

Instrument	Delirium Observation Screening Scale NOTE: This card is populated with information from the instrument's original validation study only.
Acronym	DOSS
Primary use	Delirium Severity
Area assessed (Number of questions)	Seven areas assessed on the day shift, evening shift, and night shift: consciousness (1 item), attention/concentration (3 items), thinking (2 items), memory/orientation (3 items), psychomotor activity (2 items), mood (1 item), perception (1 item) 13 items total
Description	An observational scale for clinical staff to assess for delirium based on observations made during regular nursing care. Items are reflective of DSM-IV criteria for delirium, and the DOSS is meant to be used to identify early delirium symptoms. DOSS can be rated one or more times daily.
Versions	2 (original 25-item form, revised 13-item form)
Scoring information	Score each item as "never" (0) or "sometimes – always" (1) for each shift, sum of scores from each shift divided by 3 is final score. Score <3 is not delirious, ≥3 is probably delirious
Cognitive testing	Not included or required; can be conducted to enhance observations for scoring
Estimated time to rate	5 minutes (estimate); based on observations over course of nursing shift (8 hours)
Require trained rater	Yes – trained clinical staff
Administer to	Patient, in-person
How to obtain	Instructions and instrument available for download at http://www.primarycareforms.com/delerium%20observation%20score.pdf
Licensing Fee*	None
Languages available	English
Highest COSMIN** rating	6/6 [†]
Test Performance Characteristics	<p>Schuermans 2003 [Study 1: 21 nursing shifts, N=82 geriatric med patients; Study 2: 18 nursing shifts, N=92 hip fracture patients]</p> <ul style="list-style-type: none"> •Reliability (Inter-rater, mean ratings across shifts): Study 1) Cronbach's alpha=0.96; Study 2) Cronbach's alpha=0.97; COSMIN: GOOD •Predictive Validity (Overall DOSS scores of patients later diagnosed as delirious vs. non-delirious patients): Study 1) 36.3 vs. 61.6, p≤0.01; Study 2) 31.4 vs. 44.3, p≤0.001; COSMIN: GOOD •Concurrent Validity (Correlation between DOSS items and Confusion Assessment Method [CAM] 0.63 [p≤0.001]; Study 1 Mini-Mental State Examination [MMSE], R_s -0.66 [p≤0.001]; Study 2 MMSE, R_s -0.79 [p≤0.001]) COSMIN: GOOD •Construct Validity: Correlation with Informant Questionnaire on Cognitive Decline in the Elderly [IQCODE]: Study 1 R_s=0.33 [p≤0.05]; IQCODE Study 2 R_s=0.74 [p≤0.001]; Correlation with pre-existing psychiatric diagnosis: Study 1 R_s=0.42 [p≤0.001]; Study 2 R_s=0.43 [p≤0.001]; Correlation with Barthel Index Study 1 R_s=-0.26 [p≤0.05]; Study 2 R_s=-0.55 [p≤0.001]) COSMIN: GOOD

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

Reference:

Schuermans, M.J., Shortridge-Baggett, L.M., Duursma, S.A. (2003). The Delirium Observation Screening Scale: a screening instrument for delirium. *Res Theory Nurs Pract*, 17(1):31-50.

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** 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.*

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

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

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

Van Velthuisen, E.L., Zwakhalen, S.M., Warnier, R.M., Mulder, W.J., Verhey, F.R., Kempen, G.I. (2016). Psychometric properties and feasibility of instruments for the detection of delirium in older hospitalized patients: a systematic review. *Int J Geriatr Psychiatry*, 31(9):974-89. doi:10.1002/gps.4441

Wong, C. L., Holroyd-Leduc, J., Simel, D. L., & Straus, S. E. (2010). Does this patient have delirium?: value of bedside instruments. *Jama*, 304(7), 779-786.

