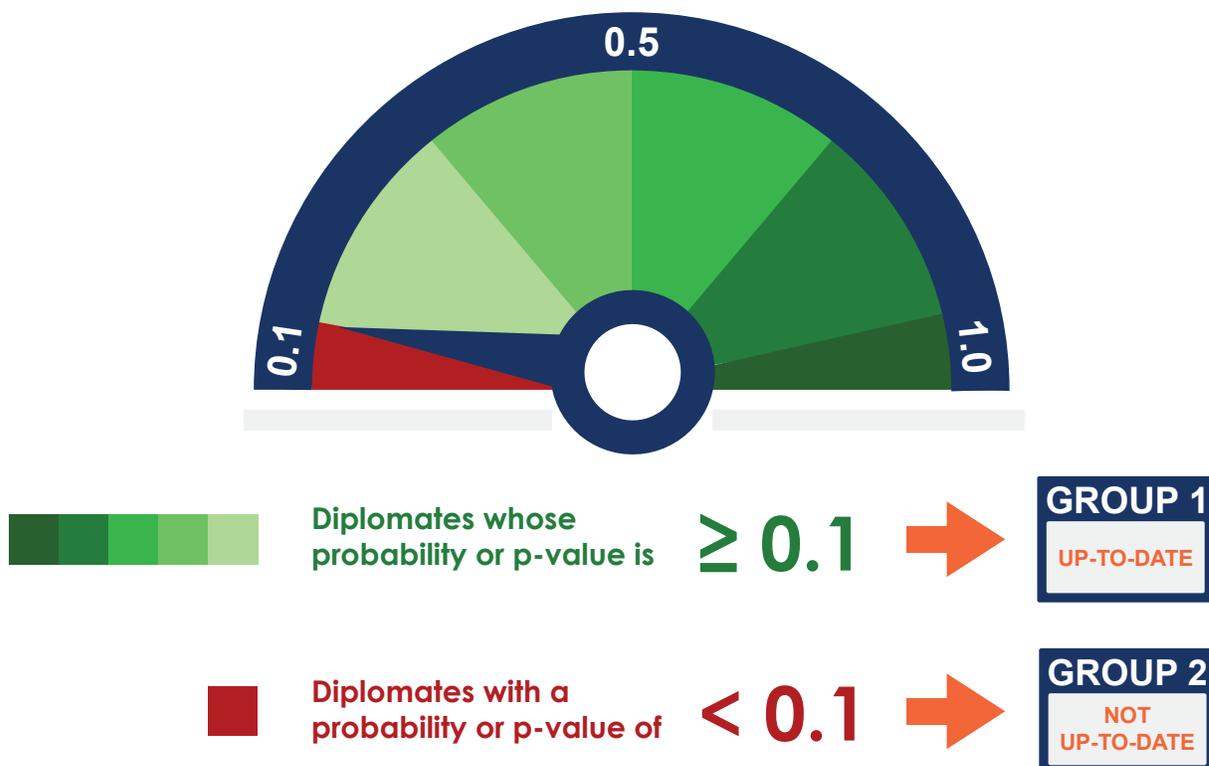
Over time, a few diplomates may begin to look like they belong to the not up-to-date group based on their pattern of responses to MOCA Minute questions.





Each time diplomates answer a question, we get a bit more information about the probability of them being in Group 1 (up-to-date). The more questions diplomates answer, the more certain we can be about whether they are keeping their knowledge current.

PROBABILITY OF MEMBERSHIP IN GROUP 1



We consider a diplomate whose p-value is ≥ 0.1 likely to be up-to-date (i.e., in Group 1). For those with p-values of < 0.1 we have concerns that they may not be up-to-date (i.e., may be in Group 2). We chose this p-value based on an initial analysis of diplomates' MOCA Minute responses and the historical pass rates for the MOCA Exam.

Using MDT to set a standard for MOCA Minute is different than grading a traditional exam. Here are a few important points about what makes it distinct:

1

MDT provides a PROBABILITY, NOT a score. We let diplomates know their percent correct score and how it compares with their peers, but the percent correct is NOT used to directly calculate the probability that a diplomate is in the up-to-date group.

2

MDT does NOT grade on the curve. With MDT, EVERYONE can remain in the up-to-date group. We know based on learning science research that participating in continual assessment helps individuals learn. So, participating in MOCA Minute can help diplomates stay up-to-date.



3

MDT can be used to reward learning. If diplomates answer a question incorrectly, they may see that question or a similar one again, and get credit for answering it correctly the second time they see it.

4

MDT takes into account a question's difficulty. If many diplomates are getting a question wrong, MDT adjusts the importance of the question in determining their p-value.

5

MDT accounts for the fact that diplomates' MOCA Minute experience is personalized to their practice profiles. Different diplomates have different practices and require a somewhat different command of knowledge to practice successfully.

Remember, the purpose of the MOCA Minute is to help our diplomates assess and enhance their knowledge. We are also using this innovative approach to make fair and defensible decisions about whether diplomates are maintaining their specialty-specific knowledge.