Alcohol withdrawal is a frequently under-diagnosed yet deadly condition that affects many hospitalized adult patients. An estimated 16% of post-surgical patients and 43% of trauma patients experience alcohol withdrawal. Complications from alcohol withdrawal include delirium tremens, seizures and death. UCM identified significant patient safety events related to the under-recognition of alcohol withdrawal by providers and nurses when caring for adult inpatients. Variable drug dosing and inconsistent ordering practices yielded no standardized approach to managing patients with alcohol withdrawal.

**Background**

Variable drug dosing and inconsistent ordering practices yielded no standardized approach to managing patients with alcohol withdrawal.

**Aim**

The aim of the project was to implement an evidence-based process for screening adult inpatients for alcohol withdrawal.

**CAGE Questions**

1. Have you ever felt you should cut down on drinking?
2. Have people annoyed you by criticizing your drinking?
3. Have you ever felt guilty about your drinking?
4. Have you ever felt you needed a drink first thing in the morning to steady your nerves or get rid of a hangover (eye opener)?

**Alcohol Withdrawal Screening Questions**

1. When was your last drink? Date and Time
2. Have you ever gone more than 3-4 days without a drink?
3. Have you ever taken a drink in the morning to steady your nerves or get rid of a hangover (eye opener)?
4. Do you have a history of withdrawal related seizures, tremors, or delirium tremens?
5. Do you use benzodiazepines or sleep aids?

**The Intervention**

An interprofessional team of clinical nurse specialists (CNSs), clinical nurse educators (CNEs), nurse managers, physicians, pharmacists, and nurses from the department of risk management reviewed the literature and developed the protocol. Initial screening consisted of CAGE questions. Four additional questions, adapted from the AUDIT tool, were added to further identify patients at risk for alcohol withdrawal. The Alcohol Withdrawal Assessment Scoring Guidelines (CIWA-Ar) were adopted as the standardized tool to assess level of alcohol withdrawal. An algorithm was developed to guide the providers and nurses through the standardized screening processes and alcohol withdrawal protocol. The team collaborated with the informatics to integrate these tools into the electronic medical record (EMR). Alcohol withdrawal order sets, utilizing standardized medication dosing, were integrated into the EMR. Best practice alerts notified providers to use the standardized order sets. Nursing education included on-line computer based training, unit-in-services and direct one-on-one reinforcement by CNSs and CNEs. Interprofessional education was completed by primary departments: pharmacy, physicians and risk management.

**Admissions with ICD9 related Alcohol Diagnoses**

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<td>120</td>
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<td>70</td>
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</table>

**Admission Screening Assessment Algorithm for Alcohol Withdrawal Syndrome**

1. POSITIVE screening or clinical suspicion
2. Physician assesses patient
4. Physician orders CIWA-Ar protocol
5. Nurse conducts the Alcohol Withdrawal Risk Assessment
6. CIWA-Ar score ≤ 9
7. CIWA-Ar score 9-14
8. CIWA-Ar score ≥ 15

**Results**

799 nurses completed the education from 8/2013 -1/2014

**Alcohol Withdrawal Order Set Usage**

- Increased admissions to general medical/surgical units vs. ICUs
- Increased usage of Alcohol Withdrawal Order Sets

**Lessons Learned**

- Importance of interprofessional approach with physician involvement (ED and Hospitalists)
- Importance of MD education (resident turnover in July 2013)
- Nursing education: Initial and ongoing (new nursing orientees, annual competencies)
- Pharmacists education
- Electronic medical record upgrades: Link CIWA orders to alcohol withdrawal order set, using synonyms e.g. ETOH, withdrawal, alcohol
- Event report prompted evaluation regarding Lorazepam dosing and CIWA scoring

**Next Steps**

- Expand screening to pre-procedural areas
- Pre-anesthesia visits
- Continue evaluation of Alcohol Withdrawal Order Sets
- Continue education for all providers, nurses and pharmacists

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