Geriatric Delirium in the Emergency Department

Delirium:
Acute brain failure characterized by inattention and fluctuating course. This can be superimposed on chronic brain failure (dementia). Approximately 7-10% of elderly ED patients will experience delirium during their stay.7

Why should we care?
Delirious elders diagnosed in the ED have a higher 30 day mortality, are more likely to require ICU admission, and have a 1 year mortality rate of 10-26%, similar to sepsis or AMI. Patients discharge home with unidentified delirium have 3 times the six month mortality.

Remember:
Delirium has a fluctuating course, and repeat testing may be necessary. Studies have shown that a statistically significant number of patients who initially tested normal, were found to be delirious at repeat testing 3 hours later.4

Consider Possible Etiologies of Delirium

Infections: Namey UTI and PNA
Medications
Electrolyte Imbalance
Intoxication / Withdrawal

Other Causes
Meningitis
Encephalitis
SAH
Non-Convulsive Status Epilepticus
CVA
Hypoxemia
Hypercapnia
Pain
MI
Acute Hepatitis
Hypo/Hyper Thyroid
Low Vitamin B12
Low Folate
Toxins

Treatment
Optimize Environment First7

Environment
Frequently reassure and reorient the patient
Encourage mobility as tolerated under supervision
Provide appropriate sensory stimulation: quiet room, adequate light, one task at a time, and noise-reduction strategies
Carefully explain all activities and communicate clearly
Encourage family and friends to stay at the bedside and allow them to bring familiar objects from home
If possible, maintain consistency of caregivers and minimize relocations
Provide adequate nutrition and pain control

Medication
If medication is needed, avoid benzodiazepines

<table>
<thead>
<tr>
<th>Drug</th>
<th>Route</th>
<th>1st Dose</th>
<th>Interval</th>
<th>2nd Dose</th>
<th>Max Dose per 12 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olanzapine</td>
<td>IM</td>
<td>2.5 mg</td>
<td>2 hrs</td>
<td>2.5 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td></td>
<td>Oral / ODT</td>
<td>2.5 - 5 mg</td>
<td>12 hrs</td>
<td>2.5 - 5 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>Risperidone</td>
<td>Oral / ODT</td>
<td>0.25 - 0.5 mg</td>
<td>1 hr</td>
<td>0.25 - 0.5 mg</td>
<td>2 mg</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>Oral / Solution</td>
<td>0.5 - 1 mg</td>
<td>2 - 3 hrs</td>
<td>0.5 - 1 mg</td>
<td>3 mg</td>
</tr>
<tr>
<td></td>
<td>IM</td>
<td>0.25 - 0.5 mg</td>
<td>0.5 - 1 hr</td>
<td>0.25 - 0.5 mg</td>
<td>3 mg</td>
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</tbody>
</table>

A Cochrane review of 3 small studies did not show a significant difference between low dose (1-3mg a day) Haldol, Risperidone, and Olanzapine with respect to efficacy or frequency of adverse drug reactions, although there does appear to be a higher adjusted risk of death with typical antipsychotics vs atypical antipsychotics when followed out to 180 days. Although underlying dementia appears to increase risk of adverse events.

*monitor for Torsades
Disposition

**Admit**
The majority of those with delirium are probably being admitted for the condition that caused the delirium.

If an etiology for the patient’s acute brain failure is not discovered in the ED, admit for further observation.

**Discharge criteria**
(expert opinion)

There is a reasonable explanation for the delirium.

There is a treatment plan in place.

There is a mechanism for 24 hour support and prompt provider re-evaluation.

If possible, there should be a discussion with the out of hospital treating provider.

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**Determination of Delirium in the ED**

**Delirium Triage Screen: Highly Sensitive**

Does the patient have an altered level of consciousness?
Use the Richmond Agitation-Sedation Scale

YES

DTS Positive
Confirm with bCAM

NO

Is the patient inattentive?
“Can you spell the word LUNCH backwards?”
Or
“Can you name the months backwards from December to July?”

> 1 Error

STOP
ED Delirium Triage Screen Negative

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<table>
<thead>
<tr>
<th>Richmond Agitation and Sedation Scale (RASS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+4</td>
</tr>
<tr>
<td>+3</td>
</tr>
<tr>
<td>+2</td>
</tr>
<tr>
<td>+1</td>
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<tr>
<td>0</td>
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<td>-1</td>
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<td>-2</td>
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<tr>
<td>-3</td>
</tr>
<tr>
<td>-4</td>
</tr>
<tr>
<td>-5</td>
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</tbody>
</table>

*Figure 1*
This guideline was ratified by the emergency department faculty at Maine Medical Center in September 2018. It reflects our expert opinion and is not necessarily applicable to all institutions. It is intended to be a reference for clinicians caring for patients and is not intended to replace providers’ clinical judgment.
# Guideline Evidence

Guideline Topic: Evaluation and Treatment of Delirium in the Elderly  
Author: Evan Gill, MD  
Date of Creation: 8/28/18  
Sugg Update: 2020  
Search Criteria: Delirium; Emergency Department  
Databases: PubMed, Cochrane Database  
Key Guidelines (Dates)  
- Diagnosing Delirium in Elderly ED Patients (2013)  
- Evidence Based Management of Delirium (2012)

<table>
<thead>
<tr>
<th>#</th>
<th>Recommendation</th>
<th>Source</th>
<th>Classification</th>
<th>Level of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Delirium Triage Screen was 98.0% sensitive with a negative likelihood ratio of 0.04 and the Brief Confusion Assessment Method had a specificity of 96.9%. The positive likelihood ratio of the bCAM was 19.9 as done by the EM physician.</td>
<td>Ann Emerg Med. 2013;62(5):457-65.</td>
<td>Prospective Observational Study</td>
<td>IIb</td>
</tr>
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<td>2</td>
<td>Admitted patients w/ ED delirium had longer lengths of stay, more likely to require ICU admission, and be discharged to new long term care facility. ED delirium was associated w/ higher 30 day mortality and readmission</td>
<td>Journal of the American Geriatrics Society, vol. 62, No. 3, Mar. 2014</td>
<td>Prospective Observational Study</td>
<td>IIb</td>
</tr>
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<td>3</td>
<td>No difference between typical and atypical antipsychotics with respect to efficacy or frequency of adverse events.</td>
<td>Cochrane Database Syst Rev 2007; CD005594</td>
<td>Cochrane Review</td>
<td>IIa</td>
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<td>4</td>
<td>Synthesized existing literature into an evidence-based, comprehensive protocol that addresses the common precipitating factors of delirium and approaches to management</td>
<td>Adv Emerg Nurs J. 37(3):183-E3, 2015</td>
<td>Literature Review</td>
<td>IIa</td>
</tr>
<tr>
<td>6</td>
<td>Conventional antipsychotic medications were associated with a significantly higher adjusted risk of death than atypical antipsychotic medications at all time intervals studied.</td>
<td>N Engl J Med 2005; 353:2335-2341</td>
<td>Retrospective Cohort Study</td>
<td>IIb</td>
</tr>
<tr>
<td>7</td>
<td>Prevention may reduce delirium incidence and decreasing delirium duration and severity in geriatric patient populations</td>
<td>J Clin Onc 2012 Apr 10; 30(11):1206–1214</td>
<td>Literature Review</td>
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