Pitfalls of Delirium Screening in Older Adults
Danya Khoujah MBBS, MEHP, Debra Eagles MD, MSc., FRCPC

INTRODUCTION

Delirium is present in 10% of older emergency department (ED) patients. It is associated with multiple short-term and long-term adverse outcomes,1 is distressing to patients and their families,2 and has an estimated economic impact in excess of 164 billion dollars per year in the United States alone.3 It is an acute medical emergency, yet often goes unrecognized. Detection begins with screening. The following are some common pitfalls in delirium screening, accompanied by tips to improve identification of this high-risk condition in the ED. Further details are covered in this recent podcast.1

10 PITFALLS OF DELIRIUM SCREENING

1. Dismissing hypoactive delirium as harmless:
   Hypoactive delirium is the most common form of delirium.4 Delirium (whether hypoactive, hyperactive, or mixed) is associated with an increased risk of intensive care admission, prolonged hospital stay, long-term cognitive decline, and death.1

2. Assuming that altered mental status is chronic without clear collateral history:
   One in four older ED adults has an element of cognitive impairment,5 possibly leading to an incorrect assumption that the patient’s presentation is chronic. If the clinician is unable to confirm the chronicity of the symptoms from a reliable source, the confusion should be assumed to be acute and the patient managed accordingly.

3. Not assessing for attention during the mental status exam:
   Inattention is the hallmark of delirium6 and is missed on cursory mental status examinations that only evaluate awareness and orientation. Attention can be tested by observing the patient’s interactions, or by asking the patient to count or spell backward.

4. Incorrectly scoring attention questions on delirium tests:
   Patients may refuse to answer certain questions related to attention, perseverate on the answer, or take longer than 15 seconds to answer. Clinicians may dismiss this as a sign of stoicism or other behavior and score the patient’s attention as normal, when in fact this should be scored as an “error” and a sign of inattention.7

5. Depending on gestalt instead of a validated delirium screening tool:
   Delirium can be subtle and easily missed, especially in patients with underlying cognitive impairment such as dementia. In one study, 85% of older adults with delirium were missed in the ED.8 The Delirium Triage Screen is > 90% sensitive for delirium, takes less than 60 seconds to complete, and has been validated in older ED patients.9

6. Not having a clear plan after a positive delirium screen:
   As with all highly-sensitive screening tools, delirium screening tools have poor specificity, and the results should be confirmed using a highly-specific diagnostic tool, such as the Brief Confusion Assessment
Method (b-CAM) or the 4AT.\textsuperscript{9,10} A search for the cause(s) should ensue, such as an underlying infection, polypharmacy, dehydration, or metabolic abnormality.

7. **Instituting a delirium screening protocol for all older adults in limited-resource environments:**
   Screening requirements that overwhelm the local resources are unlikely to be met. Focusing screening efforts on high-risk individuals, such as the oldest old or those with baseline cognitive impairment, may have a better yield.\textsuperscript{11}

8. **Not communicating the concern for delirium to other team members, including the inpatient team:**
   Delirium management is a multidisciplinary intervention. When delirium is not diagnosed in the ED, it is also missed by the inpatient team. Poor communication during transitions of care may halt management efforts.

9. **Not implementing delirium prevention protocols:**
   Iatrogenic delirium can develop in high-risk patients during their ED stay and may be ameliorated by simple interventions such as adjusting the lighting to the time of the day, frequent reorienting, encouraging the presence of caregivers at the bedside, and administering home medications on time (if not contraindicated.)

10. **Evaluating for delirium only at the beginning of the ED encounter:**
    Screening for delirium only on presentation will miss patients who have delirium for two reasons:
    
    - by definition, delirium is fluctuating.
    - some patients do not present with delirium but rather develop it during their ED stay. Continued vigilance about diagnosing delirium is necessary to avoid missing the diagnosis.

**CONCLUSION**

We hope that sharing these pitfalls will increase clinicians’ comfort and performance in screening for delirium in their older ED patients. The first step in improving care and outcomes in older ED patients suffering from delirium is recognition of this devastating syndrome. Delirium detection will only increase when a systematic approach at both the clinician and healthcare system level is adopted. Further details can be found in this article.\textsuperscript{1}

**KEYWORDS**

Delirium, confusion, polypharmacy, mental status, infection

**AFFILIATIONS**

| Danya Khoujah MBBS, MEHP | Attending Physician, University of Maryland Upper Chesapeake Medical Center  
|                          | Adjunct Volunteer Assistant Professor, University of Maryland School of Medicine  
|                          | Department of Emergency Medicine  
|                          | Baltimore, MD |

| Debra Eagles MD, MSc | Associate Professor, Department of Emergency Medicine, University of Ottawa  
|                      | Associate Professor, School of Epidemiology and Public Health, University of Ottawa  
|                      | Associate Scientist, Ottawa Hospital Research Institute  
|                      | Ottawa, Ontario, Canada |

**AUTHOR CONTRIBUTIONS**

Both authors contributed to the conceptualization, writing, and revision of this article.

**Sponsor Role:** There were no sponsors of this work.

**Funding:** There was no funding for this work.
CONFLICTS OF INTEREST
Authors have no conflicts to report.

REFERENCES