

Instrument	Memorial Delirium Assessment Scale NOTE: This card is populated with information from the instrument's original validation study only.
Acronym	MDAS
Core Domain	Delirium Severity
Area assessed (Number of questions)	Areas assessed: Reduced level of consciousness (awareness); Disorientation; Short-term memory impairment; Impaired digit span; Reduced ability to maintain and shift attention; Disorganized thinking; Perceptual disturbance; Delusions; Decreased or increased psychomotor activity; Sleep-wake cycle disturbance (disorder of arousal) 10 items total
Description	Designed to diagnose delirium as well as classify delirium severity. The instrument reflects delirium diagnostic criteria from DSM IV as well as other diagnostic systems (e.g., DSM III, DSM III-R, ICD-9). MDAS can be administered multiple times daily to allow for measurement of changes in delirium severity due to clinical interventions.
Versions	1
Scoring information	10 severity items rated 0 to 3 points for a maximum total score of 30 points, with higher scores representing more severe delirium. Scores ≥ 13 indicate the presence of delirium as revealed in validation study (Breitbart 1997).
Cognitive testing	Embedded within instrument; no additional testing needed
Estimated time to rate	≥ 10 minutes to rate, plus 15-30 mins to establish rapport, review medical records, and speak to staff/family members
Require trained rater	Yes – trained psychiatrist/psychologist
Administer to	Patient, in-person
How to obtain	Instrument available at http://dx.doi.org/10.1016/S0885-3924(96)00316-8
Licensing Fee*	None
Languages available	English, French, German, Japanese, Spanish
Highest COSMIN** rating	5/6 [†]
Test Performance Characteristics	<p>Breitbart 1997</p> <ul style="list-style-type: none"> •Reliability: Overall Cronbach's alpha coefficient=0.91 based on ratings of principal investigator, intra-class correlation coefficient=0.92 for two psychiatrist ratings; COSMIN: FAIR •Discriminant Validity: Delirium group significantly higher scores than non-delirious [F=10.49, P<0.003] and non-cognitive psychiatric disorders [F=19.69, P<0.0001] •Concurrent Validity compared to: Delirium Rating Scale [DRS] [r=0.88, P<0.0001], Mini-Mental State Examination [MMSE] [r=-0.91, P<0.0001], clinician's global rating of delirium severity [r=0.89, P<0.0001]; COSMIN: GOOD •Sensitivity/Specificity at cut-off score 13: 70.59%/93.75%; COSMIN: GOOD •Positive/Negative Predictive Value at cut-off score 13: 92.31%/75.00%

* Fees and licensing information is effective as of 2018, but is subject to change over time

** COSMIN is used to rate a study's evaluation of a survey or test's measurement properties. COSMIN does NOT rate the instrument itself, but helps readers understand if they can have confidence in the results of studies evaluating measurement properties of surveys and tests. For example, a rigorous study evaluating a test with poor measurement properties will receive a "good" COSMIN rating, while a poorly-conducted study evaluating a test with good measurement properties will receive a "poor" COSMIN rating. Small sample size can impact all COSMIN ratings. You must consider both the COSMIN rating and the results of studies provided when forming your opinion about that test. *COSMIN ratings shown are based solely on the instrument's original validation study.*

Reference:

Breitbart, W., Rosenfeld, B., Roth, A., Smith, M., Cohen, K., Passik, S. (1997). The Memorial Delirium Assessment Scale. *Journal of Pain and Symptom Management*, 13(3), 128-137. doi:10.1016/S0885-3924(96)00316-8

Last updated on **May 14, 2018**. If you are aware of any updates required for this document, please notify us via nidus@hsl.harvard.edu



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†COSMIN breakdown: internal consistency: FAIR, inter-rater reliability: FAIR, content validity: GOOD, construct validity: GOOD, effect indicator: GOOD, external validity: GOOD

Additional Test Performance Characteristics:

•Concurrent Validity (Stratified by type; compared to DRS, MMSE, clinician’s global rating of delirium severity: hyperactive [$r=0.91, -0.99, 0.97$], hypoactive [$r=0.82, -0.90, \text{ and } 0.87$], and mixed [$r=0.89, -0.83, \text{ and } 0.91$])

Reviews:

Adamis, D., Sharma, N., Whelan, P.J.P., Macdonald, A.J.D. (2010). Delirium scales: A review of current evidence. *Aging & Mental Health*, 14(5):543-55. doi:10.1080/13607860903421011

Carvalho, J.P.L.M., de Almeida, A.R.P., Gusmao-Flores, D. (2013). Delirium rating scales in critically ill patients: a systematic literature review. *Rev Bras Ter Intensiva*, 25(2):148-54. doi:10.5935/0103-507x.20130026

De, J., Wand, A.P.F. (2015). Delirium Screening: A Systematic Review of Delirium Screening Tools in Hospitalized Patients. *The Gerontologist*, 55(6):1079-1099. doi:10.1093/geront/gnv100

Leonard, M. M., Nekolaichuk, C., Meagher, D. J., Barnes, C., Gaudreau, J. D., Watanabe, S., ... & Lawlor, P. G. (2014). Practical assessment of delirium in palliative care. *Journal of pain and symptom management*, 48(2), 176-190.



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