A Multidisciplinary Approach to Improving the Treatment of Alcohol Withdrawal Syndrome
Nicole Vitti BSN, MPA, RN & Deana Brown BSN, RN
Norwalk Hospital, Norwalk, CT

PURPOSE: To create an interdisciplinary team at Norwalk Hospital to improve the care of alcohol withdrawal patients using benzodiazepine tapering schedules with breakthrough doses; instead of symptom triggered management.

BACKGROUND
- Alcohol withdrawal syndrome is a potentially life threatening condition that can occur in people who have been drinking heavily for weeks, months, or years and then either stop or significantly reduce their alcohol consumption.
- Prior to this protocol, patients were treated with symptomatic management.
- Symptoms include: increased anxiety, irritability, agitation, tremors, tachycardia, elevated BP, seizures, and delirium tremens.

TREATMENT PROTOCOL
- 8-East, a Med-Surg unit was identified as the receiving floor for all detox patients unless ICU care was required.
- RN staff was provided education by nurses from psychiatry regarding this specific patient population and treatment.
- Patients are assessed and medicated hourly using the Sedation Agitation Scale (SAS).
- Patient is started on a standing dose of either chlordiazepoxide (Librium) or lorazepam (Ativan).
- Haldol is ordered PRN for confusion or delirium.
- Patients are repleted with folic acid, thiamine and multivitamin daily.
- Electrolyte levels monitored closely and repleted accordingly.
- Benzos are tapered 20-25% a day, starting days 2-5 of withdrawal.

OUTCOMES
- Over a period of 12 months there is sustained:
  - Decrease in length of stay from 5.3 days to 3.7 days
  - 36% decrease in sitter hours from 57,600 hours to 6,752 hours.
  - 62% decrease in the number of code greens (behavioral codes) requiring security interventions
  - 95% decrease in ICU transfers from 42 in a year to 2 transfers.
  - The reduction in average LOS saved $609,889
  - The reduction in ICU transfers saved $855,246.
  - The reduction in sitter hours saved $14,400.
  - These endpoints totaled a direct cost savings to the institution of approximately $1,479,535.

FINDINGS

<table>
<thead>
<tr>
<th>SAS Score</th>
<th>Symptoms</th>
<th>Protocol Dosing</th>
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</thead>
<tbody>
<tr>
<td>7 (Dangerous Agitation)</td>
<td>Pulls at IV; Tries to remove catheters; Climbs over side rails; Strikes staff; Thrashes</td>
<td>PRN 1mg of Ativan (Notify MD, consider need for higher dosing)</td>
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<tr>
<td>6 (Very Agitated)</td>
<td>Does not calm despite frequent, verbal reminding of limits. Requires physical constraints.</td>
<td>PRN 2mg Ativan or 50mg of Librium</td>
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<tr>
<td>5 (Agitated)</td>
<td>Anxious or mildly agitated; Attempts to sit up; Calms to verbal instructions; Tachycardia; Hypertension, tremors, diaphoresis.</td>
<td>PRN 1mg Ativan or 25mg of Librium</td>
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<tr>
<td>4 (Calm)</td>
<td>Awakens easily; follows commands; Comfortable. GOAL FOR PATIENT.</td>
<td>No PRN, continue with standing dose</td>
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<tr>
<td>3 (Sedated)</td>
<td>Difficult to arouse; Awakens to verbal stimuli or gentle shaking but drifts off again; Follows simple commands.</td>
<td>No PRN, continue with standing dose</td>
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<tr>
<td>2 (Very Sedated)</td>
<td>Aroused to physical stimuli but does not communicate or follow commands, may move spontaneously.</td>
<td>Consider holding standing dose</td>
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<tr>
<td>1 (Unarousable)</td>
<td>Minimal or no response to noxious stimuli; Does not communicate or follow commands.</td>
<td>Hold standing dose (Notify MD)</td>
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Contact Information
Nicole Vitti: nicole.vitti@wchn.org
Deana Brown: deana.piccirella@wchn.org