

FAST FACTS AND CONCEPTS #160 SCREENING FOR ICU DELIRIUM

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Background Delirium is an acute, fluctuating change in mental status, accompanied by sleep/wake cycle disruption, inattention, and altered perceptions (hallucinations/delusions) (see *Fast Facts* #1, 60). Delirium can be hypoactive or hyperactive and is often multifactorial (1). Patients with hypoactive delirium are calm, but inattentive and manifest decreased mobility. Patients with hyperactive delirium are agitated and combative, and also lack the ability to maintain attention to complete tasks. Delirium can be considered a marker of acute brain dysfunction, much like shock is evidence for dysfunction of the cardiovascular system (2). When recognized early, it is potentially modifiable depending on the patient's circumstances.

ICU Delirium Delirium occurring in the ICU is associated with an increased length of hospitalization, increased need for institutionalization, and higher short and long-term mortality (3). In the ICU, delirium occurs in as many as 80% of patients, but is often overlooked or misdiagnosed because of the difficulty of assessing mental states in intubated patients. Three assessment tools have been described in the literature to aid in delirium diagnosis.

1) The Confusion Assessment Method-Intensive Care Unit (CAM-ICU) Assessment Tool is the best documented method of diagnosing delirium in the ICU (4). This tool was specifically designed for use in non-verbal (i.e. mechanically ventilated) patients. With the CAM-ICU, delirium is diagnosed when patients demonstrate 1) an acute change in mental status or fluctuating changes in mental status, 2) inattention measured using either an auditory or visual test, and either 3) disorganized thinking, or 4) an altered level of consciousness. Importantly, the CAM-ICU can only be administered if the patient is arousable to voice without the need for physical stimulation. The CAM-ICU includes very specific assessment questions/tools, found online at <http://www.icudelirium.org/delirium.html>.

When administered by a nurse, the CAM-ICU takes only 1 to 2 minutes to conduct (3,5). A systematic review of nine studies evaluating the CAM-ICU showed a pooled sensitivity of 80% and a pooled specificity of 95.9% for detecting delirium as compared to full DSM-IV assessment by a geriatric psychiatrist (6). National guidelines recommend routine use of the CAM-ICU for delirium assessment in all critically ill patients and treatment with haloperidol when delirium is present (7). However, these recommendations are based on expert opinion and limited case series. It remains unknown whether diagnosis and/or treatment of delirium will lead to better patient outcomes. While there are some early observational cohort data suggesting that patients treated with haloperidol have lower hospital mortality, this finding needs confirmation in a randomized, controlled trial before being applied to routine patient care.

2) The Intensive Care Delirium Screening Checklist assesses eight features of delirium: altered level of consciousness, inattention, disorientation, hallucinations, psychomotor agitation/retardation, inappropriate mood/speech, sleep/wake cycle disturbance, and symptom fluctuation. The pooled sensitivity and specificity of this tool were 74% and 81.9% respectively per a systematic review (6).

3) The Delirium Screening Checklist is another recent tool that uses a checklist similar to the Intensive Care Delirium Screening Checklist (8).

Recommendation It is believed that prompt recognition and treatment of ICU delirium is important for patient safety. Use of rapid tools such as CAM-ICU can help identify ICU delirium and are recommended when assessing mental status changes. A key to effective implementation of ICU delirium screening includes addressing attitudinal barriers that delirium is an inevitable part of critical illness via multi-faceted training such as lectures, case-based scenarios, one-on-one teaching, and bedside teaching to provide real time feedback (1).

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