



MEMORIAL DELIRIUM ASSESSMENT SCALE

Extra codes: (7)= N/A, (9)= missing/interview incomplete

Based on the DSI and MMSE interviews, please rate the severity of the following symptoms of delirium.

1. **Reduced level of Consciousness:** (refer to DSI Disturbance of Consciousness # 25 & 26 to formulate impression)

_____	(0) none	Fully awake
	(1) mild	Becomes awake when prodded minimally; interview can be completed with minimal disruption; sleepy
	(2) moderate	Becomes completely or intermittently awake when prodded strongly; interview is prolonged & difficult, but not seriously disrupted
	(3) severe	Becomes incompletely awake or aroused with maximal prodding; interview is disrupted & very difficult to complete

2. **Disorientation:** Rate current state based on answers to orientation items on MMSE (See total points of Orientation Subsection # 1k)

_____	(0) none	9-10 items correct
	(1) mild	7-8 items correct
	(2) moderate	5-6 items correct
	(3) severe	4 or less items correct

3. **Short Term Memory Impairment:** Rate current status based on registration/recall elements of MMSE (= add total points of # 2 & # 4)

_____	(0) none	All 3 words registered and recalled
	(1) mild	All 3 words registered, fails to recall 1
	(2) moderate	All 3 words registered, fails to recall 2 or 3
	(3) severe	Fails to register 1 or more words

4. **Impaired Digit Span:** (base on results from Digit Span questions on DSI Supplement)
- _____ (0) none Can do 4-5 numbers forward and 4 backwards
- (1) mild Can do 4-5 forward but only 3 backwards
- (2) moderate Can do 4-5 forward, cannot do 3 backwards
- (3) severe Cannot do > 3 forward
5. **Reduced ability to maintain and shift attention:** as indicated during the interview by questions needing to be rephrased and/or repeated because attention wanders, patient loses track, patient is distracted by outside stimuli or over absorbed in a task. (Refer to DSI, #'s 23c)
- _____ (0) none None of the above, maintains and shift attention appropriately
- (1) mild The above attentional problems occurs once or twice without prolonging the interview
- (2) moderate The above attentional problems occur often, prolonging the interview without seriously disrupting it
- (3) severe The above attentional problems occur constantly, disrupting and making the interview difficult to impossible
6. **Disorganized thinking:** as indicated during the interview either by rambling, irrelevant, or incoherent speech, or by tangential, circumstantial or faulty reasoning (refer to DSI, Incoherent Speech section #'s 28a (see sections 19 & 27 of DSI).
Note: Code=7 N/A if Participant non-verbal
- _____ (0) none Speech is coherent and goal directed
- (1) mild Patients speech is slightly difficult to follow, responds to questions slightly off target but not so much as to prolong the interview
- (2) moderate Disorganized thoughts or speech are clearly present such that interview is prolonged but not disrupted
- (3) severe Examination very difficult or impossible due to disorganized thinking or speech
7. **Perceptual disturbance:** misperceptions, illusions, hallucinations, inferred from inappropriate behavior during the interview, admitted by subject, as well as those elicited from nurse/family accounts, if available (refer to DSI, Perceptual Disturbance section #'s 12-15 & appropriate lettered sub-questions)

- _____ (0) none No misperceptions, illusions or hallucinations
- (1) mild Misperceptions or illusions related to sleep, fleeting hallucinations on 1-2 occasions without inappropriate behavior
- (2) moderate Hallucinations or frequent illusions on several occasions with minimal inappropriate behavior that does not disrupt the interview
- (3) severe Frequent or intense illusions or hallucinations with persistent inappropriate behavior that disrupts the interview or interferes with medical care
8. **Delusions:** rate delusions inferred from inappropriate behavior during the interview, admitted by the patient as well as delusions elicited from nurse/family accounts (Refer to DSI Perceptual Disturbance # 12- 15 for any associated thought disorder, especially 13g & 13i).
- _____ (0) none No evidence of misrepresentations or delusions
- (1) mild Misrepresentations or suspiciousness without clear delusional ideas or inappropriate behavior
- (2) moderate Delusions admitted by the patient or evidenced by his/her behavior that do not or only marginally disrupt the interview or interfere with medical care
- (3) severe Persistent and/or intense delusions resulting in inappropriate behavior, disrupting the interview or seriously interfering with medical care
9. **Decreased or increased psychomotor activity:** rate activity during the interview. (Refer to DSI Abnormal Psychomotor Activity section #'s 30b)
- _____ (0) none Normal psychomotor behavior
- (1) mild Barely noticeable, as in slight slowing of movement, simple restlessness
- (2) moderate Hypoactivity undeniable, with marked reduction in number of movements or marked slowness in movement, subject rarely spontaneously moves or speaks; hyperactivity is undeniable, subject moves almost constantly, in both cases, exam is prolonged as a consequence
- (3) severe Hypoactivity is severe, patient does not move or speak without prodding, or is catatonic; hyperactivity is severe, patient is constantly moving, overreacts to stimuli, requires surveillance and/or restraint; getting through the exam is practically difficult or impossible
- 9a. **(If # 9 =0, Code = "7")** Based on your observations during the interview, would you characterize the patient as
- _____ (0) hypoactive
- (1) hyperactive
- (2) elements of both
- (7) N/A

10. **Sleep-wake cycle disturbance:** rate patient's ability to sleep or stay awake during appropriate times. Utilize direct observation during interview as well as reports from nurses or family (Refer to DSI Sleep Disturbance section #'s 7-11, especially 11d)
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|-------|--------------|--|
| _____ | (0) none | At night, patient sleeps well, during the day, has no trouble staying awake |
| | (1) mild | At night, difficulty falling asleep or transient awakenings, needs medication to sleep well; and/or during the day reports periods of drowsiness or during interview is drowsy but can easily fully awaken |
| | (2) moderate | At night, repeated and prolonged night awakenings; and/or during the day, frequent and prolonged napping, or during the interview, can only be roused to complete wakefulness with strong stimuli |
| | (3) severe | At night, total sleeplessness; and/or during the day, patient spends most of the time sleeping, or during the interview, cannot be roused to full wakefulness by stimuli |

MDAS TIPS & Rulings:

The Memorial Delirium Assessment Scale (MDAS) was developed in 1997 as a measure of delirium severity. This assessment should be completed with information from the MMSE, DSI, and your interactions with the participant during the interview.

Instructions are included on the assessment. Extra details for coding across battery instruments includes:

1) Note that MDAS is coded only for "Reduced" level of consciousness, unlike DSI, which accounts for reduced and hyper-alert state in disturbance of consciousness section

4) First code best forward performance, and then best backwards performance

9) Refer to abnormal psychomotor section of DSI # 29a-h, 30, & 30b.
DSI items 29a-e represent restless/ hyperactive states for purposes of MDAS 9 & 9a with exception of 29b, tremors, which if only localized tremor, i.e. of one hand are not coded as hyperactive. Tremors or generalized tremulousness are coded as hyperactive. DSI items 29f-h represent slowed/hypoactive states for purposes of coding MDAS 9 & 9a.

9a) Elements of both, code 2, includes having both a hypoactive and hyperactive at some time during the interview

10) Unlike DSI sleep disturbance, coding positive for MDAS sleep-wake cycle disturbance does not require the condition to be “new or worsened” to be present. (i.e. Patient reports sleepy during the day, but is old. This would still get coded as positive on the MDAS)

When **Total MDAS** score is determined code 9a alone is eliminated and scores of numbers 1-10 are summed for a range of 0-30, 30 worst/most severe

Breitbart W, Rosenfeld B, Roth A, Smith MJ, Cohen K, Passik S. The Memorial Delirium Assessment Scale. *J Pain Symptom Management*. March 1997. 13(3):128-37.