The following document contains the University of Michigan Alcohol Withdrawal Guidelines. These guidelines were developed through an intensive collaborative effort by physicians and nurses representing all medical and surgical sub-specialties within the institution. The guidelines are intended to be applied to adult patients (18 years of age or older) experiencing alcohol withdrawal.

If consultation is needed to provide care for a patient in alcohol withdrawal, please contact the General Medicine Consult Attending (pager #31610). Please direct questions regarding the guidelines’ content or format to Dr. Michael Lukela (e-mail: mlukela@umich.edu; pager #11006) or Dr. Satyen Nichani (e-mail: satyen@umich.edu; pager #15612).

A brief synopsis of the guidelines’ content is provided below. It is strongly recommended that these documents be reviewed in the order they are presented.

The Alcohol Withdrawal Guidelines Flowsheet (#1 below) provides a flow diagram that depicts the algorithm used for treating alcohol withdrawal. It begins with the selection of the appropriate alcohol withdrawal protocol (e.g. mild/moderate or severe) following assessment by the clinician. Clinicians are then directed through the guidelines via a flowchart that outlines the frequency of assessment and recommendations for treatment.

The Michigan Alcohol Withdrawal Severity (MAWS) Assessment Scale (#2 below) is the scoring scale used by nurses to develop a MAWS score. The MAWS score is used to determine withdrawal severity and to consistently guide further assessment and therapy.

Clinician Instructions (#3 below) consist of a written description of the alcohol withdrawal guidelines flowsheet, including recommended dosing parameters for medications used within the guidelines. In addition, recommended dosing instructions/guidelines are provided for patients requiring maintenance (i.e. scheduled) therapy during treatment of their withdrawal.

Nursing Instructions (#4 below) consists of a written description of the alcohol withdrawal guidelines flowsheet assessment strategy used by the nurses to implement the appropriate monitoring and therapies as directed by the guidelines.

Nursing Flowsheet (#5 below) is the template used by nurses to monitor and track MAWS scores, vital signs, and medications used during the treatment of a patient in alcohol withdrawal.

CareLink Order Sets (#6 below) provide a written description, including “screen shots” that detail the process of using CareLink to order different components of the guidelines.

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1) Alcohol Withdrawal Flowsheet (Pages 2-5)
2) Michigan Alcohol Withdrawal Severity (MAWS) Assessment Scale (Pages 6-7)
3) Clinician Instructions (Pages 8-13)
4) Nursing Instructions (Pages 14-17)
5) Nursing Flowsheet (Pages 18-19)
6) CareLink Order Sets (Pages 20-28)

Updated 8/25/09
Alcohol Withdrawal Guidelines Flowsheet
ADULT Michigan Alcohol Withdrawal (MAW) Guidelines
INITIAL ASSESSMENT (PAGE I)

Cage ≤ 1 OR T-ACE ≤ 1
OR Signs of Alcohol Withdrawal? OR History of Alcohol Withdrawal

NO
Discontinue MAW protocol

YES
Clinician to initiate appropriate alcohol withdrawal protocol
Nurse to complete MAWS assessment score

MAWS score = 0-5
Initiate MILD/MODERATE Withdrawal Treatment Protocol
Go to PAGE II

MAWS score ≥ 6
with or without Type C symptoms present
Initiate SEVERE Withdrawal Treatment Protocol
Go to PAGE III
ADULT Michigan Alcohol Withdrawal Guidelines
MILD-MODERATE Withdrawal (PAGE II)

Clinician to initiate MILD/MODERATE Withdrawal Treatment Protocol

Assess MAWS score q 2hrs

MAWS score = 0 over past 24 hours?

Are 2 or more Type B symptoms present and unresponsive to Lorazepam?

Contact clinician to consider adjunct therapy with Clonidine

If clinician orders Clonidine
0.1mg PO/DHT q 2hrs prn x 3 doses until type B score < 2
Discontinue Clonidine if systolic BP decreases by >30 mmHg OR diastolic BP decreases by >20 mmHg with any one dose of Clonidine
Lorazepam should be continued unless otherwise specified by clinician

Assess MAWS score q 1hr following each dose of Lorazepam

Assess for Type C symptoms

Assess MAWS score q 4hrs
If MAWS score = 0 after another 48 hours, contact clinician to discontinue MAW protocol

MAWS score ≥ 17?

MAWS score ≥ 6?

Contact clinician to consider adjunct therapy with Clonidine

Are Type C symptoms present and unresponsive to Lorazepam?

Contact clinician to consider adjunct therapy with Haloperidol

If clinician orders Haloperidol 0.5-2mg PO/DHT/IV q 2hrs prn until Type C symptoms resolve OR patient is calm and cooperative OR can be redirected
Lorazepam should be continued unless otherwise specified by clinician

Administer: Lorazepam 1-2 mg PO/DHT/IV q 1hr pen until
MAWS = 0 OR patient is calm and cooperative

If patient requires more than 8 mg Lorazepam in 12 hours, contact clinician for re-evaluation

Consider scheduled (maintenance) dosing of adjunctive medications if:
1. Lorazepam > 4 mg is administered during 24-hour period.
2. Clonidine > 0.6 mg is administered during a 24-hour period.
3. Haloperidol > 20 mg is administered during a 24-hour period.

Dosing instructions are located in Clinician Instructions.

FINAL Updated 8/25/09
ADULT Michigan Alcohol Withdrawal Guidelines
SEVERE Withdrawal (Page III)

Clinician to initiate SEVERE Withdrawal Treatment Protocol

Assess MAWS score q 1hr

Contact clinician to initiate MILD/MODERATE Withdrawal Treatment Protocol
GO TO PAGE II

YES

Average MAWS score ≥ 2 over past 24 hours?

NO

MAWS score ≥ 1?

YES

Administer: Lorazepam 2-4 mg PO/DHT q 1hr prn until
MAWS = 0
OR
patient is calm and cooperative

If patient requires more than 16 mg Lorazepam in 12 hours, contact clinician for re-evaluation

Consider scheduled (maintenance) dosing of adjunctive medications if:
1. Lorazepam > 4 mg is administered during 24-hour period.
2. Clonidine > 0.6 mg is administered during a 24-hour period.
3. Haloperidol > 20 mg is administered during a 24 hour period.

Dosing instructions are located in Clinician Instructions.

Assess MAWS score q 1hr following each dose of Lorazepam

If MAWS score is ≥ 6 for 6 hours with active treatment
OR
signs of clinical instability recommend evaluation for transfer to ICU

Are 2 or more Type B symptoms present and unresponsive to Lorazepam?

YES

Contact clinician to consider adjunct therapy with Clonidine

If clinician orders Administer Clonidine 0.2mg PO/DHT q 2hrs prn x 3 doses until type B score < 2
Discontinue Clonidine if systolic BP decreases by >50 mmHg OR diastolic BP decreases by >20 mmHg with any one dose of Clonidine

Lorazepam should be continued unless otherwise specified by clinician

Assess MAWS score q 1hr following each dose of Lorazidine

Assess MAWS score q 1hr

Assess for Type C symptoms

Are Type C symptoms present and unresponsive to Lorazepam?

YES

Contact clinician to consider adjunct therapy with Haloperidol

If clinician orders Administer Haloperidol 2.4 mg PO/DHT/IM q 2hrs prn until Type C symptoms resolve OR patient is calm and cooperative OR can be redirected
Lorazepam should be continued unless otherwise specified by clinician

Assess MAWS score q 1hr following each dose of Haloperidol

NO
Michigan Alcohol Withdrawal Severity (MAWS) Assessment Scale
# ADULT MICHIGAN ALCOHOL WITHDRAWAL SEVERITY (MAWS) ASSESSMENT SCALE

## Type A Symptoms (CNS Excitation)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Does patient appear</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Anxious or nervous</td>
<td></td>
</tr>
<tr>
<td>b. Restless</td>
<td></td>
</tr>
<tr>
<td>c. Bothered by bright light</td>
<td></td>
</tr>
<tr>
<td>d. Bothered by sounds</td>
<td></td>
</tr>
</tbody>
</table>

Assign one point for each symptom group (a-d), maximum points: 4

If MAWS score ≥ 1, administer lorazepam as ordered q 1hr prn until MAWS score = 0 OR patient is calm and cooperative. Continue to assess patient every 1-2 hours per protocol.

## Type B Symptoms (Adrenergic Hyperactivity)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Does patient have</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. Nausea or vomiting</td>
<td></td>
</tr>
<tr>
<td>f. Tremor visible with or without arms extended</td>
<td></td>
</tr>
<tr>
<td>g. Sweat visible on palms or forehead</td>
<td></td>
</tr>
<tr>
<td>h. SBP ↑ 30mmHg over baseline or &gt;170mmHg OR DBP ↑ 20mmHg over baseline or &gt;100mmHg</td>
<td></td>
</tr>
<tr>
<td>i. Heart rate &gt; 110</td>
<td></td>
</tr>
</tbody>
</table>

Assign one point for each symptom group (e-i), maximum points: 5

If MAWS score is ≥2 with presence of 2 or more Type B symptoms not responsive to lorazepam, contact clinician to consider adjunct therapy with clonidine.

If clinician orders administer clonidine as ordered q 2hr prn x 3 doses until type B score < 2. Discontinue clonidine if systolic BP decreases by >30 OR diastolic BP decreases by >20 with any one dose.

Lorazepam should be continued if MAWS ≥1 unless otherwise specified by clinician.

## Type C Symptoms (Delirium)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Does the patient demonstrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>j. Inappropriate behavior AND cannot be redirected OR k. Disinhibited AND cannot be redirected OR l. Disoriented - cannot state name, date, where they are, how long hospitalized OR m. Hallucinations (auditory, tactile, and/or visual) AND cannot be redirected</td>
<td><strong>Assess for history of dementia to identify any baseline patient behavioral characteristics that may be misclassified as Type C symptoms.</strong></td>
</tr>
</tbody>
</table>

Max points: 1

**List baseline characteristics here:**

1. 
2. 
3. 
4. 

If MAWS score ≥1 with presence of Type C symptoms not responsive to lorazepam, contact clinician to consider adjunct therapy with haloperidol.

If clinician orders administer haloperidol as ordered q 2hr prn until Type C symptoms resolve OR patient is calm and cooperative OR can be redirected.

Lorazepam should be continued if MAWS ≥1 unless otherwise specified by clinician.

### Michigan Alcohol Withdrawal Severity (MAWS) Score

(Sum of Type A, B, C scores (maximum of 10 points))

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*Note: although patients may have more than one Type C symptom, the total maximum points assigned for scoring is 1.*
Clinician Instructions
GENERAL THERAPY RECOMMENDATIONS

The guidelines are intended to be applied to adult patients (18 years of age or older) experiencing alcohol withdrawal. Treatment of alcohol withdrawal with Lorazepam is considered first-line therapy. Clonidine and/or Haloperidol may be considered as adjunctive therapy. Lorazepam should continue if adjunctive therapy is initiated unless specifically directed otherwise by the patient’s clinician.

Michigan Alcohol Withdrawal Severity (MAWS) score of ≥ 6, indicates SEVERE alcohol withdrawal. Otherwise, patients may be treated using the MILD-MODERATE treatment protocol.

**Withdrawal Severity**
- Total score of ≤ 1 is no or minimal withdrawal
- Total score of 2 – 5 is mild to moderate withdrawal
- Total score of ≥ 6 is severe withdrawal

Consider consultation from General Medicine (General Medicine Attending pager #31610) to assist in management of patients in alcohol withdrawal not responsive to conventional therapy or inability to use lorazepam for initial therapy.

SUGGESTED DRUG WITHHOLDING CLINICAL PARAMETERS

1. Lorazepam:
   a. Sedation score ≥ 2 (out of 4); Respiratory Rate < 10; Oxygen saturation < 90%.
   b. Generally considered safe for use during pregnancy; use with caution during first trimester.

2. Clonidine:
   a. Systolic BP ≤ 130; Diastolic BP ≤ 70 mmHg; Heart Rate ≤ 60 beats per minute.
   b. Generally considered safe for use during pregnancy; use with caution during first trimester.

3. Haloperidol:
   a. Sedation score ≥ 2 (out of 4); Respiratory Rate < 10; Oxygen saturation < 90%.
   b. If duration of Haloperidol use exceeds 48 hours, recommend repeat EKG to monitor QTc interval.
   c. Consider avoiding further use of Haloperidol if QTc interval > 450 ms.
   d. Consider avoiding Haloperidol use in patients with Parkinson’s disease or African American race (given increased risk of tardive dyskinesia).
   e. Generally considered safe for use during pregnancy; **avoid** administration of Haloperidol during first trimester of pregnancy.
1. Clinician to order and review baseline EKG.

2. If patient has MAWS Assessment Scale score between 1 and 5, nurse to administer Lorazepam 1-2 mg PO/DHT/IV every 1 hr prn until MAWS Assessment Scale score is 0 OR patient is calm and cooperative.

3. If patient requires ≥ 8 mg Lorazepam in 12 hours, nurse to contact clinician for re-evaluation.
   a. If contacted by nursing, clinician may continue therapy with current guidelines, supplement with additional dose(s) of Lorazepam, or escalate to SEVERE withdrawal guidelines.
   b. If patient required ≥ 4mg of Lorazepam during a 24-hour period, initiate scheduled Lorazepam every 6 hrs [see Maintenance Recommendations: Lorazepam].

4. If patient has no symptoms after 24 hrs from last Lorazepam dose (MAWS Assessment Scale score is 0), frequency of assessment will decrease to every 4 hrs until 48 hours OR discharge.

5. If patient continues to have 2 or more TYPE B symptoms present on the MAWS Assessment Scale that are not responsive to Lorazepam, clinician to consider adjunctive therapy with Clonidine.
   a. Evaluate patient to rule out contributing factors (e.g. hypoglycemia, electrolyte abnormality, dehydration, cardiac problems, etc.).
   b. Dosing of Clonidine is 0.1mg PO/DHT every 2 hrs to a maximum of 3 doses (0.3 mg total) to achieve Type B score < 2.
   c. Discontinue Clonidine if systolic blood pressure (SBP) decreases by > 30 mmHg OR diastolic blood pressure (DBP) decreases by > 20 mmHg with any one dose of Clonidine.
   d. If patient required ≥ 0.6 mg Clonidine during a 24-hour period, initiate scheduled Clonidine 0.1 mg every 6 hrs [see Maintenance Recommendations: Clonidine].

6. If patient continues to have clinically significant TYPE C symptoms present on the MAWS Assessment Scale that are not responsive to Lorazepam, clinician to consider adjunctive therapy with Haloperidol.
   a. Evaluate patient to rule out contributing factors (e.g. hypoglycemia, electrolyte abnormality, dehydration, cardiac problems, etc.). Consider avoiding the use of Haloperidol in patients with Parkinson’s disease and/or African American race.
   b. Dosing of Haloperidol is 0.5-2 mg PO/DHT/IM every 2 hours until TYPE C symptoms resolve OR patient is calm and cooperative OR can be redirected.
   c. Nurse to monitor patient every 1 hr following each dose of Haloperidol and contact clinician if patient develops fever, new hypertension, dystonic reaction, or fails to respond to Haloperidol.
   d. If patient required ≥ 20mg of Haloperidol in past 24 hour period, initiate scheduled Haloperidol [see Maintenance Recommendations: Haloperidol]

7. If patient has MAWS Assessment Scale ≥ 6 (SEVERE withdrawal), following multi-disciplinary team evaluation, transfer to telemetry bed. Initiate guidelines for SEVERE withdrawal with new order set (see instructions on CareLink Order Sets). Consider evaluation for transfer to ICU if MAWS Assessment Scale ≥ 6 following 6 hours of therapy OR signs of clinical instability (e.g. SBP <85 or >185; HR >125; RR > 30; inability to protect airway).
CLINICIAN INSTRUCTIONS
ADULT Michigan Alcohol Withdrawal Guidelines
Updated 8/25/09

SEVERE ALCOHOL WITHDRAWAL
(MAWS Assessment Scale score ≥ 6)

1. Admit to telemetry bed or ICU. Consider evaluation for transfer to ICU if MAWS Assessment Scale ≥ 6 for > 6 hours OR clinical instability.
2. Clinician to order and review baseline EKG.
3. If patient has MAWS Assessment Scale score ≥ 1, nurse to administer Lorazepam 2-4 mg PO/DHT/IV every 1 hr prn until MAWS Assessment Scale score <1 OR patient is calm and cooperative.

4. If patient requires > 16 mg Lorazepam in 12 hours, nurse to contact clinician for re-evaluation.
   a. If contacted by nursing, clinician may continue therapy with current guidelines, supplement with additional dose(s) of Lorazepam, or evaluate for transfer to ICU.
5. If patient continues to have 2 or more TYPE B symptoms present on the MAWS Assessment Scale that are not responsive to Lorazepam, physician to consider adjunctive therapy with Clonidine. Nurse to assess patient using MAWS Assessment Scale every 1 hrs.
   a. Evaluate patient to rule out contributing factors (e.g. hypoglycemia, electrolyte abnormality, dehydration, cardiac problems, etc.).
   b. Dosing of Clonidine is 0.1-0.2mg PO/DHT every 2 hrs to a maximum of 3 doses (0.6 mg total) to achieve Type B score < 2.
   c. Discontinue Clonidine if systolic blood pressure (SBP) decreases by > 30 mmHg OR diastolic blood pressure (DBP) decreases by > 20 mmHg with any one dose of Clonidine.
   d. If TYPE B symptoms do not respond to Clonidine, clinician may continue therapy with current guidelines, supplement with additional dose(s) of Clonidine, or evaluate for transfer to ICU.
   e. If patient required ≥ 0.6 mg Clonidine during a 24-hour period, initiate scheduled Clonidine 0.1 mg every 6 hrs [see Maintenance Recommendations: Clonidine].
6. If patient continues to have clinically significant TYPE C symptoms present on the MAWS Assessment Scale that are not responsive to Lorazepam, clinician to consider adjunctive therapy with Haloperidol.
   a. Evaluate patient to rule out contributing factors (e.g. hypoglycemia, electrolyte abnormality, dehydration, cardiac problems, etc.). Consider avoiding the use of Haloperidol in patients with Parkinson’s disease and/or African American race.
   b. Dosing of Haloperidol is 2-4 mg PO/DHT/IM every 2 hours until TYPE C symptoms resolve OR patient is calm and cooperative OR can be redirected.
   c. Nurse to monitor patient every 1 hr following each dose of Haloperidol and contact clinician if patient develops fever, new hypertension, dystonic reaction, or fails to respond to Haloperidol.
   d. If patient required ≥ 20mg of Haloperidol in past 24 hour period, initiate scheduled Haloperidol [see Maintenance Recommendations: Haloperidol]
7. If patient has MAWS Assessment Scale ≥ 6 (severe withdrawal) following 6 hours of therapy OR signs of clinical instability (e.g. SBP <85 or >185; HR >125; RR > 30; inability to protect airway), recommend evaluation for transfer to ICU.
8. When patient has stabilized (MAWS Assessment Scale ≤ 5 for a 24 hr period), initiate protocol for MILD-MODERATE withdrawal with new order set (see instructions on CareLink Order Sets).
MAINTENANCE RECOMMENDATIONS: **LORAZEPAM**

1. If patient required < 4mg of Lorazepam during a 24-hour period, continue Lorazepam 1-2 mg every 1 hr prn until MAWS Assessment Scale score is 0 OR patient is calm and cooperative.
2. If patient required ≥ 4mg of Lorazepam during a 24-hour period, initiate scheduled Lorazepam at 50% of the previous day’s requirement split into 4 divided doses. Doses should be administered every 6 hrs. Continue Lorazepam 1-2mg every 1 hr prn until MAWS Assessment Scale score is 0 OR patient is calm and cooperative.
3. When patient has stable or decreasing MAWS Assessment Scale score for a 24 hour period (PRN dosing < 4 mg in previous 24 hrs), may begin to taper Lorazepam. During taper, total scheduled Lorazepam dose should be decreased by 25% daily as tolerated and PRN dosing continued.
4. Continue MAWS Assessment Scale scoring every 2 hrs during taper. If patient develops signs of withdrawal during taper, increase Lorazepam to prior maintenance dose and do not reattempt tapering until patient has demonstrated stable or decreasing MAWS Assessment Scale score for a 24-hour period.

MAINTENANCE RECOMMENDATIONS: **CLONIDINE**

1. If patient required < 0.6 mg Clonidine during a 24-hour period, continue Clonidine 0.1 mg every 6 hrs prn until **TYPE B** score is < 2.
2. If patient required ≥ 0.6 mg Clonidine during a 24-hour period, initiate scheduled Clonidine 0.1 mg every 6 hrs.
3. Discontinue Clonidine if systolic blood pressure (SBP) decreases by > 30 mmHg OR diastolic blood pressure (DBP) decreases by > 20 mmHg with any one dose of Clonidine and contact physician.
4. When patient has stable or decreasing **TYPE B** score for a 24-hour period, may begin to taper Clonidine. To initiate taper, increase dosing interval of Clonidine to 0.1 mg every **8 hours** for a 24-hour period.
5. To continue taper, if patient remains with stable or decreasing **TYPE B** score for a 24-hour period, increase dosing interval of Clonidine to 0.1 mg every **12 hours** for a 24-hour period.
6. To continue taper, if patient remains with stable or decreasing **TYPE B** score for a 24-hour period, increase dosing interval of Clonidine to 0.1 mg every **24 hours** for a 24-hour period.
7. Clonidine may be discontinued when patient’s **TYPE B** score is < 2. If patient develops signs of withdrawal during taper (i.e. an increase in **TYPE B** symptoms), increase Clonidine to prior maintenance dose and do not reattempt tapering until patient has demonstrated stable or decreasing **TYPE B** score for a 24-hour period.
MAINTENANCE RECOMMENDATIONS: HALOPERIDOL

1. If patient required < 20 mg of Haloperidol during a 24-hour period, continue Haloperidol 0.5-2 mg every 2 hrs prn. Continue monitoring every 2 hours until TYPE C score is 0 OR patient is calm and cooperative OR can be redirected.

2. If patient required ≥ 20mg of Haloperidol in past 24 hour period, begin scheduled Haloperidol at 50% of the previous day’s total requirement split into 4 divided doses administered every 6 hrs. Continue Haloperidol 0.5-2 mg every 2 hrs prn until TYPE C score is 0 OR patient is calm and cooperative OR can be redirected.

3. When patient has stable or decreasing TYPE C score for a 24-hour period, may begin to taper Haloperidol. To initiate taper, reduce Haloperidol dose by 25% daily as tolerated. Continue prior PRN dosing.

4. Continue MAWS Assessment Scale scoring every 2 hrs during taper. If patient develops signs of withdrawal during taper, increase Haloperidol to prior maintenance dose and do not reattempt tapering until patient has demonstrated stable or decreasing TYPE C score for a 24-hour period.

5. If duration of Haloperidol use exceeds 48 hours, recommend repeat EKG to monitor QTc interval. Consider avoiding further use of Haloperidol if QTc interval > 450 ms.
NURSING INSTRUCTIONS
ADULT Michigan Alcohol Withdrawal Guidelines
Updated 6/15/09

GENERAL THERAPY RECOMMENDATIONS

The guidelines are intended to be applied to adult patients (18 years of age or older) experiencing alcohol withdrawal. Treatment of alcohol withdrawal with Lorazepam is considered first-line therapy. Clonidine and/or Haloperidol may be considered as adjunctive therapy. Lorazepam should continue if adjunctive therapy is initiated unless specifically directed otherwise by the patient’s clinician.

Michigan Alcohol Withdrawal Severity (MAWS) score of $\geq 6$ indicates SEVERE alcohol withdrawal. Otherwise, patients may be treated using the MILD-MODERATE treatment protocol.

**Withdrawal Severity**
- Total score of $\leq 1$ is no or minimal withdrawal
- Total score of $2 - 5$ is mild to moderate withdrawal
- Total score of $\geq 6$ is severe withdrawal

**CONSIDER WITHHOLDING MEDICATIONS IF:**

1. **Lorazepam:**
   a. Sedation score $\geq 2$ (out of 4); Respiratory Rate $< 10$; Oxygen saturation $< 90\%$.
   b. Generally considered safe for use during pregnancy; use with caution during first trimester.

2. **Clonidine:**
   a. Systolic BP $\leq 130$; Diastolic BP $\leq 70$ mmHg; Heart Rate $\leq 60$ beats per minute.
   b. Generally considered safe for use during pregnancy; use with caution during first trimester.

3. **Haloperidol:**
   a. Sedation score $\geq 2$ (out of 4); Respiratory Rate $< 10$; Oxygen saturation $< 90\%$.
   b. If duration of Haloperidol use exceeds 48 hours, recommend repeat EKG to monitor QTc interval. Consider avoiding further use of Haloperidol if QTc interval $> 450$ ms.
   c. Consider avoiding Haloperidol use in patients with Parkinson’s disease and/or African American race (given increased risk of tardive dyskinesia).
   d. Generally considered safe for use during pregnancy; **avoid** administration of Haloperidol during first trimester of pregnancy.
MILD or MODERATE ALCOHOL WITHDRAWAL

(MAWS Assessment Scale score between 0 and 5)

1. Prophylactic vitamin supplements to patients at risk for withdrawal:
   a. Thiamine 100 mg PO/DHT/IV daily for 7 days.
   b. Folic acid 1 mg PO/DHT/IV daily for 7 days.
   c. Multivitamin PO/DHT daily for 7 days.

2. Screen patients for alcohol usage:
   a. Nurse – response to question on alcohol usage from admission assessment (FHPA)
   b. Clinician - Administer CAGE questionnaire.
   c. If CAGE score $\geq 1$ or T-ACE $\geq 1$, or patient reports excessive alcohol use, initiate social work, consult for assessment of ETOH cessation counseling during admission/post-discharge.

3. Assess patient using MAWS Assessment Scale every 2 hrs. and after each PRN dose of medication (lorazepam, clonidine or haloperidol).
   a. Include vital signs (heart rate, BP, respiratory rate) and pulse oximetry.
   b. If patient has MAWS Assessment Scale score between 1 and 5, administer Lorazepam 1-2 mg PO/DHT/IV every 1 hr prn until MAWS Assessment Scale score is 0 OR patient is calm and cooperative.
   c. If patient requires $\geq 8$ mg Lorazepam in 12 hours, contact clinician for re-evaluation.
   d. If patient has no symptoms after 24 hrs from last Lorazepam dose (MAWS Assessment Scale score is 0), decrease frequency of assessment to every 4 hrs for 48 hours then discontinue.
   e. If symptoms recur, resume monitoring. If patient remains on maintenance (scheduled) doses of medication, continue to monitor MAWS Assessment Scale at least every 4 hours.

4. If patient displays 2 or more TYPE B symptoms on the MAWS Assessment Scale that are not responsive to Lorazepam, contact clinician to consider **adjunctive** therapy with Clonidine.
   a. If clinician orders, dosing of Clonidine is 0.1mg PO/DHT every 2 hrs to a maximum of 3 doses (0.3 mg total) to achieve Type B score $< 2$. If the Type B score remains $\geq 2$, contact clinician for further orders.
   b. Continue MAWS Assessment Scale scoring and patient monitoring every 1 hr following each dose of Clonidine. Discontinue Clonidine if systolic blood pressure (SBP) decreases by $> 30$ mmHg OR diastolic blood pressure (DBP) decreases by $> 20$ mmHg with any one dose of Clonidine and contact clinician.

5. If patient displays **clinically significant** Type C symptoms outside patient’s baseline level of functioning that are not responsive to Lorazepam, contact clinician to consider **adjunctive** therapy with Haloperidol. (Clinician must review EKG to assess QT interval prior to ordering haloperidol.)
   a. If clinician orders, dosing of Haloperidol is 0.5-2 mg PO/DHT/IM every 2 hours until TYPE C symptoms resolve OR patient is calm and cooperative OR can be redirected.
   b. Continue MAWS Assessment Scale scoring and patient monitoring every 1 hr following each dose of Haloperidol. Contact clinician if patient develops fever, new hypertension, dystonic reaction, or fails to respond to Haloperidol.

6. If patient has MAWS Assessment Scale $\geq 6$ (SEVERE withdrawal), contact clinician to consider SEVERE withdrawal protocol and transfer to telemetry bed. Consider evaluation for transfer to ICU if MAWS Assessment Scale $\geq 6$ following 6 hours of active treatment OR signs of clinical instability (e.g. SBP $<85$ or $>185$; HR $>125$; RR $>30$; inability to protect airway). Initiate Rapid Response if patient displays signs of clinical instability.
NURSING INSTRUCTIONS
ADULT Michigan Alcohol Withdrawal Guidelines
Updated 6/15/09

SEVERE ALCOHOL WITHDRAWAL
(MAWS Assessment Scale score ≥ 6)

1. Prophylactic vitamin supplements to patients at risk for withdrawal:
   a. Thiamine 100 mg PO/DHT/IV daily for 7 days.
   b. Folic acid 1 mg PO/DHT/IV daily for 7 days.
   c. Multivitamin PO/DHT daily for 7 days.

2. Screen patients for alcohol usage.
   a. Nurse – response to question on alcohol usage from admission assessment (FHPA)
   b. Clinician - Administer CAGE questionnaire.
   c. If CAGE score ≥ 1 or T-ACE ≥ 1, or patient reports excessive alcohol use, initiate social work,
      consult for assessment of ETOH cessation counseling during admission/post-discharge.

3. Assess patient using MAWS Assessment Scale every 1 hrs. Include vital signs (heart rate, BP, respiratory
   rate) and pulse oximetry.
   a. If patient has MAWS Assessment Scale score > 1, administer Lorazepam 2-4 mg PO/DHT/IV
      every 1 hr prn until MAWS Assessment Scale score <1 OR patient is calm and cooperative.
   b. If patient requires > 16 mg Lorazepam in 12 hours, contact clinician for re-evaluation.

4. If patient displays 2 or more TYPE B symptoms on the MAWS Assessment Scale that are not responsive to
   Lorazepam, contact clinician to consider adjunctive therapy with Clonidine. Continue to assess patient using
   MAWS Assessment Scale every 1 hrs.
   a. If clinician orders, dosing of Clonidine is 0.1-0.2mg PO/DHT every 2 hrs to a maximum of 3
      doses (0.6 mg total) to achieve Type B score < 2. If the Type B score remains > 2, contact
      clinician for further orders.
   b. Continue MAWS Assessment Scale scoring and blood pressure monitoring every 1 hr
      following each dose of Clonidine. Discontinue Clonidine if systolic blood pressure (SBP)
      decreases by > 30 mmHg OR diastolic blood pressure (DBP) decreases by > 20 mmHg with
      any one dose of Clonidine and contact clinician.
   c. If TYPE B symptoms do not respond to Clonidine, contact clinician. Consider evaluation for
      transfer to ICU.

5. If patient displays clinically significant Type C symptoms outside patient’s baseline level of
   functioning that are not responsive to Lorazepam, contact clinician to consider adjunctive therapy with
   Haloperidol. Continue to assess patient using MAWS Assessment Scale every 1 hrs. (Clinician must
   review EKG to assess QT interval prior to ordering haloperidol.)
   a. If clinician orders, dosing of Haloperidol is 2-4 mg PO/DHT/IM every 2 hours until TYPE C
      symptoms resolve OR patient is calm and cooperative OR can be redirected.
   b. Continue MAWS Assessment Scale scoring and patient monitoring every 1 hr following each
      dose of Haloperidol. Contact clinician if patient develops fever, new hypertension, dystonic
      reaction, or fails to respond to Haloperidol. Consider transfer to ICU.

6. If patient has MAWS Assessment Scale > 6 (SEVERE withdrawal) following 6 hours of active
   treatment OR signs of clinical instability (e.g. SBP <85 or >185; HR >125; RR > 30; inability to
   protect airway), contact physician. Recommend evaluation for transfer to ICU.

7. When patient has stabilized (MAWS Assessment Scale < 5 for a 24 hr period), notify clinician to
   consider protocol for MILD-MODERATE withdrawal.

8. Initiate social work consult for assessment of alcohol cessation counseling during admission/post-
   discharge if not done previously.
Nursing Flowsheet
**Richmond Agitation Sedation Scale (RASS)**

### Adult Alcohol Withdrawal

<table>
<thead>
<tr>
<th>TIME</th>
<th>Date:</th>
<th>Vital Signs: Record with each MAWS assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Record Sedation Score, BP, P, R, O, Ssat. with each MAWS assessment and a minimum of 4 hours everyday or as indicated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Document vitals on the AWS flowsheet and in respective times on the 24° Flowsheet, record ‘See AWS flowsheet’.</td>
</tr>
</tbody>
</table>

**Type A Symptoms (CNS Excitation)**

<table>
<thead>
<tr>
<th>Does patient appear</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Anxious or nervous</td>
</tr>
<tr>
<td>b. Restless</td>
</tr>
<tr>
<td>c. Bothered by bright light</td>
</tr>
<tr>
<td>d. Bothered by sounds</td>
</tr>
</tbody>
</table>

Assign one point for each symptom group (a-d), maximum points: 4.

**Type B Symptoms (Adrenergic Hyperactivity)**

<table>
<thead>
<tr>
<th>Does patient have</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. Nausea or vomiting</td>
</tr>
<tr>
<td>f. Tremor visible with or without arms extended</td>
</tr>
<tr>
<td>g. Sweat visible on palms or forehead</td>
</tr>
<tr>
<td>h. SBP &gt;120mmHg over baseline or &gt;170mmHg OR DBP &gt;120mmHg over baseline or &gt;100mmHg</td>
</tr>
<tr>
<td>i. Heart rate &gt;110</td>
</tr>
</tbody>
</table>

Assign one point for each symptom group (e-i), maximum points: 5.

**Type C Symptoms (Delirium)**

<table>
<thead>
<tr>
<th>Assess for acute change from baseline**</th>
<th>Does the patient demonstrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>j. Inappropriate behavior AND cannot be redirected OR</td>
<td></td>
</tr>
<tr>
<td>k. Disoriented AND cannot be redirected OR</td>
<td></td>
</tr>
<tr>
<td>l. Disoriented - cannot state name, date, where they are, how long hospitalized OR</td>
<td></td>
</tr>
<tr>
<td>m. Hallucinations (auditory, tactile, and/or visual) AND cannot be redirected</td>
<td></td>
</tr>
</tbody>
</table>

Approximate maximum points 1:

**Michigan Alcoholic Withdrawal Severity (MAWS) Score**

| Sum of Type A, B, C scores - maximum of 10 points |

**Does patient appear**

- If MAWS score > 1, administer lorazepam as ordered q 1 hr prn until MAWS score = 0 OR patient is calm and cooperative.
- Continue to assess patient every 1-2 hours per protocol.

**Does patient have**

- If MAWS score is > 2 with presence of 2 or more Type B symptoms not responsive to lorazepam, contact MD to consider adjunct therapy with clonidine.

**Lorazepam should be continued if MAWS > 1 unless otherwise specified by MD**

**Med:______________**

**Med C: Haloperidol**

**Med B: Clonidine**

**Med A: Lorazepam**

**Total of all Scores**

**Type A symptoms present (list letters) / Total Score**

**Type B symptoms present (list letters) / Total Score**

**Type C symptoms present (list letters) / Total Score**

**Vital Signs: Record with each MAWS assessment**

- Respiration
- Blood Pressure
- Pulse
- Saturation
- **Document vitals on the AWS flowsheet and in respective times on the 24° Flowsheet, record ‘See AWS flowsheet’.**

**Record Sedation Score, BP, P, R, O**

**Assign one point for each symptom group (a-d), maximum points: 4**

**Assign one point for each symptom group (e-i), maximum points: 5**

**Vital Signs: Record with each MAWS assessment**

- Assign one point for each symptom group (a-d), maximum points: 4.
- Assign one point for each symptom group (e-i), maximum points: 5.

**CAGE Screening Tool**

- **CAGE screening questionnaires - Completed by Physician**

- **T-ACE Screening Tool**

**CAGE screening questionnaires**

- **Nurse Signature:**

- **Set baseline characteristics here:**

**T-ACE screening questionnaires**

- **Nurse Signature:**

**Michigan Alcoholic Withdrawal Severity (MAWS) Score**

- **Sum (of Type A, B, C scores) - maximum of 10 points**
CareLink Order Sets
INSTRUCTIONS FOR CARELINK ORDER SETS

Initiating Orders

1. Search terms for order sets in CareLink include “alcohol”, “alcohol withdrawal”, “EtOH” or “AWS”.
2. There are three available order sets: 1) “AWS initiation - Mild/Moderate Withdrawal”; 2) “AWS initiation - Severe Withdrawal”; and 3) “AWS Maintenance/Adjunctive Therapy”.
3. Select “AWS initiation Mild/Moderate Withdrawal” order set for Mild/Moderate withdrawal (MAWS score <6) or “AWS initiation - Severe Withdrawal” order set for Severe withdrawal (MAWS score ≥6.)
4. The “AWS - Maintenance/Adjunctive Therapy” order set is used for ordering adjunctive medications (Clonidine or Haloperidol) or maintenance therapy (Lorazepam, Clonidine or Haloperidol). Orders in this set are stratified separately for Mild/Moderate withdrawal or Severe withdrawal. This order set should not be used alone, and is used in addition to either the Mild/Moderate or Severe order sets.

Changing Order Sets

1. The following steps are necessary for proper maintenance and avoidance of duplicate/conflicting orders between sets.
2. Changing between the “AWS – Mild/Moderate Withdrawal” and “AWS – Severe Withdrawal” orders
   a. Discontinuing the old order set:
      i. Within the “Orders” tab in CareLink, locate the “Display Format” drop down menu in the left-hand pane, and select the “Order Sets” option. This will result in all orders to sort under their respective order sets in the right-hand pane.
      ii. To discontinue an order set, right-click on the name of the order set in the right-hand pane, and select “Discontinue/Cancel”.
   b. Initiating a new order set:
      i. To initiate the new order set, see instructions for “Initiating Orders” above.
      ii. If an EKG has been obtained previously, this order may be unchecked.
      iii. If a social work consult has been requested previously, this order may be unchecked.
3. Changing the “AWS – Maintenance/Adjunctive Therapy” orders
   a. Sort orders by order sets as described in step 2(a)(i) above.
   b. Right-click the name of the order set and choose “Discontinue/Reorder”.
### Notify Clinician

<table>
<thead>
<tr>
<th>Order</th>
<th>Parameter</th>
<th>Special Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>Notify Clinician for Clinical instability</td>
<td>Physician to consult AWS protocol.</td>
</tr>
<tr>
<td>✓</td>
<td>Notify Clinician for patient who requires ( \geq 8 ) mg Lorazepam in 12 hours</td>
<td>Physician to consider ADJUNCTIVE therapy with Clonidine...</td>
</tr>
<tr>
<td>✓</td>
<td>Notify Clinician for Persistent TYPE B symptoms not responsive to Lorazepam</td>
<td>Physician to consider ADJUNCTIVE therapy with Haloperidol...</td>
</tr>
<tr>
<td>✓</td>
<td>Notify Clinician for Persistent TYPE C symptoms not responsive to Lorazepam</td>
<td>Physician to consider ADJUNCTIVE therapy with Haloperidol...</td>
</tr>
<tr>
<td>✓</td>
<td>Notify Clinician for MAWS score ( \geq 6 ) (severely intoxicated)</td>
<td>Physician to consider initiating SEVERE withdrawal protocol...</td>
</tr>
<tr>
<td>✓</td>
<td>Notify Clinician for MAWS score ( \geq 6 ) (severely intoxicated)</td>
<td>Contact physician to discontinue AWS protocol...</td>
</tr>
</tbody>
</table>

### Nursing

<table>
<thead>
<tr>
<th>Order</th>
<th>Parameter</th>
<th>Frequency</th>
<th>Special Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>Assess patient using MAWS*</td>
<td>Q2H</td>
<td>Including blood pressure, heart rate, respiratory rate, and oxygen...</td>
</tr>
</tbody>
</table>

If patient is sedated or is receiving all 3 medications (lorazepam, clonidine, and haloperidol) for treatment of AWS, consider an evaluation for ICU management.

### Medications

<table>
<thead>
<tr>
<th>Order</th>
<th>Ordering Info</th>
<th>Score</th>
<th>From</th>
<th>To</th>
<th>UOM</th>
<th>Route</th>
<th>Frequency</th>
<th>PRN</th>
<th>PRN Reason</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>thiamine</td>
<td>mg</td>
<td>oral</td>
<td>daily</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓</td>
<td>folic acid</td>
<td>mg</td>
<td>oral</td>
<td>daily</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓</td>
<td>lorazepam</td>
<td>mg</td>
<td>IV/PO</td>
<td>every 1 hour</td>
<td>✓</td>
<td>MAWS score &gt;</td>
<td>May be...</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Cardiology

<table>
<thead>
<tr>
<th>Order</th>
<th>Priority</th>
<th>Requested Date</th>
<th>Indication</th>
<th>Right Side</th>
<th>Rhythms Strip</th>
<th>Special Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>EKG Adult 12 Lead</td>
<td>03-30-2009</td>
<td>Assess QT interval</td>
<td>✓</td>
<td>Alcohol withdrawal</td>
<td></td>
</tr>
<tr>
<td>WS Initiation - Mild/Med. Withdrawal</td>
<td>Order</td>
<td>Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------------------</td>
<td>--------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AWS Initiation - Mild/Med. Withdrawal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EKG Adult 12 Lead - Routine once, Special Instructions; Alcohol withdrawal</td>
<td>03-30-2009 Routine</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify Clinician for - Clinical instability</td>
<td>03-30-2009</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify Clinician for - patient who requires &gt; or = 8 mg Lorazepam in 12 hours, Physician to consult AWS protocol</td>
<td>03-30-2009</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify Clinician for - Persistent TYPE 8 symptoms not responsive to Lorazepam, Physician to consider ADJUNCTIVE therapy with Clonidine. This can be ordered through the AWS Maintenance/Adjunctive Therapy order set. &quot;Michigan Alcohol Withdrawal Severity Assessment Scale.&quot;</td>
<td>03-30-2009</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify Clinician for - Persistent TYPE C symptoms not responsive to Lorazepam, Physician to consider ADJUNCTIVE therapy with Haloperidol. This can be ordered through the AWS Maintenance/Adjunctive Therapy order set. &quot;Michigan Alcohol Withdrawal Severity Assessment Scale.&quot;</td>
<td>03-30-2009</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify Clinician for - MAWS* score &gt; or = 6 (severe withdrawal), Physician to consider initiating SEVERE withdrawal protocol. Recommend transfer to Intensive Care Unit; Consider evaluation for transfer to ICU if MAWS* assessment scale &gt; or = 6 following 8 hours of therapy; OR signs of clinical instability. &quot;Michigan Alcohol Withdrawal Severity Assessment Scale.&quot;</td>
<td>03-30-2009</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notify Clinician for - MAWS* = 0 for 72 hours. Contact physician to discontinue AWS protocol. &quot;Michigan Alcohol Withdrawal Severity Assessment Scale.&quot;</td>
<td>03-30-2009</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ateze - patient using MAWS*, Q2H, including blood pressure, heart rate, respiratory rate, and oxygen saturation. Additionally, assess 1 hour after treatment of Type A, B, or C symptoms. If MAWS* = 0, for 24 hours increase frequency of assessment to every 4 hours. &quot;Michigan Alcohol Withdrawal Severity Assessment Scale.&quot;</td>
<td>03-30-2009</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lorazepam 1 mg tablet oral daily, step after 7 Days.</td>
<td>03-30-2009 Routine</td>
<td>04-06-2009 10:43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Folic acid 1 mg tablet oral daily, step after 7 Days.</td>
<td>03-30-2009 Routine</td>
<td>04-06-2009 10:43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multivitamin tablet 1 tablet oral daily, step after 7 Days.</td>
<td>03-30-2009 Routine</td>
<td>04-06-2009 10:43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiated therapy (lorazepam)</td>
<td>Lorazepam (intravenous) (1 - 2 mg IV/Po every 1 hour PRN MAWS score &gt; or = 1.) May be administered IV or PO. Administer as needed until patient is calm and cooperative OR MAWS score = 0., Assess MAWS 1 hour after administration</td>
<td>03-30-2009 Routine</td>
<td>Pending</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
If patient is sedated or is requiring all 3 medications (lorazepam, clonidine, and haloperidol) for treatment of AWS, consider an evaluation for ICU management.

### Adjunctive Medications:

<table>
<thead>
<tr>
<th>Order</th>
<th>Medication</th>
<th>Dose</th>
<th>From</th>
<th>To</th>
<th>UOM</th>
<th>Route</th>
<th>Frequency</th>
<th>PRN</th>
<th>PRN Reason</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild/Moderate Withdrawal: - 2 item(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Type B score = or...</td>
<td>Administer up to 3...</td>
</tr>
<tr>
<td></td>
<td>clonidine</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td>mg</td>
<td>oral</td>
<td>every 2 hours</td>
<td>□</td>
<td>clinically significant.</td>
</tr>
<tr>
<td></td>
<td>haloperidol (multiroute)</td>
<td>EKG REQUIRED</td>
<td>0.5</td>
<td>2</td>
<td></td>
<td>mg</td>
<td>IM/PO</td>
<td>every 2 hours</td>
<td>□</td>
<td>clinically significant.</td>
</tr>
<tr>
<td></td>
<td>Severe Withdrawal: - 2 item(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Type B score = or...</td>
<td>Administer up to 3...</td>
</tr>
<tr>
<td></td>
<td>clonidine</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td>mg</td>
<td>oral</td>
<td>every 2 hours</td>
<td>□</td>
<td>clinically significant.</td>
</tr>
<tr>
<td></td>
<td>haloperidol (multiroute)</td>
<td>EKG REQUIRED</td>
<td>2</td>
<td>4</td>
<td></td>
<td>mg</td>
<td>IM/PO</td>
<td>every 2 hours</td>
<td>□</td>
<td>clinically significant.</td>
</tr>
</tbody>
</table>

### Maintenance Medications:

<table>
<thead>
<tr>
<th>Order</th>
<th>Medication</th>
<th>Dose</th>
<th>From</th>
<th>To</th>
<th>UOM</th>
<th>Route</th>
<th>Frequency</th>
<th>PRN</th>
<th>PRN Reason</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maintenance (lorazepam) - 1 item(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>May be administered IV.</td>
</tr>
<tr>
<td></td>
<td>lorazepam (multiroute)</td>
<td>≥ 4 mg/24 hours</td>
<td></td>
<td></td>
<td></td>
<td>mg</td>
<td>IV/PO</td>
<td>every 6 hours</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maintenance (clonidine) - 2 item(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Type B score &gt; 0</td>
<td>Stop clonidine if SBP...</td>
</tr>
<tr>
<td></td>
<td>clonidine</td>
<td>&lt; 0.6 mg/24 hours</td>
<td>0.1</td>
<td></td>
<td></td>
<td>mg</td>
<td>oral</td>
<td>every 6 hours</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>clonidine</td>
<td>≥ 0.6 mg/24 hours</td>
<td>0.1</td>
<td></td>
<td></td>
<td>mg</td>
<td>oral</td>
<td>every 6 hours</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maintenance (haloperidol) - 1 item(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>May be administered...</td>
</tr>
<tr>
<td></td>
<td>haloperidol</td>
<td>≥ 20 mg/24 hours</td>
<td></td>
<td></td>
<td></td>
<td>mg</td>
<td>IM/PO</td>
<td>every 6 hours</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>
### Carotid Blowout Precautions

- **Requested By:** Keppler, Teresa CDT (Analyst)
- **Date:** 03-10-2009 00:00
- **Type and Screen:** Phlebotomy/AM Collec
- **Status:** Pending Collection

- **Date:** 03-13-2009 00:00
- **Type and Screen:** Phlebotomy/AM Collec
- **Status:** Pending Collection

- **Date:** 03-16-2009 00:00
- **Type and Screen:** Phlebotomy/AM Collec
- **Status:** Pending Collection

- **Date:** 03-19-2009 00:00
- **Type and Screen:** Phlebotomy/AM Collec
- **Status:** Pending Collection

### AWS Initiation - Severe Withdrawal

- **EKG Adult 12 Lead:** Routine once, Special Instructions: Alcohol withdrawal
- **Notify Clinician for:** Clinical instability
- **Access - patient using MAWS**: Every hour, including blood pressure, heart rate, respiratory rate, and oxygen saturation
- **Michigan Alcohol Withdrawal Severity Assessment Scale**: 03-30-2009
- **Active**

- **Notify Clinician for:** Persistent TYPE C symptoms not responsive to Lorazepam. Physician to consider ADJUNCTIVE therapy with Clonidine. This can be ordered using the AWS Maintenance/Adjunctive Therapy order set.
  - ** Michigan Alcohol Withdrawal Severity Assessment Scale**: 03-30-2009
  - **Active**

- **Notify Clinician for:** MAWS score < 5 OR signs of clinical instability following 5 hrs of its. Physician to consider transfer to ICU. "Michigan Alcohol Withdrawal Severity Assessment Scale": 03-30-2009
  - **Active**

- **Notify Clinician for:** MAWS score < 5 OR for past 24 hours. Contact physician to discontinues ENTIRE AWS Initiation - Severe Withdrawal order set and place AWS Initiation - Mid/Mod Withdrawal order set. "Michigan Alcohol Withdrawal Severity Assessment Scale": 03-30-2009
  - **Active**

- **Thiamine - 100 mg tablet oral daily, stop after 7 Days**: 03-30-2009 Routine
  - **Active**
  - **Unverified By Pharmacy**

- **Folic acid - 1 mg tablet oral daily, stop after 7 Days**: 03-30-2009 Routine
  - **Active**
  - **Unverified By Pharmacy**

- **Multivitamin tablet - 1 tablet oral daily, stop after 7 Days**: 03-30-2009 Routine
  - **Active**
  - **Unverified By Pharmacy**

### Initial Therapy (lorazepam)

- **Diazepam intramuscular (IM)**: 2 - 4 mg IM PO 1 hour When MAWS score > 4 OR 0.1 mg/kg up to a maximum of 20 mg over 6 hours. Administer as needed until patient is calm and cooperative OR MAWS score = 0
  - **03-30-2009 Routine**
  - **Active**

---

**Display format of "Requested By details" groups orders by order set. You can then right-click on the order set name to take action on the entire set entered during that session (ex: discontinue or discontinue/reorder the entire set).**
Notify Clinician:

<table>
<thead>
<tr>
<th>Order</th>
<th>Parameter</th>
<th>Frequency</th>
<th>Special Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ Notify Clinician</td>
<td>Clinical instability</td>
<td></td>
<td>Consult MAWS protocol</td>
</tr>
<tr>
<td>✔️ Notify Clinician</td>
<td>Patient who requires &gt; or = 16 mg Lorazepam in 12 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️ Notify Clinician</td>
<td>Persistent TYPE B symptoms not responsive to Lorazepam</td>
<td></td>
<td>Physician to consider ADDJUNCTIVE therapy with Clonidine</td>
</tr>
<tr>
<td>✔️ Notify Clinician</td>
<td>Persistent TYPE C symptoms not responsive to Lorazepam</td>
<td></td>
<td>Physician to consider ADDJUNCTIVE therapy with</td>
</tr>
<tr>
<td>✔️ Notify Clinician</td>
<td>MAWS score &gt; or = 6. Unsigns of clinical instability</td>
<td></td>
<td>Physician to consider transfer to ICU “Michigan Alcohol</td>
</tr>
<tr>
<td>✔️ Notify Clinician</td>
<td>MAWS score &lt; or = 5 for past 24 hours</td>
<td></td>
<td>Contact physician to discontinue ENTIRE AWS Initiation</td>
</tr>
</tbody>
</table>

Nursing:

<table>
<thead>
<tr>
<th>Order</th>
<th>Parameter</th>
<th>Frequency</th>
<th>Special Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ Assess</td>
<td>MAWS*</td>
<td>every 1 hour</td>
<td>Including blood pressure, heart rate, respiratory rate, and oxygen</td>
</tr>
</tbody>
</table>

If patient is sedated or is receiving all 3 medications (lorazepam, clonidine, and haloperidol) for treatment of AWS, consider an evaluation for ICU management.

Medications:

<table>
<thead>
<tr>
<th>Order</th>
<th>Dosing Info</th>
<th>Days</th>
<th>From</th>
<th>To</th>
<th>UDM</th>
<th>Route</th>
<th>Frequency</th>
<th>PRN</th>
<th>PRN Reason</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ thiamine</td>
<td>for 7 days</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️ folic acid</td>
<td>for 7 days</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✔️ multivitamin tablet</td>
<td>for 7 days</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intake Therapy (lorazepam) - 2 items(s):

<table>
<thead>
<tr>
<th>Order</th>
<th>Dosing Info</th>
<th>Days</th>
<th>From</th>
<th>To</th>
<th>UDM</th>
<th>Route</th>
<th>Frequency</th>
<th>PRN</th>
<th>PRN Reason</th>
<th>Additional Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ lorazepam (mult dose)</td>
<td></td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MAWS score &gt; or = 1</td>
<td>Administrator as</td>
</tr>
</tbody>
</table>

Cardiology:

<table>
<thead>
<tr>
<th>Order</th>
<th>Priority</th>
<th>Requested Date</th>
<th>Indication</th>
<th>Right Sided</th>
<th>ECG Strip</th>
<th>Special Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ EKG Adult 12 Lead</td>
<td>Routine</td>
<td>03-30-2009</td>
<td>Access QT interval</td>
<td></td>
<td></td>
<td>Alcohol withdrawal</td>
</tr>
</tbody>
</table>

Last Revised: 01-23-2009
### Medications

<table>
<thead>
<tr>
<th>Date</th>
<th>Status</th>
<th>Disc/Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-30-2009</td>
<td>Routine</td>
<td></td>
</tr>
<tr>
<td>04-06-2009</td>
<td></td>
<td>10:45</td>
</tr>
</tbody>
</table>

### Nursing Notify Clinician

<table>
<thead>
<tr>
<th>Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-30-2009</td>
<td>Active</td>
</tr>
</tbody>
</table>

### Nursing Maintain/Assessment

<table>
<thead>
<tr>
<th>Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-30-2009</td>
<td>Active</td>
</tr>
</tbody>
</table>

### Cardiology

<table>
<thead>
<tr>
<th>Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-30-2009</td>
<td>Active</td>
</tr>
</tbody>
</table>