



**PHYSICIAN'S ORDER SHEET**  
**STANDING ORDERS FOR:**  
**INTENSIVE CARE UNIT**

Page 1 of 2 Check here if STAT medications ordered

ANOTHER BRAND OF GENERICALLY EQUIVALENT PRODUCT, APPROVED BY THE PHARMACY AND THERAPEUTICS COMMITTEE, MAY BE ADMINISTERED UNLESS (SPECIFIC) IS WRITTEN AFTER THE MEDICATION ORDER.

**DELIRIUM PROTOCOL**

**Definition:** Delirium is a common symptom in patients suffering from complex advanced illness. The causes of delirium are multifactorial and sometimes difficult to discern from dementia, which may occur simultaneously. Delirium can be very distressing for patients and family members; and the healthcare team should provide continuing reassurance to all.

**LOOK FOR SIGNS OF DELIRIUM (CAM-ICU)**

- Acute mental status change
- Altered perception
- Speech disturbances
- Perceptual disturbances
- Attention deficits
- Agitation
- Signs of psychosis

**LOOK FOR SPECIFIC CAUSES OF DELIRIUM**

- Medications (opioids, benzodiazepines, etc.; see full list in Protocol Book)
- Electrolyte imbalance
- Liver failure
- Myocardial ischemia
- Renal failure
- Neuroleptic malignant syndrome
- Stool impaction or urinary retention
- Infection (including UTI)
- Metastatic disease
- Dehydration
- Hypoxia
- ETOH withdrawal
- Untreated pain

**RECOMMENDED APPROACHES**

- Consider changing/reducing opioid therapies
- Consider hydration
- Provide sleep hygiene
- Discontinue or wean unnecessary medications
- Consider checking for impaction/foley obstruction
- Look into correcting impaired vision or hearing
- Family presence
- Provide proper lighting/Ambient temperature

**CONSIDER EVALUATING THE FOLLOWING** (*Check what you desire*)

- Chem 14       TSH       Urinalysis       PharmD Consult  
 LFTs       CBC       EKG

Monitor and document QT Interval every 4 hours (**LOOK FOR QT INTERVAL > 0.45 SECONDS**)

**CAUTION WITH THE DRUGS BELOW:** OBSERVE FOR SIGNS OF THE FOLLOWING:

- Extrapyramidal Syndrome (EPS) – Reference back for description of symptoms;
- QT Prolongation;
- Neuroleptic Malignant Syndrome; and

STOP ADMINISTRATION OF THE CULPRIT DRUG AND NOTIFY PHYSICIAN STAT WITH ANY OF THESE SYMPTOMS.

**IF SYMPTOMS OF EPS OCCUR, ADMINISTER BENADRYL 50 mg. IV STAT. DISCONTINUE CULPRIT MEDICATION AND NOTIFY THE PHYSICIAN. MAY REPEAT BENADRYL 50 mg. IN 20 TO 30 MINUTES and every 4 hours prn if symptoms continue.**

**FOR MODERATE DELIRIUM**

Haloperidol:  1 **or**  2 mg. (*Check one*)  p.o. /  IV every 1 hour prn until calm.  
 Then  2.5 **or**  5 mg. (*Check one*)  p.o. /  IV every 6 hours routinely. Evaluate effectiveness daily.

Risperidone:  1 **or**  2 mg. (*Check one*) p.o. at bedtime  
 FOR PHYSICIAN CONSIDERATION – may gradually raise by 1 mg. every 2 to 3 days until an effective dose (usually 4 to 6 mg.) is reached. Also available, M-TAB in SL quick dissolve tabs.

Zyprexa: 10 mg. IM every  2 **or**  4 hours (*Check one*) until calm.  
 Then \_\_\_\_\_ mg. p.o. daily (Usually 5 to 20 mg.) Also available, Zydis in SL quick dissolve tabs.

**FOR SEVERE DELIRIUM WITH AGITATION**

Haloperidol:  2 **or**  5 mg. (*Check one*) IV every 30 minutes to 1 hour until calm. Then 5 mg. q 4 hours  p.o./  IV routinely.

Lorazepam:  1 **or**  2 mg. (*Check one*)  p.o. /  IV every 1 hour until calm.  
 Then  1 **or**  2 mg. (*Check one*)  p.o. /  IV every 2 hours prn. Evaluate daily.

Chlorpromazine (Thorazine):  25 **or**  50 mg. (*Check one*)  p.o. /  IV every 1 hour until calm.  
 Then  25 **or**  50 mg. (*Circle one*) every 6 hours  p.o. /  IV routinely. Evaluate effectiveness daily.

**EVALUATE FOR INCREASE IN AGITATION OR OTHER SYMPTOMS 30 TO 60 MINUTES FOLLOWING ANY BENZODIAZEPINE ADMINISTRATION AND REPORT TO THE PHYSICIAN.**

CONFIDENTIAL INFORMATION



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**DELIRIUM PROTOCOL**

**Drugs Associated with Delirium:**

Withdrawal from:

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Barbituates</li> <li>• Benzodiazepines, sedatives</li> </ul>  | <ul style="list-style-type: none"> <li>• Miscellaneous Drugs</li> <li>Hydroxyzine</li> <li>Ketamine</li> <li>Metoclopramide</li> <li>Theophylline</li> </ul>   | <ul style="list-style-type: none"> <li>• Cardiac Drugs</li> <li>Captopril</li> <li>Clonidine</li> <li>Digoxin</li> <li>Labetalol</li> <li>Lidocaine</li> <li>Nifedipine</li> <li>Nitroprusside</li> <li>Procainamide</li> <li>Propranolol</li> <li>Quinidine sulfate</li> <li>Rythmol</li> </ul> |
| <ul style="list-style-type: none"> <li>• Antibiotics</li> <li>Acyclovir</li> <li>Amphotericin B</li> <li>Cephalosporins</li> <li>Imipenem-cilastin</li> <li>Ketoconazole</li> <li>Metronidazole</li> <li>Penicillin</li> <li>Rifampin</li> <li>Trimethoprim-sulfamethoxazole</li> </ul> | <ul style="list-style-type: none"> <li>• Poisons/metals</li> <li>Lead</li> <li>Manganese</li> <li>Mercury</li> </ul>   | <ul style="list-style-type: none"> <li>• Narcotic Analgesics</li> <li>Codeine</li> <li>Meperidine</li> <li>Morphine sulfate</li> <li>• Nonsteroidal anti-inflammatory agents</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Corticosteroids</li> <li>Dexamethasone</li> <li>Methylprednisone</li> <li>Prednisone</li> </ul>  | <ul style="list-style-type: none"> <li>• Anticholinergics</li> <li>• Anticonvulsants</li> <li>Phenobarbital</li> <li>Phenytoin</li> <li>• Antihistamines</li> <li>Cimetidine</li> <li>Diphenhydramine</li> <li>Rantidine</li> <li>• Benzodiazepines</li> </ul> |  |

**EXTRAPYRAMIDAL SYMPTOMS (EPS)**

Extrapyramidal Symptoms are a neurological side effect of (primarily) antipsychotic medications which present in a variety of ways including, but not limited to:

- **Acute dystonia:** A spastic contraction of muscle groups, most often affecting the neck, eyes and trunk. These involuntary muscle contractions can occur very suddenly and are often frightening and painful for the patient.
- **Parkinsonism:** Tremors, rigidity, temporary paralysis and slowed movements.
- **Akathisia:** An internal sense of extreme motor restlessness and an inability to sit still.

**NEUROLEPTIC MALIGNANT SYNDROME (NMS)**

Neuroleptic Malignant Syndrome is a life-threatening reaction to (primarily) neuroleptic medications. Onset can be within hours, but it has occurred even after years of neuroleptic use. The general onset is within days of medication initiation. Clinical signs and symptoms are:

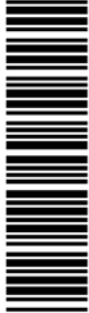
- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• <b>Hyperthermia</b> (above 38 degrees C)</li> <li>• <b>Mental status changes</b></li> <li>• <b>General rigidity</b> (lead pipe)</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Autonomic instability</b></li> <li>• <b>Profuse diaphoresis</b></li> </ul> |
|---|--|

Other symptoms may include:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Elevated CPK or urinary myoglobin</li> <li>• Leukocytosis</li> <li>• Tachycardia</li> <li>• Tachypnea</li> </ul> | <ul style="list-style-type: none"> <li>• Tremor</li> <li>• Hypertension/Hypotension</li> <li>• Incontinence</li> </ul> |
|---|--|

**TARDIVE DYSKINESIA (TD)**

Tardive dyskinesia is a neurological syndrome caused by the **long-term use of neuroleptic drugs, and may emerge when these drugs are decreased or discontinued.** Symptoms consist of repetitive, involuntary movements which may include: Rapid movements of arms, legs, and trunk, movements of the fingers and toes. Involuntary facial movements include grimacing, tongue protrusion, lip smacking, puckering and pursing, and rapid eye blinking. There is no treatment for this disorder, though symptoms may be relieved by changing medications.





**CAM-ICU FEATURES AND DESCRIPTIONS**

**1. Acute Onset or Fluctuating Course**

**Absent**

**Present**

A. Is there evidence of an acute change in mental Status from the baseline?



OR

B. Did the (abnormal) behavior fluctuate during the past 24 hours, that is, tend to come and go, or increase and decrease in severity as evidenced by fluctuation on a sedation scale (e.g. RASS), GCS, or previous delirium assessment?



**2. Inattention**

**Absent**

**Present**

Did the patient have difficulty focusing attention as evidenced by **scores less than 8** on either the auditory or visual component of the **Attention Screening Examination (ASE)**? (Instructions on next page).



**3. Disorganized Thinking**

**Absent**

**Present**

Is there evidence of disorganized or incoherent thinking as evidenced by **incorrect answers to 2 or more of the 4 questions and/or inability to follow the commands**?



**Questions** (Alternate Set A and Set B):

**Set A**

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?

**Set B**

1. Will a leaf float on water?
2. Are there elephants in the sea?
3. Do two pounds weigh more than one pound?
4. Can you use a hammer to cut wood?

**Other:**

1. Are you having any unclear thinking?
2. Hold up this many fingers. (Examiner holds two fingers in front of patient)
3. Now do the same thing with the other hand. (Not repeating the number of fingers)

**4. Altered Level of Consciousness**

**Absent**

**Present**

Is the patient's level of consciousness anything *other than alert* such as vigilant, lethargic, or stupor? (e.g., RASS other than "0" at time of assessment)



**Alert** Spontaneously fully aware of environment and interacts appropriately

**Vigilant** Hyperalert

**Lethargic** Drowsy but easily aroused, unaware of some elements in the environment, or not spontaneously interacting appropriately with the interviewer; becomes fully aware and appropriately interactive when prodded minimally

**Stupor** Becomes incompletely aware when prodded strongly; can be aroused only by vigorous and repeated stimuli, and as soon as the stimulus ceases, stuporous subject lapse back into the unresponsive state

**Overall CAM-ICU** (Features 1 and 2 and either Feature 3 or 4)

 **Yes**
 **No**



## THE ATTENTION SCREENING EXAMINATION (ASE) – AUDITORY AND VISUAL

### A. Auditory (Letter) ASE

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 the following 10 letters in a normal tone (loud enough to be heard over the noise of the ICU) at a rate of one letter per second.

**S A H E V A A R A T**

Scoring: Errors are counted when patient fails to squeeze on the letter “A” and when the patient squeezes on any letter other than “A”.

### B. Visual (Picture) ASE

**\*\* See following Picture Packets (A and B)\*\***

#### Step 1: 5 Pictures

Directions: Say to the patient, “Mr. or Mrs. \_\_\_\_\_, I am going to show you pictures of some common objects. Watch carefully and try to remember each picture because I will ask what pictures you have seen.” Then show Step 1 of either Packet A or Packet B, alternating daily if repeat measures are taken. Show the first 5 pictures for 3 seconds each.

#### Step 2: 10 Pictures

Directions: Say to the patient, “Now I am going to show you some more pictures. Some of these you have already seen and some are new. Let me know whether or not you saw the picture before by nodding your head yes (demonstrate) or no (demonstrate).” Then show 10 pictures (5 new 5 repeat) for 3 seconds each (Step 2 of Packet A or B, depending upon which form was used in Step 1 above).

Scoring: This test is scored by the number of correct “yes” or “no” answers during the second step (out of a possible 10). In order to improve the visibility for elderly patients, the images are printed on 6 x 10 buff colored paper and laminated with a matte finish.

Note: If a patient wears glasses, make sure he/she has them on when attempting the Visual ASE.

#### References:

Ely, E.W., Inouye, S., Bernard G., Gordon, S., Francis, J., May, L., Truman, B., Speroff, T., Gautam, S., Margolin, R., Dittus, R. Delirium in mechanically ventilated patients: validity and reliability of the confusion assessment method for the intensive care unit (CAM-ICU). JAMA; 286, 2703-2710, 2001.

Ely, E.W., Margolin, R., Francis, J., May, L., Truman, B., Dittus, B., Speroff, T., Gautam, S., Bernard, G., Inouye, S. Evaluation of delirium in critically ill patients: Validation of the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU). Critical Care Medicine. 29:1370--1379, 2001.