

INSTRUCTIONS FOR ADMINISTRATION OF MINI-MENTAL STATE EXAMINATION (MMSE)

What Is the MMSE?

The Mini-Mental State Examination (MMSE)¹ is a widely used, well-validated screening tool for cognitive impairment. It briefly measures orientation to time and place, immediate recall, short-term verbal memory, calculation, language, and construct ability. Each area tested has a designated point value, with the maximum possible score on the MMSE being 30/30. Since 1993 the MMSE has been available with an attached table that enables patient-specific norms to be identified on the basis of age and educational level². *Please use this table (labelled "Lower Quartiles") to identify the expected normal score for your patient when adjusted for age and educational level.*

Recording the MMSE

Record the patient's educational level in the space labeled "number of years of schooling". Circle the adjusted normal score for your patient in the table at the bottom of the page. Record that number in the space labeled "Mini-Mental Normal" on the ESAS Graph (and on any other specified data sheet that your program may use). Upon completion of the MMSE the score (numerator/denominator) achieved by the patient should be clearly recorded on the top half of the MMSE form and also in the space designated on the ESAS Graph for the MMSE score of that date. The score is recorded using a denominator of 30 unless the patient was unable to complete the test due to a physical handicap (e.g. blindness) --in which case the value of the questions not able to be completed is subtracted from 30 and the resulting number used as the denominator for the test score. If a denominator of less than 30 is used, the nature of the physical handicap should be indicated on the MMSE form.

The appropriate descriptor of the patient's level of consciousness should also be circled on the MMSE form. Alert = remains awake easily. Drowsy = finds it difficult to stay awake. Stupor = is difficult to rouse. Coma = unable to rouse. Note: if a person is unconscious, the MMSE score is 0/30.

When to Do the MMSE

The MMSE is completed on admission and weekly thereafter, and at any time when there is a concern about cognitive ability. This tool is most valuable when cognitive impairment is not suspected. The MMSE is far more sensitive in detecting cognitive impairment than is the use of informal questioning or "overall impression" of patient orientation. When the MMSE is not able to be completed, (on pass, language barrier, other, refused (see below), checkmark the reason why.

How to Do the MMSE

When the purpose and value of the MMSE is explained well, it is readily accepted by most patients and family members. Therefore, *it is extremely important to take time to explain the rationale for using this tool before commencing with the questions it contains.* Most patients value their cognitive abilities very highly and many are already well aware of the impact that medications or their disease state can have on these abilities. Explaining that the MMSE may be of great help in detecting reversible impairment of these faculties is usually enough to facilitate its acceptance by patients and their families --and, in any case, it is information with which the patient has a right to be provided. Before administering the MMSE it is important to make the patient comfortable and establish a rapport with the patient. During its administration praising successes may help to maintain this rapport and so is quite acceptable. Persisting on items the patient finds difficult should be avoided. Following are the details of how to administer and score the MMSE:

ORIENTATION

1. Ask for the date. Then ask specifically for parts omitted, e.g. "Can you also tell me what season it is?" The season is defined by the calendar, not the weather. One point for each correct answer. Maximum score of 5. Note: *there are no half points given in the MMSE.*
2. Ask in turn, "Can you tell me the name of this hospital?" or home, if at home. (Town, country, etc.). One point for each correct. Maximum score of 5.

REGISTRATION

Ask the patient if you may test his memory. Then say the names of three unrelated objects, clearly and slowly, about one second for each. After you have said all three, ask the patient to repeat them. This first repetition is considered the test of registration and determines the patient's score out of 3 on this item, but keep saying the words until the patient can repeat all three (up to six trials). If he/she does not eventually learn all three, it is unlikely that recall can be meaningfully tested. Nevertheless, it should be attempted (see below).

ATTENTION AND CALCULATION

Ask the patient to begin with 100 and count backward by 7. Stop after 5 subtractions (93,86,79,72,65). Score the total number of correct answers. If the patient cannot or will not perform this task, ask him/her to spell the word "world" backwards. The score is the number of letters in correct order, e.g. dlrow = 5; dlrow =3.

RECALL

Ask the patient if he/she can recall the three words you previously asked him/her to remember. Score one for each correct answer.

LANGUAGE

NAMING: Show the patient a wristwatch and ask him/her what it is. Repeat for pencil. Score one for each correct answer.

REPETITION: Ask the patient to repeat the sentence after you. Allow only one trial. Score one if the repetition is *completely* correct and zero if it is not.

3-STAGE COMMAND: State the command first *and then* give the patient a piece of plain blank paper. Score 1 point for each part correctly executed.

READING: On a blank piece of paper print the sentence "Close your eyes", in letters large enough for the patient to see clearly. Ask him/her to read it and do what it says. Score 1 point only if he actually closes his/her eyes.

WRITING: Give the patient a blank piece of paper and ask him/her to write a sentence for you. Do not dictate a sentence, it is to be written spontaneously. It must contain a subject and verb and be sensible. Correct grammar and punctuation are not necessary.

COPYING: On a clean piece of paper, draw intersecting pentagons, each side about 1 inch and ask him/her to copy it exactly as it is. All 10 angles must be present and two must intersect to score 1 point. Tremor and rotation are ignored.

1 Folstein MF, Folstein S, McHugh PR: "Mini-mental state": a practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research* 1975; 12: 189-198.

2 Crum RM, Anthony JC, Bassett SS, Folstein MF: Population-based norms for the Mini-Mental State Examination by age and educational level. *Journal of the American Medical Association* 1993; 269: 2386-2391.