TITLE: Alcohol Withdrawal Management for Acute Care Inpatients: Guidelines

DATE: 13 March 2015

RESEARCH QUESTION

What are the evidence-based guidelines for the management of alcohol withdrawal in acute care inpatients?

KEY FINDINGS

Five systematic reviews, including one meta-analysis, were identified regarding the management of alcohol withdrawal in acute care inpatients.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2015, Issue 3), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between November 28, 2012 and March 5, 2015. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.
## Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Acute care inpatients experiencing alcohol withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Pharmacological and non-pharmacological management options for alcohol withdrawal</td>
</tr>
<tr>
<td>Comparator</td>
<td>No comparator</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Evidence-based guidelines</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessment reports, systematic reviews, meta-analyses, evidence-based guidelines</td>
</tr>
</tbody>
</table>

### RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by evidence-based guidelines.

Five systematic reviews, including one meta-analysis, were identified regarding the management of alcohol withdrawal in acute care inpatients. No relevant health technology assessments or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

### OVERALL SUMMARY OF FINDINGS

Five systematic reviews, including one meta-analysis, were identified regarding the management of alcohol withdrawal in acute care inpatients. Detailed study results are presented in Table 2. No evidence-based guidelines were identified; therefore, no summary of recommendations can be presented.

Among the systematic reviews, various interventions for alcohol withdrawal syndrome (AWS) were assessed, including intravenous ethanol replacement, unspecified prophylactic treatment, benzodiazepines (BZD), anticonvulsants, baclofen, magnesium, gamma-hydroxybutyric acid (GHB), clomethiazole, phenobarbital, clonidine, and haloperidol.

Treatment benefits were shown for BZDs, anticonvulsants, baclofen, GHB, clomethiazole, phenobarbital, clonidine, and haloperidol. Benzodiazepines were described as having the best evidence for efficacy and being superior to other active treatments and their use was advised by one review. It was noted that there was insufficient evidence to support the use of baclofen and that alpha-2 agonists and haloperidol should be used as adjunctive therapy. Magnesium, intravenous ethanol replacement, and prophylactic treatment did not show a benefit in AWS and the authors of these reviews concluded that there was insufficient evidence for their use. Two reviews noted that treatment regimens should be based on risk factors for complications and symptom severity during treatment.
### Table 2. Summary of Systematic Review Findings

<table>
<thead>
<tr>
<th>First Author, Publication Year</th>
<th>Intervention</th>
<th>Outcomes</th>
<th>Author’s Conclusions</th>
</tr>
</thead>
</table>
| Awissi, 2013¹                 | Prophylactic treatment (unspecified) | Benefit is unproven | • Optimal treatment for AWS yet to be determined  
• Early and aggressive titration of unspecified medication as guided by symptoms is associated with improved outcomes |
| Kattimani, 2013²              | BZD          | Best evidence for benefit in treating AWS | Evidence supports guidance of initial treatment dosing by risk factors for complicated withdrawal followed by withdrawal severity |
|                              | Anticonvulsants | Evidence second to BZD for treating AWS | |
| Liu, 2013³                   | Baclofen      | • One study reported that both treatments significantly reduced CIWA-Ar compared to diazepam  
• One study reported no difference between baclofen and placebo in CIWA-Ar but a significantly reduced high-dose BZD dependence in the baclofen group  
• One study reported no safety difference between groups | Insufficient evidence to recommend use of baclofen for AWS, more evidence needed |
| Sarari, 2013⁴                | Magnesium     | • No significant increase in handgrip strength (based on meta-analysis)  
• No changes in adverse events | Insufficient evidence to determine benefits and harms of magnesium in AWS treatment |
| Ungur, 2013⁵                 | BZD, GHB, clomethiazole | • All treatments effective for AWS therapy  
• BZD superior to GHB and clomethiazole in safety and efficacy measures (unspecified) | • BZD can be advised for AWS therapy  
• Therapy should be standardized and based on “symptom-triggered BZO administration”  
• Alpha-2 agonists and haloperidol should be added for psychotic symptoms |
|                              | Adjunct treatment with phenobarbital, clonidine, or haloperidol | • All treatments effective for AWS therapy | |

AWS = alcohol withdrawal syndrome; BZD or BZO = benzodiazepines; CIWA-Ar = clinical institute withdrawal assessment of alcohol scale revised score; GHB = gamma-hydroxybutyric acid.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Clinical Practice Guidelines – Unclear Methodology


See: 4.1 Management of Patients with or at Risk of Wernicke’s Encephalopathy, page 9
5 Replacement of Alcohol with an Alternative CNS Depressant, page 10
5.1 Symptom Triggered Dosing of Chlordiazepoxide for Alcohol Withdrawal, pages 10 - 11
9.1 Pharmacological Interventions, page 13

Review Articles

