Updated Clinical Meaningful use of the HABC score

Monitoring scores: The cut points below were developed for caregiver-report in September 2012 based data from the rounded midpoints between the HABC-M total score and subscales means with respect to clinical diagnoses and information from the MMSE, namely, between the categories of diagnostic normal, MMSE mild, diagnostic dementia, and MMSE severe (Monahan et al., Practical clinical tool to monitor dementia symptoms: the HABC-Monitor. *Clinical Interventions in Aging*. 2012; 7: 143-157.)

From the self-report paper, it was determined based on comparisons with the TICS, that the same cut points are valid for self-report data, with an important caveat. Determining the validity of HABC Monitor scores from patients who self-report a perfect cognitive score of 0 requires either cognitive function test results (e.g., TICS or MMSE), or Caregiver-Report HABC Monitor scores, or further clinical examination, to rule out the possibility that the patient is denying or unaware of their cognitive symptoms. (Monahan et al., The Healthy Aging Brain Care (HABC) Monitor: Validation of the Patient Self-Report Version of the Clinical Tool Designed to Measure and Monitor Cognitive, Functional and Psychological Health. *Clinical Interventions in Aging*. 2012; 7: 143-157.)

- 1. Total score: Range: 0 to 81 (total score, sum of 27 items, excludes the 4 QOL items)
 - a. Normal range: ≤14
 - b. Mild symptoms: 15-23
 - c. Moderate symptoms: 24-35
 - d. Severe symptoms: ≥36
- 2. Cognitive subscale: Range: 0-18
 - a. Normal range: ≤4
 - b. Mild symptoms: 5-8
 - c. Moderate symptoms: 9-11
 - d. Severe symptoms: ≥12
- 3. Functional subscale: Range: 0-33
 - a. Normal range: ≤3
 - b. Mild symptoms: 4-6
 - c. Moderate symptoms: 7-11
 - d. Severe symptoms: ≥12
- 4. Behavioral subscale: Range: 0-30
 - a. Normal range: ≤5
 - b. Mild symptoms: 6-7
 - c. Moderate symptoms: 8-11
 - d. Severe symptoms: ≥12
- 5. Caregiver stress subscale: Range: 0-12
 - a. Normal range: 0
 - b. Mild symptoms: 1-4
 - c. Moderate symptoms: 5-8
 - d. Severe symptoms: ≥9

Screener

As a brief screener for MCI or dementia, only the <u>Cognitive subscale</u> (not the total or other subscales) of the HABC Monitor should be used. At this time, only the <u>caregiver-report</u> (not the patient self-report) of the cognitive subscale is recommended as a screening tool because preliminary data indicate that the diagnostic accuracy of the HABC Monitor cognitive subscale has potential as a screening tool only when lack of awareness, or under-reporting, for persons self-reporting perfect 0 scores on the HABC-M cognitive scale have been ruled out by additional information such as cognitive function test results (e.g., TICS or MMSE), Caregiver-Report HABC Monitor scores, or clinical examination.

Based on the above information from the two published articles, and on the receiver operator characteristic (ROC) analysis from the two articles, the current recommended cut point for screening for caregiver-report is:

HABC-M Cognitive score of ≥5 indicates possible mild cognitive impairment, warranting further clinical examination.