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Improving Delirium Identification: A Comparison of Tools

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Background/Problem

Delirium, an acute neuropsychiatric syndrome experienced by many hospitalized adults, is often unidentified (1, 3) and can lead to complications including increased risk of falls and skin breakdown, decline in functionality, and overall increased morbidity and mortality. This can result in greater length of stay, higher healthcare costs, and the need for specialized care at discharge (1,2,8). Early recognition and treatment can help minimize the long-term effects of delirium(5), and a valid, reliable delirium screening tool can promote a timely and accurate identification (4).

PICO

P Adults who are hospitalized

I Use of delirium risk screening tools

C Compared to current practice of utilizing Confusion Assessment Method (CAM)

O Improve the timely and accurate identification of delirium

Practice Question

Is CAM or another delirium screening tool best for providing a timely and accurate identification of delirium?

Evidence Summary: Strength and Quality of Evidence

Level II, B 4 sources

The 4AT, Nu-DESC, b CAM are valid delirium screening tools that are brief and can be used without specific training (De, 2015). CAM was less likely to identify positive delirium cases when users were not trained (Shenkin, 2019). The 4AT is a highly sensitive, brief screening tool but should be followed by a more detailed assessment (Hendry, 2016). Nu-DESC was accurate and more feasible than CAM for daily use (Jeong, 2020)

Level III, B 4 sources

Unlike CAM, Nu-DESC results were the same when performed by less-educated staff (Heinrich, 2019). Nu-DESC and DOS tool are both sensitive and specific. Nu-DESC only has 5 items to score (Bergjan, 2020). Nu-DESC was less sensitive for detecting mixed and hypoactive delirium, but sensitivity increased when the threshold for a positive screen was lowered (Hargrave, 2017).

Recommendations for Change Based on Evidence Synthesis

The Confusion Assessment Method (CAM) is not recommended because:

- It takes more time to score than many other tools (up to 10 minutes) and must be completed along with a separate cognitive test for best accuracy (which excludes patients unable to participate in a cognitive test).

- CAM's average sensitivity for delirium identification was 47%. It is less likely to identify true delirium when performed by nurses who received no formal training.
- CAM is considered a valid tool and useful for research and physician assessments but is not considered feasible for use by RNs in a busy clinical setting.

The Nursing Delirium Screening Scale (Nu-DESC), mentioned more frequently in reviewed literature than any other tool besides CAM, is recommended because :

- It demonstrated moderate to excellent sensitivity and specificity, achieving the same results when used by staff with little or no training.

- Nu-DESC takes one minute to score. It is an observational tool that can be completed during routine nursing care and does not require a separate cognitive test. This makes it more accurate to detect hypoactive delirium, and to identify delirium symptoms in patients who can't participate in a cognitive test for other reasons.

- With an average sensitivity of 78%, Nu-DESC is considered a valid, reliable tool nurses can use to quickly and accurately screen adult medical patients for delirium.

Translation of Evidence into Practice

- Disseminate findings to managers, CNS, Geriatric Resource team, NICHE members, and other key stakeholders, seeking their feedback and recommendations.

- Develop an educational plan to introduce the Nu-DESC delirium screening tool to nursing staff.

- Incorporate the Nu-DESC scoring template into Epic flow sheet for documentation every shift.

Evaluation of Practice Change/Outcomes

Baseline data to be gathered through chart audits conducted over one month using a data collection tool to record delirium scores and delirium diagnosis, if present, while current tool (CAM) is used.

Comparisons will be made with results from a later chart audit conducted over one month using the same data collection tool after the Nu-DESC is implemented.

Features and descriptions	Time Period	Symptoms Rating (0-2)		
		Midnight - 8 AM	8 AM - 4 PM	4 PM - Midnight
I. Disorientation Verbal or behavioural manifestation of not being oriented to time or place or misperceiving persons in the environment				
II. Inappropriate behaviour Behaviour inappropriate to place and/or for the person; e.g., pulling at tubes or dressings, attempting to get out of bed when that is contraindicated, and the like.				
III. Inappropriate communication Communication inappropriate to place and/or for the person; e.g., incoherence, noncommunicativeness, nonsensical or unintelligible speech.				
IV. Illusions/Hallucinations Seeing or hearing things that are not there; distortions of visual objects.				
V. Psychomotor retardation Delayed responsiveness, few or no spontaneous actions/words; e.g., when the patient is prodded, reaction is deferred and/or the patient is unarousable.				
Total score				

Database Search Strategy

PubMed
CINAHL
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Keywords

Delirium tool
CAM, Confusion Assessment Method
Delirium assessment
Delirium screening tool
Early recognition of delirium
Delirium detection

