Current Clinical Patterns in the Management of Alcohol Withdrawal Syndrome (AWS)

The goal of the survey is to evaluate current practices for the inpatient management of AWS in adult hospitals located in the Northeast region of the United States. Please take a few moments to complete this survey. It should take less than 15 minutes to complete. Feel free to use your best guess.

SECTION 1. CURRENT PRACTICE REGARDING THE MANAGEMENT OF ALCOHOL WITHDRAWAL SYNDROME (AWS)

1. Does your institution use any of these tools routinely to assess for AWS? (Check all that apply)
   □ NONE
   □ CIWA-Ar (Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised)
   □ Modified Minnesota Detoxification Scale (MINDS)
   □ RASS (Richmond Agitation Sedation Scale)
   □ Riker Sedation-Agitation Scale (SAS)
   □ Severity of Ethanol Withdrawal Scale (SEWS)
   □ Other _____________________

2. Does your institution allow the use of alcohol for the management of AWS?
   □ Yes, it is available through the pharmacy department
   □ Yes, it is available through the dietary department
   □ Yes, patients are allowed to bring in their own alcohol
   □ No

3. Does your institution have protocols/guidelines for the management of AWS in place?
   □ Yes
   □ No

   **If YES**, when was the last time the AWS guidelines/protocols were updated at your institution?
   □ Less than 6 months ago
   □ Between 6 months and 1 year ago
   □ Between 1 and 2 years ago
   □ Between 2 and 5 years ago
   □ More than 5 years ago
   □ Do not know
   □ Other _____________________
4. Please answer the following 4 questions (4a to d) on the basis of the guidelines/protocol or common practices at your institution.

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**For those who have the AWS guidelines/protocols in place at your institution,** please indicate whether the guidelines/protocols are used to make decisions on each question by checking either “Guidelines/protocols” or “Common Practices.”

**For those who do NOT have the AWS guidelines/protocols,** please check “Common practices” on each question and answer the questions according to common practices at your institution.

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4a. Which treatment option would be your choice to treat patients with **MILD** alcohol withdrawal syndrome? (Please choose ONE column and answer all questions in that column)

<table>
<thead>
<tr>
<th>Guidelines/protocols</th>
<th>Common practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Benzodiazepine (BZD)-only regimen</td>
<td>□ BZD-based regimen with other agents as needed</td>
</tr>
</tbody>
</table>

*If this box is checked, please answer the following questions.*

1. **What BZDs would be used?** (Check all that apply)
   - □ Lorazepam (Ativan)
   - □ Intravenous (IV) □ Oral
   - □ Diazepam (Valium)
   - □ IV □ Oral
   - □ Chlordiazepoxide (Librium) oral
   - □ Oxazepam (Serax) Oral
   - □ Other ____________________

2. **How would BZD be given?**
   - □ On an as-needed basis (PRN) only
   - □ On a schedule only (e.g., every 6 hrs)
   - □ On a schedule and as-needed

3. **What other agents would be used in addition to BZDs?** (Check all that apply)
   - □ Gabapentin (Neurontin) oral
     - □ Scheduled □ PRN
   - □ Valproic acid (Depakene, Depakote)
     - □ IV □ Scheduled □ PRN
   - □ Haloperidol (Haldol)
     - □ IV □ Oral □ Scheduled □ PRN
   - □ Clonidine (Catapres) Oral
     - □ Scheduled □ PRN
   - □ Phenytoin (Luminal)
     - □ IV □ Oral □ Scheduled □ PRN
   - □ Quetiapine (Seroquel) Oral
     - □ Scheduled □ PRN
   - □ Risperidone (Risperdal) Oral
     - □ Scheduled □ PRN
   - □ Olanzapine (Zyprexa) Oral
     - □ Scheduled □ PRN
   - □ Other ____________________

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4b. What other agents would be primarily used? (Check all that apply)

| □ Phenobarbital (Luminal) |
| □ Gabapentin (Neurontin) |
| □ Chlordiazepoxide (Librium) oral |
| □ Oxazepam (Serax) Oral |
| □ Other ____________________ |

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4c. What other agents would be primarily used? (Check all that apply)

| □ Valproic acid (Depakene, Depakote) |
| □ Clonidine (Catapres) oral |
| □ Haloperidol (Haldol) |
| □ Phenytoin (Luminal) |
| □ Quetiapine (Seroquel) Oral |
| □ Risperidone (Risperdal) Oral |
| □ Olanzapine (Zyprexa) Oral |
| □ Other ____________________ |

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4d. What other agents would be primarily used? (Check all that apply)

| □ Oral |
| □ Scheduled □ PRN |
| □ Scheduled □ PRN |
| □ Scheduled □ PRN |
| □ Scheduled □ PRN |

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4 b. Which treatment option would be your choice to treat patients with MODERATE alcohol withdrawal syndrome? (Please choose ONE column and answer all questions in that column)

An example of one moderate AWS case: A 45-year-old man with a 10-year history of heavy alcohol abuse consisting of the consumption of a fifth of bourbon and about 10 beers a day presents to the emergency department with nausea, tremor, headache, agitation, disorientation, and auditory hallucinations. He stated that his last drink was one day before admission. He is having moderate withdrawal based on his AWS assessment scores. At this time, the patient is able to take oral medications safely. He has no known drug allergies and his kidney and liver function are all within the normal limits. His electrocardiogram (ECG) shows normal QTc interval.

- □ Benzodiazepine (BZD)-only regimen
  *If this box is checked, please answer the following questions.
  
  (1) What BZDs would be used? (Check all that apply)
  □ Lorazepam (Ativan) □ IV □ IM □ Oral
  □ Diazepam (Valium) □ IV □ IM □ Oral
  □ Chlordiazepoxide (Librium) Oral
  □ Oxazepam (Serax) Oral
  □ Other __________________________

  (2) How would BZD be given?
  □ On an as-needed basis (PRN) only
  □ On a schedule only (e.g., every 6 hrs)
  □ On a schedule and as-needed

- □ BZD-based regimen with other agents as needed
  *If this box is checked, please answer the following questions.
  
  (1) What BZDs would be primarily used? (Check all that apply)
  □ Lorazepam (Ativan) □ IV □ IM □ Oral
  □ Diazepam (Valium) □ IV □ IM □ Oral
  □ Chlordiazepoxide (Librium) Oral
  □ Oxazepam (Serax) Oral
  □ Other __________________________

  (2) How would BZD be given?
  □ On an as-needed basis (PRN) only
  □ On a schedule only (e.g., every 6 hrs)
  □ On a schedule and as-needed

  (3) What other agents would be used in addition to BZDs? (Check all that apply)
  □ Gabapentin (Neurontin) oral □ SCHEDULED □ PRN
  □ Valproic acid (Depakene, Depakote) □ IV □ Oral □ SCHEDULED □ PRN
  □ Haloperidol (Haldol) □ IV □ IM □ Oral □ SCHEDULED □ PRN
  □ Clonidine (Catapres) Oral □ SCHEDULED □ PRN
  □ Phenobarbital (Luminal) □ IV □ Oral □ SCHEDULED □ PRN
  □ Quetiapine (Seroquel) Oral □ SCHEDULED □ PRN
  □ Risperidone (Risperdal) Oral □ SCHEDULED □ PRN
  □ Olanzapine (Zyprexa) Oral □ SCHEDULED □ PRN
  □ Other __________________________

- □ Non-BZD based regimen with no BZDs
  *If this box is checked, please answer the following questions.
  
  (1) What agents would be primarily used? (Check all that apply)
  □ Phenobarbital (Luminal) □ IV □ SCHEDULED □ Oral □ PRN
  □ Gabapentin (Neurontin) oral □ SCHEDULED □ PRN
  □ Valproic acid (Depakene, Depakote) □ IV □ Oral □ SCHEDULED □ PRN
  □ Clonidine (Catapres) Oral □ SCHEDULED □ PRN
  □ Haloperidol (Haldol) □ IV □ IM □ Oral □ SCHEDULED □ PRN
  □ Quetiapine (Seroquel) Oral □ SCHEDULED □ PRN
  □ Risperidone (Risperdal) Oral □ SCHEDULED □ PRN
  □ Olanzapine (Zyprexa) Oral □ SCHEDULED □ PRN
  □ Other __________________________
4 c. Which treatment option would be your choice to treat patients with SEVERE alcohol withdrawal syndrome? (Please choose ONE column and answer all questions in that column) *If this question is not applicable to your institution, please check □ N/A (not applicable) and move to SECTION 2.

Guidelines/protocols

**An example of one severe AWS case:** A 35-year-old man is admitted to the emergency department with palpitations, sweating, tremors, and delirium. A friend who arrived with the patient stated that the patient had been a heavy drinker for about 5 years who consumes around one bottle of vodka a day. His last drink was three days ago. On admission, he developed generalized tonic-clonic seizures. The patient is receiving high flow nasal cannula oxygen therapy, but does not require intubation at this time. His vital signs include blood pressure 150/90 mmHg and heart rate 120 beats/minutes. The patient is unable to take oral medications at this time and he has been closely monitored in the intermediate care unit. He has no known drug allergies and his kidney and liver function are all within the normal limits. His electrocardiogram (ECG) shows normal QTc interval.

### Benzodiazepine (BZD)-only regimen

*If this box is checked, please answer the following questions.

1. What BZDs would be primarily used? (Check all that apply)
   - □ Lorazepam (Ativan)
   - □ IV □ IM
   - □ Diazepam (Valium)
   - □ IV □ IM
   - □ Midazolam (Versed)
   - □ IV □ IM
   - □ Other ______

2. How would BZD be given?
   - □ On an as-needed basis (PRN) only
   - □ On a schedule only (e.g., every 6 hrs)
   - □ On a schedule and as-needed
   - □ Other ______

3. What other agents would be used in addition to BZDs? (Check all that apply)
   - □ Valproic acid (Depakene) IV
   - □ SCHEDULED □ PRN
   - □ Haloperidol (Haldol)
   - □ IV □ IM
   - □ SCHEDULED □ PRN
   - □ Clonidine (Catapres) sublingual
   - □ SCHEDULED □ PRN
   - □ Phenobarbital (Luminal) IV
   - □ SCHEDULED □ PRN
   - □ Risperidone (Risperdal M-Tab) ODT*
   - □ SCHEDULED □ PRN
   - □ Olanzapine (Zyprexa Zydol) ODT*
   - □ SCHEDULED □ PRN
   - □ Olanzapine (Zyprexa) Short-acting IM
   - □ SCHEDULED □ PRN
   - □ Ziprasidone (Geodon) IM
   - □ SCHEDULED □ PRN
   - □ Other ______

### Benzodiazepine (BZD)-based regimen with other agents as needed

*If this box is checked, please answer the following questions.

1. What BZDs would be primarily used? (Check all that apply)
   - □ Lorazepam (Ativan)
   - □ IV □ IM
   - □ Diazepam (Valium)
   - □ IV □ IM
   - □ Midazolam (Versed)
   - □ IV □ IM
   - □ Other ______

2. How would BZD be given?
   - □ On an as-needed basis (PRN) only
   - □ On a schedule only (e.g., every 6 hrs)
   - □ On a schedule and as-needed
   - □ Other ______

3. What other agents would be used in addition to BZDs? (Check all that apply)
   - □ Valproic acid (Depakene) IV
   - □ SCHEDULED □ PRN
   - □ Haloperidol (Haldol)
   - □ IV □ IM
   - □ SCHEDULED □ PRN
   - □ Clonidine (Catapres) sublingual
   - □ SCHEDULED □ PRN
   - □ Phenobarbital (Luminal) IV
   - □ SCHEDULED □ PRN
   - □ Risperidone (Risperdal M-Tab) ODT*
   - □ SCHEDULED □ PRN
   - □ Olanzapine (Zyprexa Zydol) ODT*
   - □ SCHEDULED □ PRN
   - □ Olanzapine (Zyprexa) Short-acting IM
   - □ SCHEDULED □ PRN
   - □ Ziprasidone (Geodon) IM
   - □ SCHEDULED □ PRN
   - □ Other ______

### Non-BZD based regimen with no BZDs

*If this box is checked, please answer the following questions.

1. What agents would be primarily used to treat this patient’s AWS? (Check all that apply)
   - □ Valproic acid (Depakene) IV
   - □ SCHEDULED □ PRN
   - □ Haloperidol (Haldol)
   - □ IV □ IM
   - □ SCHEDULED □ PRN
   - □ Clonidine (Catapres) sublingual
   - □ SCHEDULED □ PRN
   - □ Phenobarbital (Luminal) IV
   - □ SCHEDULED □ PRN
   - □ Risperidone (Risperdal M-Tab) ODT*
   - □ SCHEDULED □ PRN
   - □ Olanzapine (Zyprexa Zydol) ODT*
   - □ SCHEDULED □ PRN
   - □ Olanzapine (Zyprexa) Short-acting IM
   - □ SCHEDULED □ PRN
   - □ Ziprasidone (Geodon) IM
   - □ SCHEDULED □ PRN
   - □ Other ______

*Orally-disintegrating tablets
4 d. Which treatment option would be your choice to treat patients with **Benzodiazepine-Refractory** alcohol withdrawal syndrome? *(Please choose ONE column and answer all questions in that column)* *If this question is not applicable to your institution, please check □ N/A (not applicable) and move to SECTION 2.*

**Guidelines/protocols**

**Common practices**

An example of one BZD-refractory AWS case: A patient required 35 mg of lorazepam over the first 3 hours. The patient’s assessment scores consistently showed that he is at high severity of AWS. The decision to transfer the patient to the ICU was made by the medical team. On admission to the ICU, the patient is able to protect his airway and does not require intubation. The patient is placed on NPO (nothing by mouth) status. He has no known drug allergies and his kidney and liver function are all within the normal limits. His electrocardiogram (ECG) shows normal QTc interval.

<table>
<thead>
<tr>
<th>□ Benzodiazepine (BZD)-only regimen</th>
<th>□ BZD-based regimen with other agents as needed</th>
<th>□ Non-BZD based regimen with no BZDs</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(If this box is checked, please answer the following questions.)</em></td>
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<tr>
<td>(1) What BZDs would be primarily used?</td>
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<td>(1) What agents would be primarily used?</td>
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<tr>
<td>(Check all that apply)</td>
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<tr>
<td>□ Lorazepam (Ativan)</td>
<td>□ Lorazepam (Ativan)</td>
<td>□ Phenobarbital (Luminal) IV</td>
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<td>□ Diazepam (Valium)</td>
<td>□ Diazepam (Valium)</td>
<td>□ Valproic acid (Depakene) IV</td>
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<td>□ Midazolam (Versed)</td>
<td>□ Midazolam (Versed)</td>
<td>□ Clonidine (Catapres) sublingual</td>
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<td>□ Other</td>
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<td>□ Haloperidol (Haldol) IV</td>
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<td>□ Risperidone (Risperdal M-Tab) ODT*</td>
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<td>(2) How would BZD be given?</td>
<td>(2) How would BZD be given?</td>
<td>□ Olanzapine (Zyprexa Zydis) ODT*</td>
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<tr>
<td>□ IV continuous infusion only</td>
<td>□ IV continuous infusion only</td>
<td>□ SCHEDULED</td>
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<tr>
<td>□ On an as-needed basis (PRN) only</td>
<td>□ On a schedule only (e.g., every 6 hrs)</td>
<td>□ PRN</td>
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<tr>
<td>□ On a schedule and as-needed</td>
<td>□ IV continuous infusion and as-needed</td>
<td>□ SCHEDULED</td>
</tr>
<tr>
<td>□ Other</td>
<td>□ Other</td>
<td>□ PRN</td>
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<tr>
<td>(3) What other agents would be used in addition to BZDs?</td>
<td>(3) What other agents would be used in addition to BZDs?</td>
<td>□ Olanzapine (Zyprexa) Short-acting IM</td>
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<td>(Check all that apply)</td>
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<td>□ SCHEDULED</td>
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<tr>
<td>□ Phenobarbital (Luminal) IV</td>
<td>□ Valproic acid (Depakene) IV</td>
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<td>□ Clonidine (Catapres) sublingual</td>
<td>□ Haloperidol (Haldol) IV</td>
<td>□ Olanzapine (Zyprexa) IM</td>
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<td>□ Risperidone (Risperdal M-Tab) ODT*</td>
<td>□ Olanzapine (Zyprexa) ODT*</td>
<td>□ Ziprasidone (Geodon) IM</td>
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<tr>
<td>□ Olanzapine (Zyprexa) Short-acting IM</td>
<td>□ Risperidone (Risperdal M-Tab) ODT*</td>
<td>□ Propofol (Diprivan) IV infusion</td>
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<tr>
<td>□ Ziprasidone (Geodon) IM</td>
<td>□ Olanzapine (Zyprexa) Short-acting IM</td>
<td>□ Dexmedetomidine (Precedex) IV infusion</td>
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<tr>
<td>□ Propofol (Diprivan) IV infusion</td>
<td>□ Olanzapine (Zyprexa) Short-acting IM</td>
<td>□ Other</td>
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<tr>
<td>□ Dexmedetomidine (Precedex) IV infusion</td>
<td>□ Non-BZD based regimen with no BZDs</td>
<td>□ Other</td>
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<tr>
<td>□ SCHEDULED</td>
<td><em>(If this box is checked, please answer the following questions.)</em></td>
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<tr>
<td>□ Other</td>
<td><em>(If this box is checked, please answer the following questions.)</em></td>
<td>□ Other</td>
</tr>
</tbody>
</table>

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SECTION 2. HOSPITAL CHARACTERISTICS

1. Hospital bed size
   ☐ 100-299 beds  ☐ 300-499 beds  ☐ >500 beds

2. Teaching status
   ☐ Teaching (a hospital that is affiliated with a medical residency program)
   ☐ Nonteaching

3. State
   ☐ CT  ☐ MA  ☐ ME  ☐ NH  ☐ NJ  ☐ NY  ☐ PA  ☐ RI  ☐ VT

4. What is your current position within the pharmacy department?
   ☐ Pharmacy Director
   ☐ Pharmacy Manager
   ☐ Clinical Coordinator
   ☐ Clinical Pharmacy Specialist
   ☐ Clinical/Staff pharmacist
   ☐ Pharmacy Resident/Fellow
   ☐ Drug Information/Drug Utilization Review Pharmacist
   ☐ Other _______________________

5. Which hospital setting do you spend ≥ 50% of time in (Check only one)?
   ☐ Not Applicable
   ☐ Intensive care unit (ICU) (e.g., Burn ICU, Cardiac ICU, Cardiothoracic ICU, Medical ICU, Neuro/Neurosurgical ICU, Surgical/Trauma ICU)
   ☐ Intermediate care unit (IMC)
   ☐ Emergency department (ED)
   ☐ Adult medical/surgical units
   ☐ Other _______________________

6. Does your institution offer substance abuse treatment services?
   ☐ Yes, in an inpatient setting only
   ☐ Yes, in an outpatient setting only
   ☐ Yes, in both inpatient and outpatient settings
   ☐ No

7. How many clinical pharmacists/specialists (e.g., unit-based, service-based, or decentralized pharmacists) does your institution have?
   ☐ None
   ☐ 1-2
   ☐ 3-5
   ☐ 6-10
   ☐ > 10

Thank you for taking time to answer the questions. Please use the space for any additional comments you would like to make about this study.