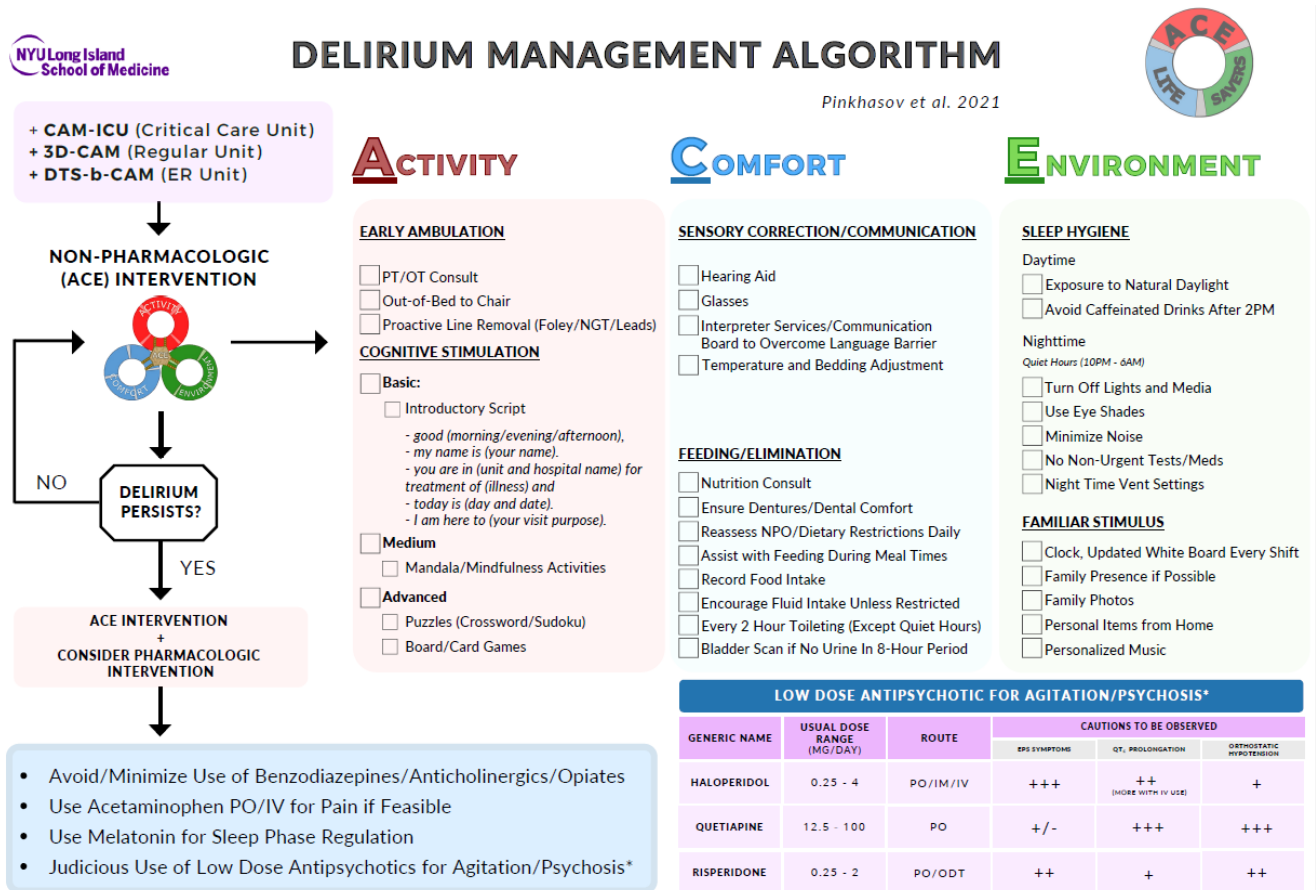


Manual for Delirium Assessment and Intervention

Version 1.5 (Aaron Pinkhasov et al, 2021)

Last Updated: April 1, 2021

This is a manual for Delirium Management Algorithm for healthcare providers treating patients diagnosed with delirium.



- IF DELIRIUM PERSISTS, REQUEST PSYCHIATRIC CONSULTATION -

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I. What is Delirium?

Delirium is the most common neuropsychiatric syndrome diagnosed in general medical hospitals characterized by acute cognitive impairment and fluctuating course. The condition is prevalent among older demographic groups with reduced brain reserve capacity and underlying medical conditions. Patients with delirium often experience symptoms including general disorientation, reduced awareness, confusion, agitation, and stress. Significant cognitive changes may further impede a variety of mental functions such as learning, memory, and attention.

There are three types of delirium: hypoactive, hyperactive and mixed. Hypoactive delirium is the most common form, constituting up to 90% of diagnosed cases, although it is often difficult to discern. ¹ Delirium has a negative impact on patients' morbidity and mortality and inflates healthcare costs.

For more details on Delirium and its management please watch the, "[*This is Delirium*](#)" module available on NYU FOCUS platform, YouTube or American Delirium Society website.

Diagnostic Tools

1. 3D-CAM (Regular Hospital Unit)

The 3-Minute Diagnostic Interview and Confusion Assessment Method (3D-CAM) provides a brief, easy to use, sensitive and specific delirium assessment tool for older hospitalized patients, both with and without dementia and may be done by primary care team, including RN, PA, NP, MD.

2. Confusion Assessment Method-CAM-ICU

The CAM-ICU is a standard screening tool for delirium in the ICU that is brief, easy to use, sensitive and specific. It is a commonly performed screening assessment administered by RN, and is designed to include patients who are intubated, both with and without dementia.

3. DTS/b-CAM (ER)

The Delirium Triage Screen (DTS) and Brief Confusion Assessment Method (b-CAM) constitute a multi-step and sequential delirium screening strategy that is effective, sensitive and specific. These assessments are typically performed on older hospitalized patients in the Emergency Room Department.

i. Delirium Management Algorithm-Regular floor

Delirium Management Algorithm is set of evidence-based recommendations starting with non-pharmacological A.C.E. interventions and if necessary, pharmacological intervention. The aim of this manual is to describe the process of each intervention in order to prevent and manage delirium for healthcare professionals likely to encounter patients at risk for delirium.

Before you Begin:

Before you begin reading our steps and non-pharmacological interventions, it is important to note that not all of the following interventions should be used for each patient. You should use your best judgement in determining which exercise or activity is appropriate for your patient based on their needs and ability level on any given day.

The following is our recommended toolbox for your utilization with the given patient population in our hospital along with a stepwise description of the A.C.E algorithm for treating patients with delirium. Please follow the outline and steps provided to ensure optimal outcome for your patients in hopes of reducing their length of stay in the hospital and preserving their quality of life after discharge.

II - A.C.E. (Non-Pharmacological Management) Protocol Description

i. Activity

Early Ambulation:

Immobilization is one of the risk factors for delirium. Early involvement of Physical Therapy and Occupational Therapy services is important to assess patients and make specific recommendations regarding their recovery plan.

Nursing staff should make every effort to get patients out of bed and aid them with ambulation. Consistent efforts in reinforcing certain actions, such as sitting in bed as opposed to lying in bed, standing as opposed to sitting, and walking as opposed to standing should be made on a regular basis. This has the potential to promote greater levels of alertness and can lead to improved overall outcomes, specifically by shortening duration of delirium.

Of further importance is the proactive removal of catheter lines to prevent infections and make ambulation more likely.

Cognitive Stimulation:

This part of the A.C.E algorithm is important in keeping the patient cognitively aware of and attentive to their surroundings and situation. There are three levels of intervention in this section. The basic level of intervention is applicable to all patients. The idea of the following interventions is to improve attention, awareness, language production and comprehension, as well as memory and orientation.

Basic:

As defined in the above algorithm, every time you enter the patient's room, you should use the opportunity to reorient the patient by following this script:

- *“Good morning/afternoon/evening Mr/Mrs (name of patient),*
- *My name is (your name and role in patient care).*
- *You are in (name of unit and hospital) for treatment of (illness) and today is (day and date).*
- *I am here to (purpose of your visit).”*

Once the patient is cognitively alert and physically ready, proceed to more advanced levels of intervention, which are further outlined below.

Medium:

Mandala

Mandalas are excellent ways for adults to pass time and to relax. Furthermore, they are generally regarded as simple tasks, and studies have shown success with their use with other neurocognitive disorders such as dementia.

Ask the patient if they would like to spend some time in coloring some mandalas (can be phrased as pictures). Once the patient has agreed to it, give the patient their choice of color pencils.

Start from less complex mandalas and gradually move up in complexity as the patient becomes comfortable with the activity over time.

*Refer to the following attachment for examples of mandalas, which may be printed and used. For patients that are comfortable using electronic mobile devices, free apps such as Mandala Coloring may be also used.

Mindfulness Activities:

Breathing Techniques:

4 in 4 out method- The following exercise should only be practiced with patients who are able to breathe without assistance.

Being in a hospital and not having control over your environment can be very stressful and anxiety provoking. A simple breathing exercise may be useful with your patient to help calm them down in times of stress, agitation and anxiety. Patients should be guided through this process, which could last for approximately 2 minutes. Instruct the patient to follow your actions as you lead them through a series of mindfulness exercises. Begin by demonstrating the act of breathing in through your nose, doing so for a count of 4 seconds if possible. If the patient experiences difficulty breathing, you may tailor the length of time the breaths are made. After the 4 second inhale, you should demonstrate and tell the patient to subsequently exhale through their nose. Repeat this for 1-2 minutes, counting out loud to help the patient regulate their breathing. Free apps easily accessible on electronic mobile devices display the breathing exercises using visuals, including Breathwrk: Breathing Exercises App may be used.

Identify and Describe Objects:

In this exercise, have the patient identify 3 objects that they see in the room. Once they have identified and named the three objects, instruct the patient to describe the appearance or characteristics of any of the 2 objects (ex. round, sharp, blue, red, shiny etc.). Next, instruct the patient to choose one of the items they observed and to describe the perceived purpose of the object, to the best of their ability. This exercise can also be done with colored shapes that are provided by staff. The patient should identify each shape, its color and describe the shape.

Grounding the Patient in the Present:

For patients with short attention or poor cognitive abilities, simply ask them to identify 3 things they see, 3 sounds they can hear, and 3 sensations they feel. This type of mindful exercise can also be practiced during meals; the patient can focus on the flavors and texture they experience

while eating, relaxing, or during routine check-ups. You may wish to consider the more challenging version of the exercise as previously described if your patient's attention, working memory and cognitive abilities are improving. These exercises can help improve cognition, orientation, awareness and promote relaxation.

Progressive Muscle Relaxation: (Advanced)

For this exercise, the therapist, nurse, volunteer, or sitter reads a script that guides the patient. This is an advanced exercise as it takes longer (approximately 10-15 minutes) and requires a greater level of attentiveness from the patient. This exercise promotes full body awareness and relaxation, which in turn, helps with orientation to self. A script will be provided for staff and volunteers to use to help demonstrate and guide the patient.

Advanced:

Crossword puzzles:

Crossword puzzles are an excellent tool for cognitive stimulation. The person must answer a question and be able to write the correct answer accurately in the provided boxes. The completion of crossword puzzles can help exercise the patient's concentration and problem solving skills. You can start with simple crossword puzzles and progress to more complex ones depending on patient's ability to solve them.

Board Games/Card Games:

Patients who are more advanced and have better cognitive capabilities can participate in various board games to improve focus and assist with cognitive stimulation. These board games include but are not limited to:

1. UNO (card game)
2. Go Fish (card game)
3. Matching card game
4. War (card game)
5. Gin Rummy (card game)
6. Crazy 8's (card game)
7. Sudoku
8. Chess
9. Checkers
10. Backgammon
11. Dominos
12. Dice Game (LCR)
13. Yahtzee

These different games can be played to further stimulate the patient and help to increase their attention, problem solving abilities and memory. Family members can be encouraged to bring in the patients favorite game to play for the staff to use with them. The board games should come with a rules manual, however if not *available*, here is a website with rules for the above mentioned games: <http://www.boardgamecapital.com>

ii. Comfort

Sensory correction/communication:

Eyes and ears are gateways to our brain. People with impaired hearing or vision are much more likely to misinterpret reality and get confused. This in turn may lead to agitation and worsen treatment outcomes. It is shown that correcting vision and hearing has the potential to improve and preserve cognitive function.² Making sure that patient in need has proper hearing aid and glasses at all times is of great importance. Proper dentures fitting is important not only for adequate food intake, but also in speech articulation and quality of communication.

It is imperative to overcome any language barriers by implementing use of interpreting devices or assistance from live interpreters for patients.

Room comfort:

Room temperature and bedding is also important and should be optimized routinely to ensure comfort.

Feeding/elimination:

Consult with a nutritionist to ensure adequate diet for patients. Make sure that the patient's dentures are appropriately fitting and offer support if the patient is having a difficult time with them. It is important to assist patients with menu choices and timely feeding. Be sure to record their food intake and encourage drinking fluids unless contraindicated. Reassess need for NPO regularly and resume oral intake as soon as possible. Q2 hour toileting of the patient will reduce chances of incontinence and will provide extra opportunity to ambulate to bathroom when possible. If a patient has not urinated for a prolonged period of time (i.e. 8 hours), performing a bladder scan will alert clinicians of a possible urinary obstruction and need for catheterization.

iii. Environment

Sleep hygiene:

It is important to encourage and maintain a consistent sleep routine for the patient. Keeping the room quiet between 10 PM - 6 AM will promote uninterrupted sleep cycle and is the most effective way of accomplishing this goal. During this time interval, be sure to lower the shades, turn off the lights and any television or media device in the room. Maximize exposure to natural light during day. When possible, set the vents to the nighttime setting to minimize the noise and avoid giving the patient any caffeinated beverage after 2 PM. Patients should be offered eye shades and ear plugs to promote uninterrupted restful sleep. Ensure to keep this routine for prophylaxis of sundowning and to maintain optimal alertness and attentiveness during the waking hours. Unless indicated, no vital signs or tests including blood work or imaging should be done between 10 PM and 6 AM to sustain adequate sleep hygiene.

Familiar Stimulus

In addition to updated information on the white board in patient's room, the presence of a clock within patient's visual field is desirable. Encourage family to interact with the patient during visiting hours and to bring familiar objects from patients' home to increase their sense of comfort. The following may be helpful:

- 1) Viewing pictures of family members
 - a) Name the family members
 - b) What are their ages?
 - c) Relationship *to you* (grandchildren, children, spouse etc.)
- 2) Viewing pictures of household items
 - a) A photo of their home environment
 - b) A photo of their family members and pets
- 3) Listening to familiar or favorite music. You may play "guess that tune" game.

Bringing a favorite blanket, pillow, or a stuffed animal or plush toy may add to patient's comfort and help to alleviate anxiety.

III - Pharmacological Management Protocol Description

Medications should be routinely reviewed to eliminate any drugs that may cause or worsen delirium. These include medications with anticholinergic side effects, benzodiazepines (unless clinically indicated) and narcotic analgesics (when avoidable). If the patient is experiencing pain, consider using Acetaminophen (Tylenol) PO/IV if sufficient for pain control. Consider use of Dexmedetomidine (Precedex) IV drip in ICU setting if patients' BP/HR allows. To aide with sleep cycle regulation, use melatonin and ramelteon.

i. Antipsychotics

When behavioral problems persist despite implementing the non-pharmacological intervention, low dose Haloperidol, Quetiapine or Risperidone used as pharmacological treatments for hyperactive agitated delirium (Hipp & Ely 2012).

Finally, if despite above interventions, delirium persists, feel free to request **psychiatry consultation** to address any questions regarding diagnosis and management.

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