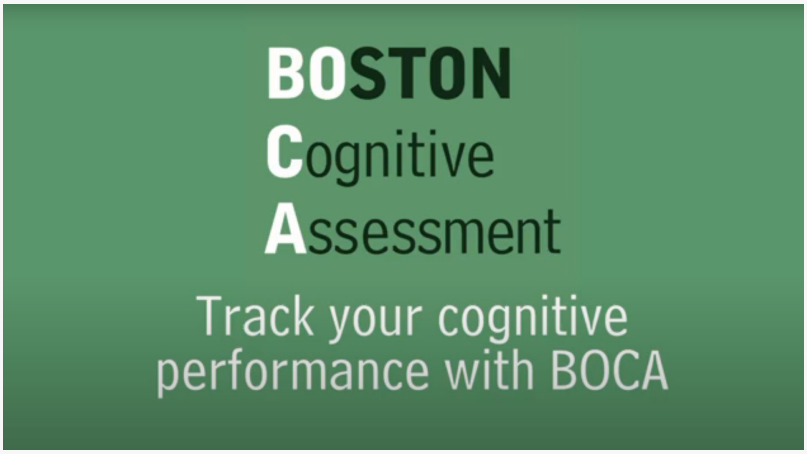
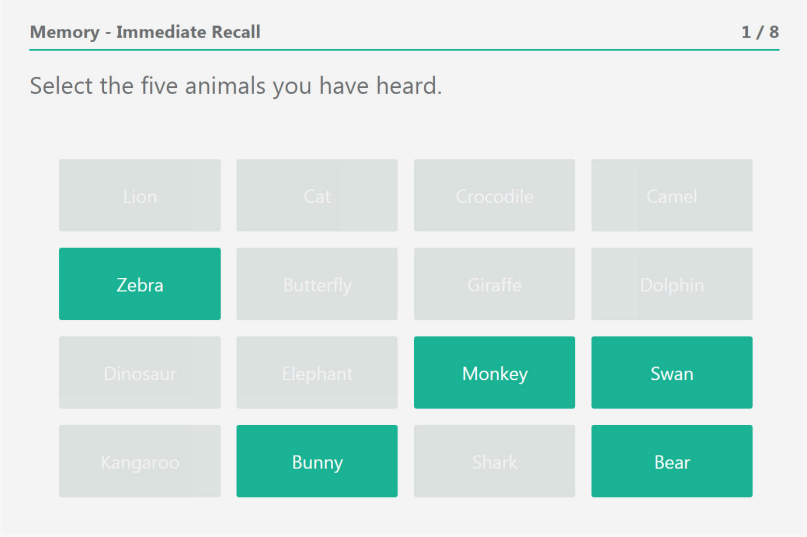
Boston Cognitive Assessment (BOCA) — a self-administered online test for longitudinal tracking of cognitive performance

New study validates Boston Cognitive Assessment—an online test for longitudinal tracking of cognitive performance. BOCA is available gratis at www.bocatest.org



Boston Cognitive Assessment (BOCA)

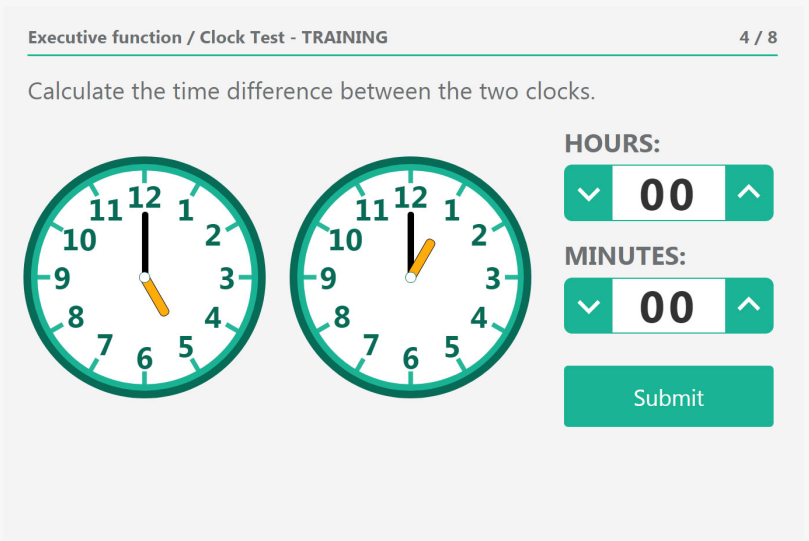


Boston Cognitive Assessment (BOCA) - Memory Subscale

BOSTON, MA, UNITED STATES, March 30, 2022 /EINPresswire.com/ -- New study published today in BMC Neurology (open access: https://rdcu.be/cl32w) validates Boston Cognitive Assessment (BOCA) for cognitive assessment and monitoring. BOCA has the unique advantages of being automatically scored and utilizing random and non-repeating stimuli to reduce the risks of practice effects, which may be especially beneficial for patients or research projects where cognitive tracking is required. BOCA is currently utilized in several clinical trials studying the effect of cognitive intervention, pharmaceutical treatment for Alzheimer's disease, COVID fog, researching the effect of anesthesia and preoperative treatment, long-term effect of cancer drugs, as well several observational studies of Alzheimer's disease and dementia. BOCA is royalty free. Please email us if you are interested in using BOCA in your clinical studies.

FOR CLINICIANS

Many health care providers administering cognitive testing are using the MOCA or MMSE, but not getting paid for their work. BOCA provides rapid, mobile cognitive assessments and personalized cognitive care planning that are reimbursable. Clinical practices can use BOCA and reimburse for CPT 96138, CPT 96132, and CPT 99483 for cognitive assessment administration and interpretation. Practices may also consider CPT 96116 as an alternative telehealth CPT code for cognitive testing. The BOCA test, combined with a few additional questions, can meet the requirements for CPT 96116.



Boston Cognitive Assessment (BOCA) - Executive Function / Clock Test

Standard cognitive assessments are not suited for monthly cognitive evaluations. First, they ubiquitously rely on trained professionals. While this approach has a high sensitivity and specificity for the detection of dementia, it is time and resource consuming. Second, the number of variations of standard tests is often limited resulting in strong practice effects. BoCA uses random never repeating tasks to minimize learning effects.

FOR INDIVIDUALS

Many treatable conditions such as sleep disorders, mood problems, heavy metal accumulation, as well as lack of movement and social interactions can affect memory and thinking.
Longitudinal monitoring of cognitive health can help you assess if an underlying condition is causing cognitive decline and guide timely therapeutic interventions. BOCA is a self-administered and assisted online test intended for longitudinal cognitive monitoring.

BOCA can be taken at the comfort of your home. It eliminates an extra visit to a doctor and saves hundreds of dollars, usually not covered by insurance.
We recommend completing the test weekly, on the same day of the week, at the same time.
After BoCA is completed, the domain scores and total score are provided immediately. Users will also receive an email with the link to the full report with progress charts.

HOW IT WORKS

BOCA experience starts at www.bocatest.org; participants of a clinical trial receive an email or SMS with a link to the test. Clicking on the link, automatically opens the browser with BOCA introductory page or the BOCA app on an iPhone. The mandatory sound check ensures that

participants can hear the instructions. The testing in each subscale is preceded by a training session in order to familiarize participants with both the task and the answering protocol. Training sessions are unscored and are repeated until the participant finds the correct answer. Once a participant has confirmed his/her ability to answer correctly in a given subscale, they proceed to scored questions of that subscale. The testing in each subscale is accomplished by a set of questions which gradually increase in difficulty. Randomly selected non-repeating tasks are used to minimize practice effects.

BOCA was programmed to work on all devices including smartphones and tablets and in all browsers. BOCA is light on data usage transmitted over the web and can be administered over slower 3G connections.

PSYCHOMETRIC PROPERTIES

BOCA has demonstrated excellent psychometric properties. The Cronbach's alpha was 0.87 implying good internal consistency. BOCA demonstrated strong correlation with Montreal Cognitive Assessment (MoCA) ($R = 0.90$, $p < 0.001$). The study revealed strong ($R = 0.94$, $p < 0.001$) test-retest reliability of the total BOCA score one week after participants' initial administration. The practice effect tested by daily BOCA administration over 10 days was insignificant ($\beta = 0.03$, $p = 0.68$). The effect of the screen size tested by BOCA administration on a large computer screen and re-administration of the BOCA to the same participant on a smartphone was insignificant ($\beta = 0.82$, $p = 0.17$; positive β indicates greater score on a smartphone).
BOCA has the potential to reduce the cost and improve the quality of longitudinal cognitive tracking essential for testing novel interventions designed to reduce or reverse cognitive aging. BOCA is available online gratis at www.bocatest.org.

For more information, please visit www.bocatest.org or contact Dr. Vyshedskiy at vysha@bu.edu.

Andrey Vyshedskiy
Alzheimer's Light
vysha@bu.edu
Visit us on social media:
Facebook
Twitter
LinkedIn
Other
