

Best Practice Guidance –Delirium

These recommendations are bound by the current evidence and best practice at the time of writing and so will be subject to change as further developments are made in this field.

Aim

To provide guidance on delirium prevention, detection and management in adult critical care

Introduction

Delirium (sometimes called 'acute confusional state') is a common clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which has an acute onset and fluctuating course¹. Its prevalence in ICU has been cited as up to 80% in mechanically ventilated patients and it is associated with increased mortality, LOS, development of cognitive impairment, likelihood of being admitted to long term care on discharge and increased risk of developing hospital acquired complications². For these reasons, it is important that all patients in intensive care are screened for delirium and measures to actively prevent delirium, incorporated into everyday care.

There are three types of delirium: Hyperactive (agitated), hypoactive (lethargic or calm) and mixed (fluctuating between the two). Those that make up the purely hyperactive population are less than <5% of those ICU patients experiencing delirium.³ In view of this, there is the likelihood that many patients with delirium will be missed without the use of appropriate screening tools such as the CAM-ICU.

Baseline risk factors such as pre-existing dementia, hypertension, alcoholism and being critically unwell have been highlighted as increasing the likelihood of developing delirium in ICU². ICU delirium is a recognised predictor of increased mortality, length of stay, ventilator time, cost and risk of long term cognitive impairment or dementia necessitating the need for long term care⁴.

¹ NICE (2010) *Delirium: prevention, diagnosis and management (CG 103)*, p5. Available at:

<https://www.nice.org.uk/guidance/cg103/resources/delirium-prevention-diagnosis-and-management-35109327290821>

[Accessed: 30 January 2017]

² Barr, J., Fraser, G.L., Puntillo, K., Ely, E.W., Gélinas, C., Dasta, J.F., Davidson, J.E., Devlin, J.W., Kress, J.P., Joffe, A.M., Coursin, D.B., Herr, D.L., Tung, A., Robinson, B.R.H., Fontaine, D.K., Ramsay, M.A., Riker, R.R., Sessler, C.N., Pun, B., Skrobik, Y. and Jaeschke, R. (2013) 'Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit', *Critical Care Medicine*, 41(1), pp. 278–280

³ Wesley Ely, E. (2016) *Confusion Assessment Method for the ICU: The complete training manual. Revised Edition*. Vanderbilt University. Available from: http://www.icudelirium.org/docs/CAM-ICU-training-manual-2016-08-31_Final.pdf [Accessed 16 February 2017].

Prevention

Recommendations for prevention of delirium are incorporated into the ABCDEF Bundle suggested by www.icudelirium.org⁴

- A** – Assess, Prevent and Manage Pain
- B** – Both sedation holds and spontaneous breathing trials
- C** – Choice of analgesia and sedation – pain should be treated first⁷
- D** – Delirium – Assess, prevent, manage
- E** – Early mobilisation
- F** – Family engagement and empowerment

These include:

- Reorientation to time/place/person
- Promote good sleep patterns and sleep hygiene
- Minimising unnecessary noise or noxious stimuli
- Early mobilisation
- Ensuring access to spectacles and hearing aids
- Treatment of dehydration and constipation
- Use of an appropriate pain management protocol
- Provide cognitively stimulating activities for patients.
- Address hypoxia
- Address infection
- Regular medication reviews
- Daily sedation interruption and use of light sedation where possible.⁵

There are currently no recommendations for pharmacological prevention of delirium⁶

⁴ VUMC Center for Health Services Research (2013) Delirium Prevention and Safety: Starting with the ABCDEF's. Available Online: <http://www.icudelirium.org/medicalprofessionals.html> [Accessed 16 February 2017].

⁵ Adapted from Pain, Agitation and Delirium guidelines (see footnote 6) and NICE (2010) Delirium: prevention, diagnosis and management (CG 103), p5. Available at: <https://www.nice.org.uk/guidance/cg103/resources/delirium-prevention-diagnosis-and-management-35109327290821> [Accessed: 30 January 2017]

⁶ Barr, J., Fraser, G.L., Puntillo, K., Ely, E.W., Gélinas, C., Dasta, J.F., Davidson, J.E., Devlin, J.W., Kress, J.P., Joffe, A.M., Coursin, D.B., Herr, D.L., Tung, A., Robinson, B.R.H., Fontaine, D.K., Ramsay, M.A., Riker, R.R., Sessler, C.N., Pun, B., Skrobik, Y. and Jaeschke, R. (2013) 'Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit', *Critical Care Medicine*, 41(1), pp. 278–280

Assessment

Patients on ICU should be routinely monitored for delirium as it may otherwise be missed two thirds of the time. Frequency of monitoring has been recommended to be once per nursing shift.⁷ A validated assessment tool such as the Confusion Assessment Method for ICU (CAM ICU) or the Intensive Care Delirium Screening Checklist (ICDSC) should be used.^{8,9}

We suggest the use of CAM ICU as this is currently already in use in the northern region.

CAM ICU first involves assessing level of consciousness using the Richmond Agitation and Sedation Score (RASS). Patients with a RASS of -4 or -5 (i.e. unconscious) are not appropriate to assess CAM ICU.

Scale	Label	Description	
+4	COMBATIVE	Combative, violent, immediate danger to staff	VOICE
+3	VERY AGITATED	Pulls to remove tubes or catheters; aggressive	
+2	AGITATED	Frequent non-purposeful movement, fights ventilator	
+1	RESTLESS	Anxious, apprehensive, movements not aggressive	
0	ALERT & CALM	Spontaneously pays attention to caregiver	
-1	DROWSY	Not fully alert, but has sustained awakening to voice (eye opening & contact >10 sec)	
-2	LIGHT SEDATION	Briefly awakens to voice (eyes open & contact <10 sec)	
-3	MODERATE SEDATION	Movement or eye opening to voice (no eye contact)	TOUCH
If RASS is \geq -3 proceed to CAM-ICU (Is patient CAM-ICU positive or negative?)			
-4	DEEP SEDATION	No response to voice, but movement or eye opening to physical stimulation	
-5	UNAROUSABLE	No response to voice or physical stimulation	
If RASS is -4 or -5 → STOP (patient unconscious), RECHECK later			

10

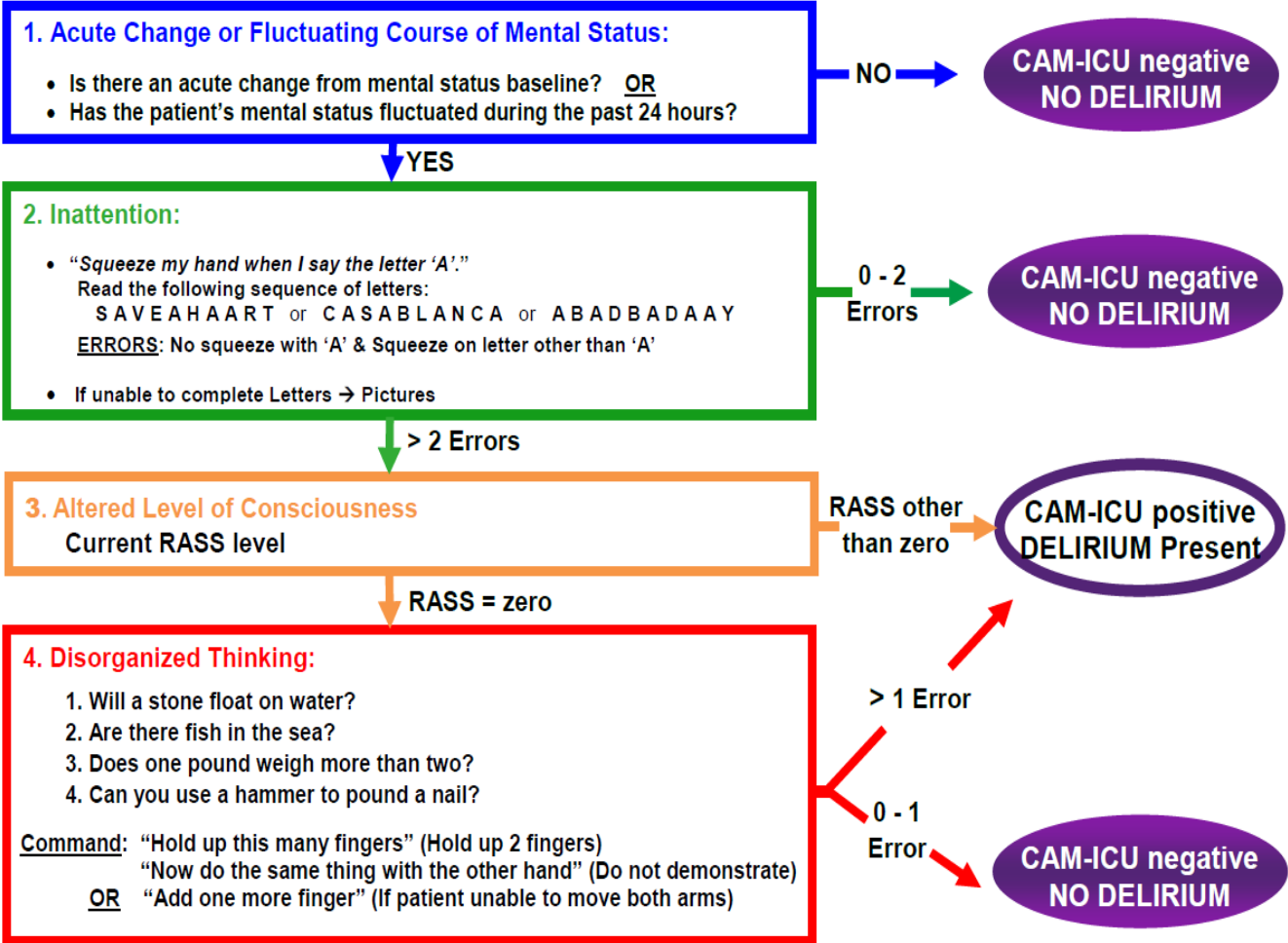
The next step is to assess content of consciousness using the CAM ICU.⁸

⁷ Barr, J., Fraser, G.L., Puntillo, K., Ely, E.W., Gélinas, C., Dasta, J.F., Davidson, J.E., Devlin, J.W., Kress, J.P., Joffe, A.M., Coursin, D.B., Herr, D.L., Tung, A., Robinson, B.R.H., Fontaine, D.K., Ramsay, M.A., Riker, R.R., Sessler, C.N., Pun, B., Skrobik, Y. and Jaeschke, R. (2013) 'Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit', *Critical Care Medicine*, 41(1), pp. 278–280

⁸ Wesley Ely, E. (2016) *Confusion Assessment Method for the ICU: The complete training manual. Revised Edition*. Vandebilt University. Available from: http://www.icudelirium.org/docs/CAM-ICU-training-manual-2016-08-31_Final.pdf [Accessed 16 February 2017].

¹⁰ CAM ICU and RASS pocket cards, Available online: <http://www.icudelirium.org/resources.html> [Accessed 16 February 2017]

Confusion Assessment Method for the ICU (CAM-ICU) Flowsheet



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ACTION: All patients will have CAM ICU performed every shift . (Minimum Twice Daily)

3: Treatment

A useful tool to aid in consideration of underlying causes of ICU delirium is the THINK mnemonic:

ACTION: Consider underlying cause

T	<i>Toxic Situations, CHF, shock, dehydration, deliriogenic medications, new organ failure</i>
H	<i>Hypoxemia</i>
I	<i>Infection/sepsis, immobility</i>
N	<i>Nonpharmacological interventions: hearing aids, glasses, reorientation, sleep protocols, music, noise control</i>
K	<i>K+ or electrolyte problems¹¹</i>

Also, consider whether the patient is experiencing withdrawal symptoms from nicotine, alcohol, benzodiazepines, opioids or recreational drugs and treat accordingly.

There is no evidence that pharmacological intervention prevents delirium, however, atypical antipsychotics may reduce the duration of delirium. These should not be given to patients with prolonged QTc or those with a history of Torsades de Pointes.

If sedation is required in delirious patients, the PAD guidelines suggest the use of dexmedetomidine instead of benzodiazepines (unless the delirium is a result of benzodiazepine or alcohol withdrawal).¹²

ACTION: Avoid using pharmacological intervention for prevention of delirium

¹¹ Render, M. in VUMC Center for Health Services Research (2013) Terminology and Mnemonics Available Online: <http://www.icudelirium.org/terminology.html> [Accessed 16 February 2017].

¹² Barr, J., Fraser, G.L., Puntillo, K., Ely, E.W., Gélinas, C., Dasta, J.F., Davidson, J.E., Devlin, J.W., Kress, J.P., Joffe, A.M., Coursin, D.B., Herr, D.L., Tung, A., Robinson, B.R.H., Fontaine, D.K., Ramsay, M.A., Riker, R.R., Sessler, C.N., Pun, B., Skrobik, Y. and Jaeschke, R. (2013) 'Clinical practice guidelines for the management of pain, agitation, and delirium in adult patients in the intensive care unit', *Critical Care Medicine*, 41(1), pp. 278–280

