Interdepartmental Collaboration to Promote Safe Administration of Phenobarbital in Med Surg Areas

TAP TO GO BACK TO KIOSK MENU

Introduction/Problem

Phenobarbital administration for the treatment of alcohol withdrawal has been occurring in the ICU's at BIDMC since 2014. Studies demonstrated that antiepileptic drugs (AED) may provide a safe alternative to benzodiazepines with less delirium. (Hsu, Marshall) An ICU algorithm was developed which included an initial IV loading dose, a second IV "rescue dose" within 1-6 hours of the loading dose , if indicated, and a 7 day PO or IM taper.

Issues arose when patients transferred out of the ICU after completing their loading dose, only to then exhibit signs/symptoms of withdrawal hours later. Med Surg nursing staff was frequently asked to administer a second or "rescue" dose of IV phenobarbital, however guidance in the PPGD was limited to the ED and Critical Care Areas. In some instances patients were transferred back to the ICU to receive a "rescue" dose of IV phenobarbital, and in others patients may have received concomitant benzodiazepines on the floor.

In addition there were anecdotal reports of some patients who remained in house for the duration of the 7 day taper. In some cases this would have been unnecessary as the half-life of phenobarbital allows for self tapering, and does not always require the full taper.

Aim/Goal

To provide optimal care for patients who are admitted with or who develop ETOH, while providing guidance for the safe administration and monitoring of patients receiving IV phenobarbital at all levels of care.

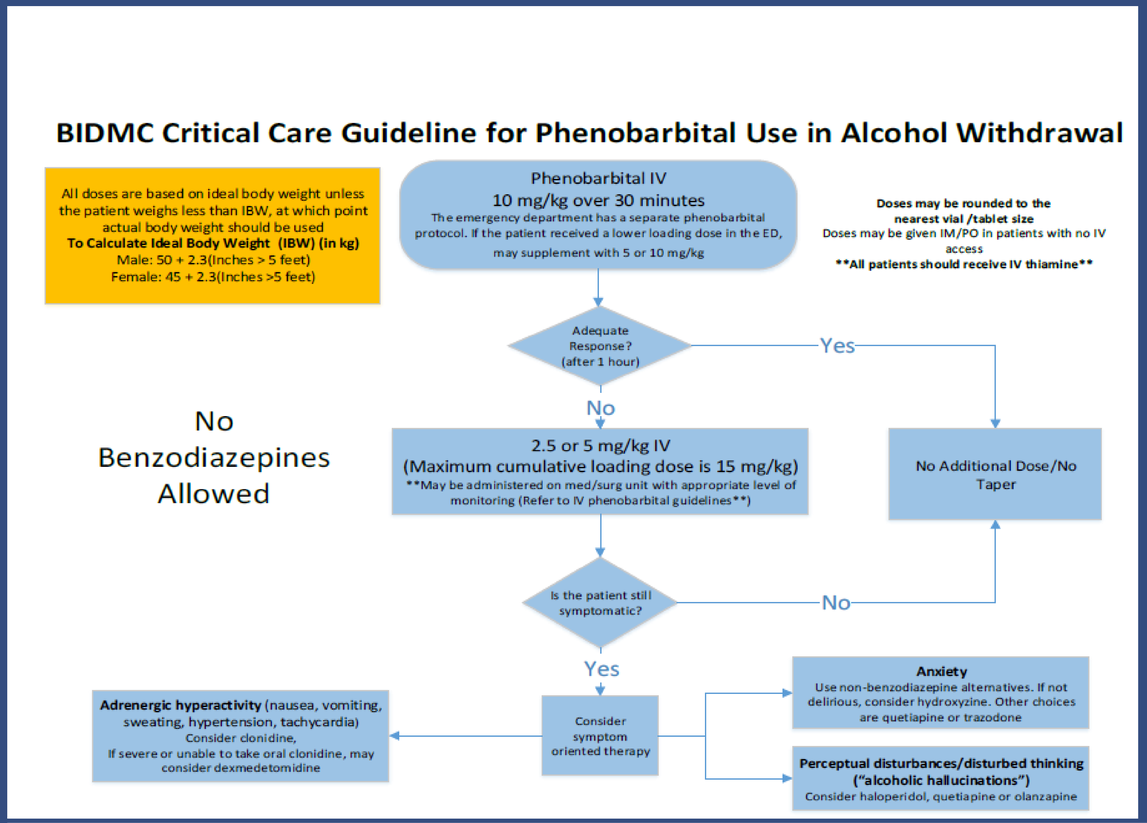
The Team

- Barbra Donovan RN, MSN, Joanne Devine PMHCNS-BC CARN, John Hrenko, PharmD, RPh, Mary Eche, Bill Entwistle RN

The Interventions

- Physicians from the ED, ICU and Psychiatry, as well as nursing representation from the ICU, Med Surg, and Addiction Psych convened to discuss the safety and efficacy of phenobarbital administration for the treatment of ETOH withdrawal at both the Critical and Med/Surg level of care.
- The new algorithm and updated IV guideline was presented to and approved by the Nursing Pharmacy and Practice Councils
- IV guideline and PPGD updated to reflect the change in practice, and presented to nursing leadership at standing Quality and Safety Operations meeting.

Results/Progress to Date



Updated algorithm has been rolled out to nursing units which supports safe monitoring and nursing practice.

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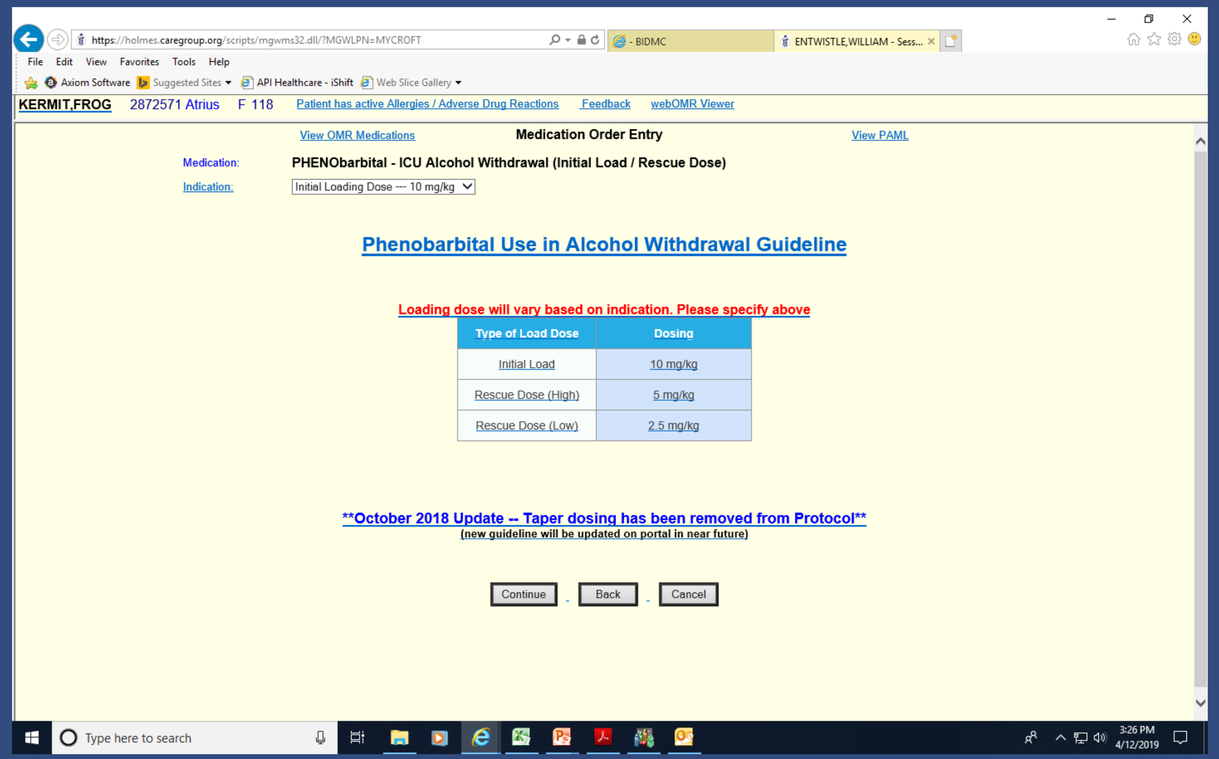
More Results/Progress to Date



eMAR support with instructions for dosing and monitoring as well as a link to the guidelines.

Loading doses: Loading doses up to 10 mg/kg may be administered over 30 minutes in the **ED or Critical Care setting**. Close monitoring of respiratory state may be necessary when giving intravenous loading doses of 20 mg/kg.

Rescue Doses: After receiving the loading dose, patients who continue to exhibit signs/symptoms of alcohol withdrawal, may receive an additional 2.5mg/kg (mild symptoms) or 5mg/kg (severe symptoms) from 1-6 hours after the initial load is completed. **Rescue doses may be administered at the Med Surg level of care.**

Maximum cumulative dose: (***loading plus rescue dose***) **should not exceed 15 mg/kg.**

Lessons Learned

- Since making this change patients who exhibit signs and symptoms of ETOH withdrawal within 6 hours of the completion of their initial loading dose, no longer require a transfer to the ICU in order to receive a second 2.5mg/kg or 5 mg/kg “rescue” dose of IV phenobarbital. Thus reducing the potential for a delay in care, and maximizing the use of resources.
- Staff at all levels have a reference for dosing and monitoring

Next Steps

- Further education for LIPs and nursing staff highlighting the prohibition of concomitant benzodiazepine usage.
- Ongoing evaluation of current and best practice standards.

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