Implementing recovery room delirium screening in elderly patients following emergency surgery

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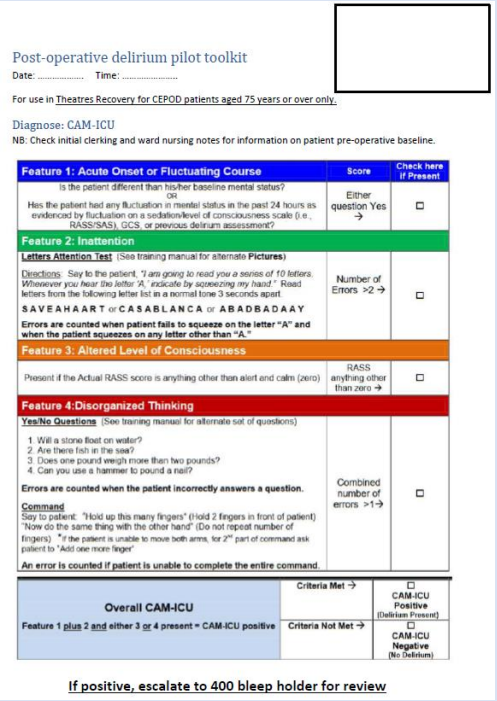
Introduction

Delirium is common in elderly patients undergoing emergency surgery. The 2014 AAGBI Perioperative Care of the Elderly safety guideline recommended formal cognitive assessment prior to surgery and in the post-operative recovery area. We aimed to audit compliance with this standard.

Methods

Patients aged 75 years and over undergoing emergency surgery were eligible for inclusion. Notes were reviewed for documentation of a validated delirium and cognition assessment at any point pre-operatively, and in the recovery area post-operatively.

A pre-intervention audit was conducted over a 1 month period and a post-intervention audit was completed over 3 months.



Post-operative delirium pilot toolkit

Date: ..... Time: .....

For use in Theatres Recovery for CEPOD patients aged 75 years or over only.

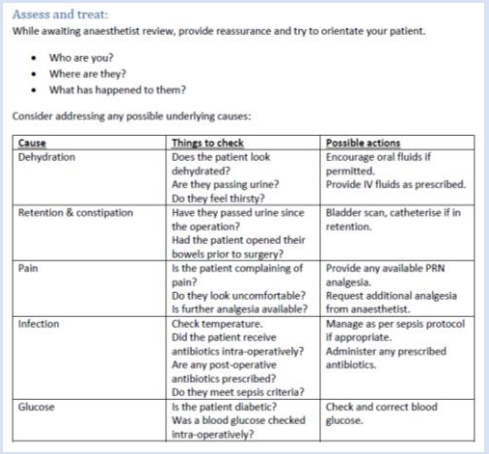
Diagnose: CAM-ICU

NB: Check initial clerking and ward nursing notes for information on patient pre-operative baseline.

Feature 1: Acute Onset or Fluctuating Course	Score	Check here if Present
Is the patient different than his/her baseline mental status? OR Has the patient had any fluctuation in mental status in the past 24 hours as evidenced by fluctuation on a sedation/level of consciousness scale (i.e., RASS/SAS), GCS, or previous delirium assessment?	Either question Yes →	☐
Feature 2: Inattention		
Letters Attention Test (See training manual for alternate **Pictures**) Directions: Say to the patient, *"I am going to read you a series of 10 letters. Whenever you hear the letter 'A,' indicate by squeezing my hand."* Read letters from the following letter list in a normal tone 3 seconds apart. **S A V E A H A A R T** or **C A S A B L A N C A** or **A B A D B A D A A Y** **Errors are counted when patient fails to squeeze on the letter "A" and when the patient squeezes on any letter other than "A."**	Number of Errors >2 →	☐
Feature 3: Altered Level of Consciousness		
Present if the Actual RASS score is anything other than alert and calm (zero)	RASS anything other than zero →	☐
Feature 4:Disorganized Thinking		
Yes/No Questions (See training manual for alternate set of questions) 1. Will a stone float on water? 2. Are there fish in the sea? 3. Does one pound weigh more than two pounds? 4. Can you use a hammer to pound a nail? **Errors are counted when the patient incorrectly answers a question.** **Command** Say to patient: "Hold up this many fingers" (Hold 2 fingers in front of patient) "Now do the same thing with the other hand" (Do not repeat number of fingers). *"If the patient is unable to move both arms, for 2nd part of command ask patient to "Add one more finger" **An error is counted if patient is unable to complete the entire command.**	Combined number of errors >1→	☐

Overall CAM-ICU		
Feature 1 plus 2 and either 3 or 4 present = CAM-ICU positive	Criteria Met →	☐ CAM-ICU Positive (Delirium Present)
	Criteria Not Met →	☐ CAM-ICU Negative (No Delirium)

If positive, escalate to 400 bleep holder for review



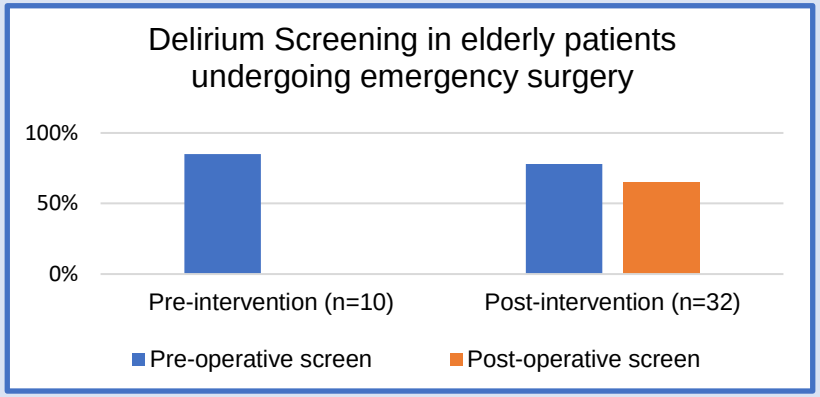
Assess and treat:

While awaiting anaesthetist review, provide reassurance and try to orientate your patient.

- Who are you?
- Where are they?
- What has happened to them?

Consider addressing any possible underlying causes:

Cause	Things to check	Possible actions
Dehydration	Does the patient look dehydrated? Are they passing urine? Do they feel thirsty?	Encourage oral fluids if permitted. Provide IV fluids as prescribed.
Retention & constipation	Have they passed urine since the operation? Had the patient opened their bowels prior to surgery?	Bladder scan, catheterise if in retention.
Pain	Is the patient complaining of pain? Do they look uncomfortable? Is further analgesia available?	Provide any available PRN analgesia. Request additional analgesia from anaesthetist.
Infection	Check temperature. Did the patient receive antibiotics intra-operatively? Are any post-operative antibiotics prescribed? Do they meet sepsis criteria?	Manage as per sepsis protocol if appropriate. Administer any prescribed antibiotics.
Glucose	Is the patient diabetic? Was a blood glucose checked intra-operatively?	Check and correct blood glucose.



Intervention

Recovery staff were trained to use a post-operative delirium screening toolkit, utilising the Confusion Assessment Method in ICU (CAM-ICU) scoring system. Positive results were escalated to the emergency theatre anaesthetist. The toolkit included prompts for recovery staff and the anaesthetist to address easily reversible delirium triggers.

Results

Pre-operative screening was already well established, due to the inclusion of 4-AT in the trust's emergency clerking proforma.

No recovery room delirium screening occurred prior to our intervention. Our toolkit led to 65% of patients being screened in recovery, although no positive cases were detected. Staff expressed some uncertainty regarding appropriate timing of screens.

Conclusions

We demonstrated that recovery room delirium screening can be introduced simply with relatively little staff training required. We are now aiming to collect further data to assess detection rates, as well as introducing further screening 24h post-operatively.

NHS United Lincolnshire Hospitals NHS Trust

EMSA East Midlands School of Anaesthesia