Delirium:
How We Can Make a Difference

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Disclosure

• Dr. Kresevic has no actual or potential conflict of interest in relation to this presentation
• Any views or opinions presented are solely those of Dr. Kresevic and do not necessarily represent those of the Veterans Administration or University Hospitals
• Acknowledge Dr. Wes Ely, Dr. Jim Rudolph resources
Proposed Pathophysiology
So What’s the Big Deal

• Delirium is not normal-brain failure

• Not harmless 1/3 never return to baseline

• Meds negatively associated with outcomes
Managing Patients

• Awareness of Delirium Pathophysiology

• Knowledgeable and skilled at doing assessment

• Knowledgeable and skilled at Management, Pharmacological and Non Pharmacological
Nursing Assessment is Key

• CAM each shift (don’t miss hypoactive)
• Pain assessment
• Find the causes and treat delirium
• Prevent permanent cognitive impairment
• Prevent deaths
Frail Brain

• Dementia or Delirium

• Less able to take in information

• More likely to misinterpret Environment, Communication

• Normal, fight or flight response
Fight or Flight

- Visual cues more important than words

- As a caregiver we have but a few seconds for the “frail brain” to interpret our intentions

- Do we say NO, CAN’T
- Do we approach head on
- How fast are we speaking
- Are we speaking loud enough
- Do we touch too soon
Managing Fight or Flight Response

• Do we smile
• Speak slowly
• Say I am here to help you to make sure you are safe
• What can I do for you right now
“Get me out of here. I have to go home.”

• Ok
  I will need a little information to help you

• How is your breathing
• Are you in pain, this is essential to fix FIRST

• Can I get you a cup of coffee (if at all possible)

Where do you live
Were you born and raised in Cleveland
What kind of work did you do

Can I call your family, this can often be very helpful
Resisting Care Techniques

- Brushing Teeth/Bathing
- Asking permission
- Visual Cues - mirror
- Music
- Working as a team - place tooth brush wash cloth in hand
- Using 2 brushes, warm water (Rita Jabonski, U tube)
- For bathing, warm room, keep covered
- Talking for meals, socialization,
Benzodiazepines

“The irony is that these are the same medications physicians often use to manage agitated or delirious patients. This practice, even if immediately effective in tranquilizing a patient may, in the long run, aggravate and perpetuate the syndrome of delirium.”

Causes of Delirium

- Opioid toxicity can cause delirium but in hip-surgery patients delirium is nine times more frequent if their post-operative pain is undertreated (Morrison et al, 2003).
- Sleep deprivation
- Electrolyte imbalance
- Use of physical restraints
- Visual or hearing deficits
- History of stroke, HF, epilepsy, renal failure, liver disease, HIV, dementia
Delirium Risk Factors

**Predisposing**

- Age 75 & older
- Co-morbid conditions
- ETOH history
- Orthopedic surgery
- >5 medications
- History of dementia
- Functional impairments
- Sensory deficits—hearing, vision loss
- Inactivity
Delirium: Other Names...

- Metabolic encephalopathy
- Acute organic brain syndrome
- Acute confusional state
- ICU psychosis: treated as normal occurrence in ICU
- Psychosis
- Sundowning
- Cerebral insufficiency
- Post-partum psychosis
Delirium: DSM5

• Disturbance of attention,
• Develops over short time,
• Change from baseline,
• Accompanied by changes in cognitive domain, such as memory, disorientation, language, perception, that cannot be accounted for by pre-existing or other neurocognitive disorders;
• Occurs in context of severely reduced level of arousal

APA, 2013
Delirium, Dementia or BOTH

2. 22-89% of delirium cases are superimposed on dementia (Fick et al. J Am Geriatr Soc. 2002)
3. 60% of patients who experience delirium while hospitalized develop dementia (Witlox et al. JAMA.2010)
4. Patients with delirium and dementia with “neuropsychiatric symptoms” have similar poor outcomes (Holtta et al. Am J Geriatr Psychiatry.2011)
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**Confusion Assessment Method for the ICU (CAM-ICU) Flowsheet**

1. **Acute Change or Fluctuating Course of Mental Status:**
   - Is there an acute change from mental status baseline? OR
   - Has the patient’s mental status fluctuated during the past 24 hours?
   - **NO** → **CAM-ICU negative NO DELIRIUM**
   - **YES**

2. **Inattention:**
   - “Squeeze my hand when I say the letter ‘A’.”
   - Read the following sequence of letters: S A V E A H 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: No squeeze with ‘A’ & Squeeze on letter other than ‘A’
   - If unable to complete Letters → Pictures
   - **0 - 2 Errors** → **CAM-ICU negative NO DELIRIUM**
   - **> 2 Errors**

3. **Altered Level of Consciousness**
   - Current RASS level
   - **RASS = zero** → **CAM-ICU positive DELIRIUM Present**
   - **RASS other than zero**

4. **Disorganized Thinking:**
   - 1. Will a stone float on water?
   - 2. Are there fish in the sea?
   - 3. Does one pound weigh more than two?
   - 4. Can you use a hammer to pound a nail?
   - **Command:** “Hold up this many fingers” (Hold up 2 fingers)
   - “Now do the same thing with the other hand” (Do not demonstrate)
   - **OR** “Add one more finger” (If patient unable to move both arms)
   - **> 1 Error** → **CAM-ICU negative NO DELIRIUM**
   - **0 - 1 Error**
Feature 1 – Altered Mental Status Or Fluctuating Course

- No
  - bCAM Negative
    - No Delirium
  - Yes
    - bCAM POSITIVE
      - DELIRIUM PRESENT

Feature 2 – Inattention
- Can you name the months backwards from December to July?
  - No or 1 error
    - bCAM Negative
      - No Delirium
  - >1 errors
    - bCAM POSITIVE
      - DELIRIUM PRESENT

Feature 3 – Altered Level of Consciousness
- Richmond Agitation Sedation Scale
  - Yes
    - bCAM POSITIVE
      - DELIRIUM PRESENT
  - No
    - Any Errors
      - bCAM Negative
        - No Delirium

Feature 4 – Disorganized Thinking
- 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?
  - Command: Hold up two fingers. Now do the same with the other hand. Do not demonstrate.
  - No Errors
    - bCAM Negative
      - No Delirium
  - Any Errors
    - bCAM POSITIVE
      - DELIRIUM PRESENT

The Brief Confusion Assessment Method (bCAM) is adapted from:
Not to be reproduced without permission.
Interdisciplinary Rounds

- Face-to-face Bedside rounds are invaluable, especially with the night nurse
- What is the RASS, is this where we want it
- What has the CAM been for the last 24 hours
- What medications Have we addressed pain
- Is the family present
- Mobility plan of care
Managing Delirium: What Nurses Can Do

- Engage family: liberal visitation
- OOB
- Music
- Restraint alternatives-Busy boards, purse
- Clocks/Calendar/Assistive Devices
- Pain programs/Constipation
Cares  Distraction Supplies

- Restraint alternatives-busy boards, fishing vests, puzzles, stress balls
- CD’s for music
- DVD’s for movies
- Early mobilization
- Assistive devices, hearing amplifiers, magnifying glasses
- Prism glasses
Delirium Management

• We may know the facts

• We may even do the CAM (sometimes)

• Do we feel confident and competent to manage a patient and or family who is delirious?

• Most likely we need more than didactic education
Learning

Goal is to change behavior

• Also a complex process
• Give information – reading passive
• Complex technical skills – computers, IV’s
• Communication skills – read, role model, practice
• Delirium- complex assimilation of clinical skills, assessment, communication with patients families and the entire health care team
Overview of Multi-Modal Education

Assemble multidisciplinary team/task force to review data, standards

**Simulation Training** of moderators and staff using Montessori strategies

- 1:1 Bedside education/role modelling of CAM for nurses, and team
- Pocket cards review
- CPRS template creation audits revisions
- Development of training manual
Why Simulation

- Didactic education presents the facts....
- Case studies / group work helpful.....
- Videos helpful....
- However many caregivers from multiple disciplines still lacked confidence to accurately assess and effectively manage delirious patients / families
- Most likely we need more........
<table>
<thead>
<tr>
<th>Sadie:</th>
<th>Should introduce herself to patient, ask how is patient feeling</th>
<th>Introduce self How are you feeling? 2 patient identifiers</th>
<th>Re-Orient</th>
</tr>
</thead>
<tbody>
<tr>
<td>:• Stella is that you?</td>
<td>• Are you having any pain?</td>
<td>Introduce self again 2 patient identifiers</td>
<td>Assess Environment</td>
</tr>
<tr>
<td>:• Why am I here?</td>
<td>• Should explain who he/she is and ask Sadie to state her name again.</td>
<td>Re-orient again</td>
<td></td>
</tr>
<tr>
<td>:• Are you here to take me home?</td>
<td>• Nurse should also be reassuring patient that she is safe, in the hospital, and being cared for.</td>
<td>Reassurance Physical assessment Presence of pain Strongly encourage fluids</td>
<td></td>
</tr>
<tr>
<td>:• What are these things on my wrists?</td>
<td>• Nurse should remove the wrist alternate restraints, and attempt to do an assessment.</td>
<td>Toileting Check leg pain for swelling, redness Wear glasses? Wearing hearing aids?</td>
<td></td>
</tr>
<tr>
<td>:• Should introduce herself to patient, ask how is patient feeling</td>
<td>• How can I help you be more comfortable?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sadie:</th>
<th>While patient is questioning Nurse should be turning off TV, resetting alarms.</th>
<th>Reducing environment Reposition patient</th>
<th>De-Escalate</th>
</tr>
</thead>
<tbody>
<tr>
<td>:• Stella, you are my daughter, you know who I am!!</td>
<td>• Cover IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>:• Why aren’t you helping me?</td>
<td>• Reposition the patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>:• I can’t move here, look I can only get one leg out of bed!</td>
<td>• Get her out of bed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>:• Quietly and calmly re-orient</td>
<td>• I am here to help you</td>
<td></td>
<td></td>
</tr>
<tr>
<td>:• Ask patient to practice with call light</td>
<td>•</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sadie:</th>
<th>Ask again about pain and comfort.</th>
<th>Move slow and cautious</th>
<th>Safety and Comfort</th>
</tr>
</thead>
<tbody>
<tr>
<td>:• Ok, OK, my name is Sadie Steinberg and I’m 87 years old.</td>
<td>• Yes I will help you</td>
<td></td>
<td></td>
</tr>
<tr>
<td>:• Now will you help me?</td>
<td>•</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sadie:</th>
<th>Let’s sit in chair but try toilet so I can talk to the doctor</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>:• No, I’m not in pain and I don’t need to go to the bathroom.</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>:• What I need is to get out of here!!!</td>
<td>•</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sadie:</th>
<th>Where is your home, tell me about your dog How is the dog?</th>
<th>CARES cart Items</th>
<th>Individualized Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>:• I really need to go home now.</td>
<td>• I understand your daughter is taking care of your dog</td>
<td></td>
<td></td>
</tr>
<tr>
<td>:• I need to take care of my dog and watch my stories.</td>
<td>• What kind of dog is it?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|                                                                 | SBAR report to doctor including CAM Any new medications causing this? Pulse ox, lung sounds, sleep pattern, PCA pain, current medications, fluid intake Vital signs, (low grade temperature, increased respiratory rate), is patient stable Labs? Post op state? Should highlight lung sounds; O2 sat as having changed along with mental status. | You did a good job assessing - how do you further assess signs of confusion? Look through the chart Check MAR SAT and lung sounds Check pain Last pain medication BM Fluid intake SBAR Considerations new meds The doctor is on the phone would you like to give a SBAR report? |
Delirium Assessment
(Cleveland VA)

**DELIRIUM ASSESSMENT**

**RASS Score is Between Negative 2 and Positive 4**

<table>
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<tr>
<th>Yes</th>
</tr>
</thead>
</table>

**Identify Risk Factors**

- Cognitive Impairment
- Severe Illness
- Sleep Deprivation
- Immobility
- Dehydration
- Pain
- Sensory Impairment
- Medications:
- Alcohol and/or drug withdrawal

**CAM-ICU Assessment**

- Acute Change in Mental Status:  
  - Yes [ ]  
  - No [ ]  
  
  Is the patient different than his/her baseline status? OR Has the patient had any fluctuation in mental status in the past 24 hours as evidenced by fluctuation on a sedation scale or previous delirium assessment?

- Inattention:  
  - Yes [ ]  
  - No [ ]  
  
  Say to patient to the patient, “I am going to read you a series of letters. Whenever you hear the letter “A” indicate by squeezing my hand.” S A V E A H A R T

- Disorganized Thinking
- Altered Level of Consciousness

Questions are visible to the nurse and not included in the final dialog.
# Nursing Interventions

## Modify Environment
- Orientation and re-orientation.
- Provide objects that provide orientation - clock, calendar.
- Familiar objects at the bedside such as family members pictures.
- Encourage family/significant other visitation.

## Promote Normal Sleep
- Relaxation tapes.
- Back massage.
- Noise reduction and dim lights.

## Correct Sensory Deficits
- Eyeglasses/magnifying lenses/prism glasses.
- Appropriate lighting.
- Hearing amplifiers/hearing aid device.

## Enhance Daytime Activities
- Exercise and Mobility Safety Screen.
- Passive range of motion.
- Mobility appropriate for patient, PT/OT.
- Reduce barriers to mobility: Foley catheter/restraints.

## Prevent Dehydration
- Ensure nutritional assessment.
- Supplement if necessary.
- Monitor Intake and Output.
- Address constipation.
Early Progressive Mobility Algorithm

(Cinn VA)

**EARLY MOBILITY-**
Applied daily to all patients. *RN/PT driven*

**Exercise/Mobility Safety Screen**
within 24 hours of ICU admission

**Clarify w/ MD Activity order**

**Perform Exercise/Mobility and**
document level of mobility; consult PT/OT as needed

**COORDINATION**
Discuss mobility progression on daily rounds and document level of mobility

**Re-Evaluate Every 24 hours**

**Fail**

**Pass**

**Re-Evaluate Every 24 hours**

**Fail**

**Pass**

**Fail**

**Pass**

**Refer to PT/OT Consult algorithm**
Educational Outcomes

- Pre- and post-test
- Recognition of delirium needing medical follow up 67%-90%*
- Accurately able to identify symptoms 80-93%*
- Able to describe distraction interventions 77% - 97%*
- *p<.05
- Webinar participant satisfaction scores 4.35/5
Patient Outcomes

- **ICU CAM assessments** 96-99% compliance with template

- **Non Pharmacological Interventions** increased from 10% to 43%

- **Mobility.** 86% of ventilated patients were assessed as safe for mobility and 70% of these patients were able to be mobilized.
Special Thanks

• Wade Park Delirium Team
• Dr. Wes Ely
• Dr. Jim Rudolph
• Louis Stokes Cleveland VAMC staff nurses, therapists and champions
• Our patients and families