SUBJECT: Alcohol Withdrawal Guideline

KEY WORDS: Alcohol
Alcohol abuse
Alcohol withdrawal
Delirium Tremens

SEE ALSO:
#1-7-16 “Initiating Antipsychotic Medications for Delirium”
# 1-6-23, “Restraints and Seclusion Used for Behavioral Management”
#4A-03-24 “Nursing Assessment and Reassessment”

Principles of the Alcohol Withdrawal Syndrome (AWS) Guideline

PURPOSE:
The purpose of this practice guideline is to standardize the screening and management of patients at risk for, or those with, acute alcohol withdrawal syndromes at the Hospital of the University of Pennsylvania (HUP). These guidelines are not intended to replace appropriate consultation, but should provide education and guidance in the management of patients. However, the practitioner may deviate from this guideline based on clinical indication if appropriate and documented, or in emergency or unusual circumstances.

SCOPE:
This guideline applied to all patients at HUP not in intensive care units. It is a management guideline for physicians, auxiliary health care providers, nurses and pharmacists to help care for patients at HUP who may be suffering from, or who are at risk for, an alcohol withdrawal syndrome (AWS). This guideline provides a working definition of AWS, evidenced-based patient assessment and monitoring methods to safely and effectively guide a medical treatment algorithm.

IMPLEMENTATION:
Chairs of clinical departments, attending physicians, program directors, house staff, nursing staff and pharmacy are to implement these guidelines. These guidelines will be monitored by HUP’s Clinical Effectiveness and Quality Improvement (CEQI) Committee.

DEFINITIONS:
A. Alcohol Withdrawal Syndrome (AWS) is defined by the manifestation of at least two (2) of the following signs, which occur within hours to a few days following cessation of heavy and prolonged alcohol consumption, which cannot be attributed to another medical disorder.
1. Autonomic hyperactivity (e.g. sweating or heart rate (HR)>100)
2. Tremors
3. Insomnia
4. Transient visual, tactile, or auditory hallucinations or illusions
5. Nausea or vomiting
6. Psychomotor agitation
7. Anxiety
8. Grand mal seizures

B Delirium tremens is defined as an acute and sometimes fatal complication of abrupt withdrawal of excessive alcohol intake. It is characterized by agitation, hallucinations, disorientation, confusion, fear and anxiety. Patients can also exhibit tachycardia, diaphoresis, tremors and GI distress.

PROCEDURE:
A. Screening for High-Risk AWS Patients
1. All patients admitted to non-intensive care units at HUP should be screened for alcohol dependence so that this complication can be anticipated and appropriately managed.
2. Nursing will perform the initial assessment and document their results on all the nursing admission forms. A positive screen should always prompt notification to the physician.
3. The physician should then confirm the risk level and decide on the appropriate management.
4. All such patients, should be monitored closely by nursing for the development of early signs of AWS using the Clinical Institute Withdrawal Assessment for Alcohol scale (CIWA-Ar), see below for description and scale scoring system. (See Attachment # 2)
5. The physician may consider instituting prophylaxis for AWS. This decision should be based on whether there are concurrent medical problems and whether there is a high risk of having a severe withdrawal syndrome.

B. Management of AWS Patients
1. Once a patient is determined to be high risk for alcohol withdrawal based on initial screening questions or is actively in AWS CIWA-Ar monitoring should be initiated by the nursing staff.
2. If the initial CIWA-Ar score is ≥ 9 the nurse should contact the physician/nurse practitioner/physician assistant with the assessment to confirm that AWS best explains the clinical findings rather than a new or worsening medical condition.
3. Once AWS is confirmed, lorazepam should be given based on dosing algorithm provided.
4. Admit or transfer patients with AWS to the ICU if:
   i. Patient is unable to protect his/her airway
   ii. Moderate alcohol withdrawal (CIWA-Ar 9-15) in a patient that is frail, elderly or has important co-morbidities (e.g. hemodynamic instability, pulmonary disease, GI pathology (pancreatitis, bleeding) or presents with an alcohol level > 100 mg/dL)
   iii. Moderate alcohol withdrawal in a patient that is unable to communicate, e.g. delirium, such that the CIWA-Ar cannot be used to guide treatment (unless a 1:1 is provided on floor)
   iv. Severe alcohol withdrawal defined as any patient who requires >6 mg of lorazepam in the first hour, 12 mg of lorazepam in the first 6 hours, or if the CIWA-Ar remains >15 for > 1 hour.
5. If the CIWA-Ar remains >15 for > 1 hour initiate a Rapid Response Team alert (RRT).

C. Pharmacologic Treatment Strategy
1. In most cases, Lorazepam is the drug of choice for treating AWS.
2. Dosing is based on the CIWA-Ar score
3. Consider consulting Psychiatry (pager) 215-401-1155 to assist with implementing the AWS treatment protocol.
4. RRT Nursing Staff is also available for help (pager) 215-834-0401 or 0402.

D. Non-pharmacologic Support:
1. Evaluate for causes of delirium other than AWS
2. Institute fall and aspiration precautions as appropriate.
3. Consider 1:1 monitoring.
4. Encourage family visitation.
5. If it is necessary to place a patient in restraints, the procedures outlined in policy # 1-6-23, “Restraints and Seclusion Used for Behavioral Management” for restraint placement and monitoring will be followed.
6. Closely monitor consciousness, gag reflex, monitor for dehydration, volume depletion, and electrolyte and nutritional status.
7. Consult social work and psychiatry to assess for possible further long-term detoxification options and assistance if the patient is interested, once the AWS has resolved.

E. Management Guideline for the Non-intubated patients (mild to moderate withdrawal):
1. Evaluate need for intubation/airway protection (i.e. level of consciousness, gag)
2. Evaluate for decreased urine output or other signs of shock and treat as appropriate
3. Administer Thiamine orally or intravenously as appropriate
4. Replete electrolytes as needed
5. Basic laboratory tests also to include urine drug screen, serum ethanol, electrolytes, PT/INR, LFT’s, amylase, lipase, check anion gap, osmolarity, creatine phosphokinase, UA, lactic acid (consider co-ingestions).

F. Other Clinical Considerations
1. If findings of adrenergic hyperactivity symptoms, agitation, and delirium tremens are prominent in the absence of other features of AWS, an alternative etiology should be suspected and the patient should be worked up appropriately.
2. If the patient has cardiovascular co-morbidities (coronary artery disease, congestive heart failure) the physician should consider treating the signs and symptoms of adrenergic hyperactivity, including hypertension (Systolic BP > 140 mmHg, Diastolic BP >90 mmHg, HR >100 beats per minute), with an adrenergic antagonist in conjunction with lorazepam.

G. Maintenance/Weaning/Discontinuing Medications:
1. When stable for 24 hours, total the amount of lorazepam given in last 24 hours and give subsequently in 3 to 4 doses over the next 24 hours.
2. Once CIWA-Ar remains < 8 for > 24 hours, begin to taper medications by 20% per day in consultation with psychiatry.
3. If patients are still in the hospital when medications for alcohol withdrawal are completely weaned off they should be monitored for recurrence of symptoms for at least another 24 hours before considering hospital discharge.
4. Medications may be weaned as an outpatient, in consultation with psychiatry and/or through outpatient detoxification programs. Consult the Department of Resource Management and Social Work in all cases to assist with outpatient disposition and other needs.

References:

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SUBJECT: Alcohol Withdrawal Guideline

Effective: 11/1/10

RN Screen for Increased Risk of AWS:
1. Do you drink any alcohol (beer, wine, or hard liquor)?
2. Was your last drink within the past 5 days?
   * if No to 1 or 2 — STOP!
3. Do you have 3 or more drinks at least every other day?
4. Have you ever had withdrawal symptoms, including DT’s or seizures after you stop drinking?
   * if Yes to 3 or 4 — Increased risk for AWS — Call MD

MD Assessment: If confirmed, order CIWA monitoring q6 by RN to observe for AWS

History of seizures or DT’s, or planned elective surgery?

Yes

MD Assessment: Determine etiology of agitation/delirium
   • See delirium pocket card
   • AWS vs alternative

Non-AWS

See delirium assessment, management protocols:
   • Search for medical causes
   • Stop offending medicine
   • Consider haloperidol
   • Non-Pharmacologic Mgmt

MD Assessment: If CIWA < 8 — Assess CIWA q6 hrs x 3 then q12 hrs x 2 then stop

CIWA < 8

If CIWA > 8 — Call HO

CIWA > 8

MD to consider prophylaxis for AWS:
   • Drug of choice: Lorazepam (PO/IM/IV)
   • Day 1: 1-2 mg q 6 hrs
   • Day 2-3: 1 mg q 6 hrs; reassess
   • Recurs: 1 mg TID-QID x 1-3 days

Consider ICU Transfer if:
   • Compromised airway, frail, >65, BAL>100 mg/dl, comorbidities (eg. CV, Resp, GI, CNS)

AWS

Consider ICU Transfer if:
   • CIWA>15 for >1 hour (call RRT)
   • CIWA>15 & non-communicative (at least order 1:1)
   • 6 mg Lorazepam/1 hr, 12 mg/6hr

AWS Rx protocol:
   • ABC’s/Thiamine/Electrolytes/Labs
   • Monitor via CIWA-Ar prn score
   • Lorazepam: 1-4 mg PO/IV/IM prn via CISA-Ar protocol
   • Employ non-pharm strategies for delirium

Non-AWS

Abbreviations: BAL= Blood alcohol level; CV= cardiovascular; Resp= respiratory; GI=gastrointestinal; CNS= central nervous system; HO=house officer
**Attachment 2**

**Clinical Institute Withdrawal Assessment for Alcohol: CIWA-Ar**

<table>
<thead>
<tr>
<th>Date/Time</th>
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</thead>
<tbody>
<tr>
<td>Rater’s Initials/Signature</td>
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</table>

**Nausea and Vomiting**—“Do you feel sick to your stomach? Have you vomited?” Observation.

<table>
<thead>
<tr>
<th>0</th>
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<th>4</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>No nausea and no vomiting</td>
<td>Mild nausea with no vomiting</td>
<td>Intermittent nausea with dry heaves</td>
<td>Constant nausea, frequent dry heaves and vomiting</td>
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**Tremor**—Arms extended and fingers spread apart. Observation.

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<tbody>
<tr>
<td>No tremor</td>
<td>Not visible, but can be felt fingertip to fingertip</td>
<td>Moderate, with patient’s arms extended</td>
<td>Severe, even with arms not extended</td>
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**Paroxysmal Sweats**—Observation.

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<tbody>
<tr>
<td>No sweat visible</td>
<td>Barely perceptible sweating, palms moist</td>
<td>Beads of sweat obvious on forehead</td>
<td>Drenching sweats</td>
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**Anxiety**—“Do you feel nervous?” Observation.

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<tbody>
<tr>
<td>No anxiety, at ease</td>
<td>Mildly anxious</td>
<td>Moderately anxious, or guarded, so anxiety is inferred</td>
<td>Equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions</td>
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**Agitation**—Observation.

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<tbody>
<tr>
<td>Normal activity</td>
<td>Somewhat more than normal activity</td>
<td>Moderately fidgety and restless</td>
<td>Paces back and forth during most of the interview, or constantly thrashes about</td>
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</tbody>
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**Tactile Disturbances**—“Have you any itching, pins and needle sensations, any burning, any numbness or do you feel bugs crawling on or under your skin? Observation.

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<th>5</th>
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</thead>
<tbody>
<tr>
<td>None</td>
<td>Very mild itching, pins and needles, burning or numbness</td>
<td>Mild itching, pins and needles, burning or numbness</td>
<td>Moderate itching, pins and needles, burning or numbness</td>
<td>Moderately severe hallucinations</td>
<td>Severe hallucinations</td>
<td>Extremely severe hallucinations</td>
<td>Continuous hallucinations</td>
</tr>
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**Auditory Disturbances**—“Are you more aware of sounds around you? Are they harsh? Are you hearing things that you know are not there?” Observation.

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<tbody>
<tr>
<td>Not present</td>
<td>Very mild harshness or ability to frighten</td>
<td>Mild harshness or ability to frighten</td>
<td>Moderate harshness or ability to frighten</td>
<td>Moderately severe hallucinations</td>
<td>Severe hallucinations</td>
<td>Extremely severe hallucinations</td>
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**Visual Disturbances**—“Does the light appear to be too bright? Is its color different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things that you know are not there?” Observation.

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</thead>
<tbody>
<tr>
<td>Not present</td>
<td>Very mild sensitivity</td>
<td>Mild sensitivity</td>
<td>Moderate sensitivity</td>
<td>Modestly severe hallucinations</td>
<td>Severe hallucinations</td>
<td>Extremely severe hallucinations</td>
<td>Continuous hallucinations</td>
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**Headache, Fullness in Head**—“Does your head feel different? Does it feel like there’s a band around your head? Do not rate for dizziness or lightheadedness.

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<th>5</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not present</td>
<td>Very mild</td>
<td>Mild</td>
<td>Moderate</td>
<td>Severe</td>
<td>Very severe</td>
<td>Extremely severe</td>
<td></td>
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**Orientation and Clouding of Sensorium**—“What day is this? Where are you? Who am I?”

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</thead>
<tbody>
<tr>
<td>Oriented and can do serial additions</td>
<td>Cannot do serial additions or is uncertain about the date</td>
<td>Disoriented for date by no more than 2 calendar days</td>
<td>Disoriented for date by more than 2 calendar days</td>
<td>Disoriented for place and/or person</td>
</tr>
</tbody>
</table>

**Total CIWA-Ar Score**

Dose of lorazepam administered based on CIWA-Ar Score:

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ETOH Withdrawal 2010