

Minnesota Detoxification Scale (MINDS) Assessment Protocol for Treatment of Alcohol Withdrawal, Pre and Post Implementation Comparison

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BACKGROUND

- Acute alcohol withdrawal is commonly encountered in the hospital setting and carries high risk for morbidity and mortality.
- The current standard of care favors symptom triggered therapy using an assessment scoring system (CIWA is the most common).
- In 2014 a pilot was implemented at Unity Hospital (part of Allina Health, MN) with the intent of systematizing treatment of alcohol withdrawal.
- The MINDS assessment tool is used to score acute alcohol withdrawal, which treatment using diazepam.
- By direct comparison, MINDS assessment includes fewer screening domains than CIWA and less subjective variation.
- By 2016 all Allina hospitals had implemented the use of MINDS protocol for patients presenting with alcohol withdrawal symptoms.
- This study aims to address whether implementation of the MINDS protocol for diagnosis and treatment of acute alcohol withdrawal results in a meaningful, measurable improvement in patient outcomes.

HYPOTHESIS

Hospital patients who were treated for alcohol withdrawal after the implementation of the MINDS protocol experienced better outcomes compared to patients who were treated for alcohol withdrawal before the implementation of the MINDS protocol.

OUTCOMES

Primary outcome

- Hospital length of stay (LOS) and mortality

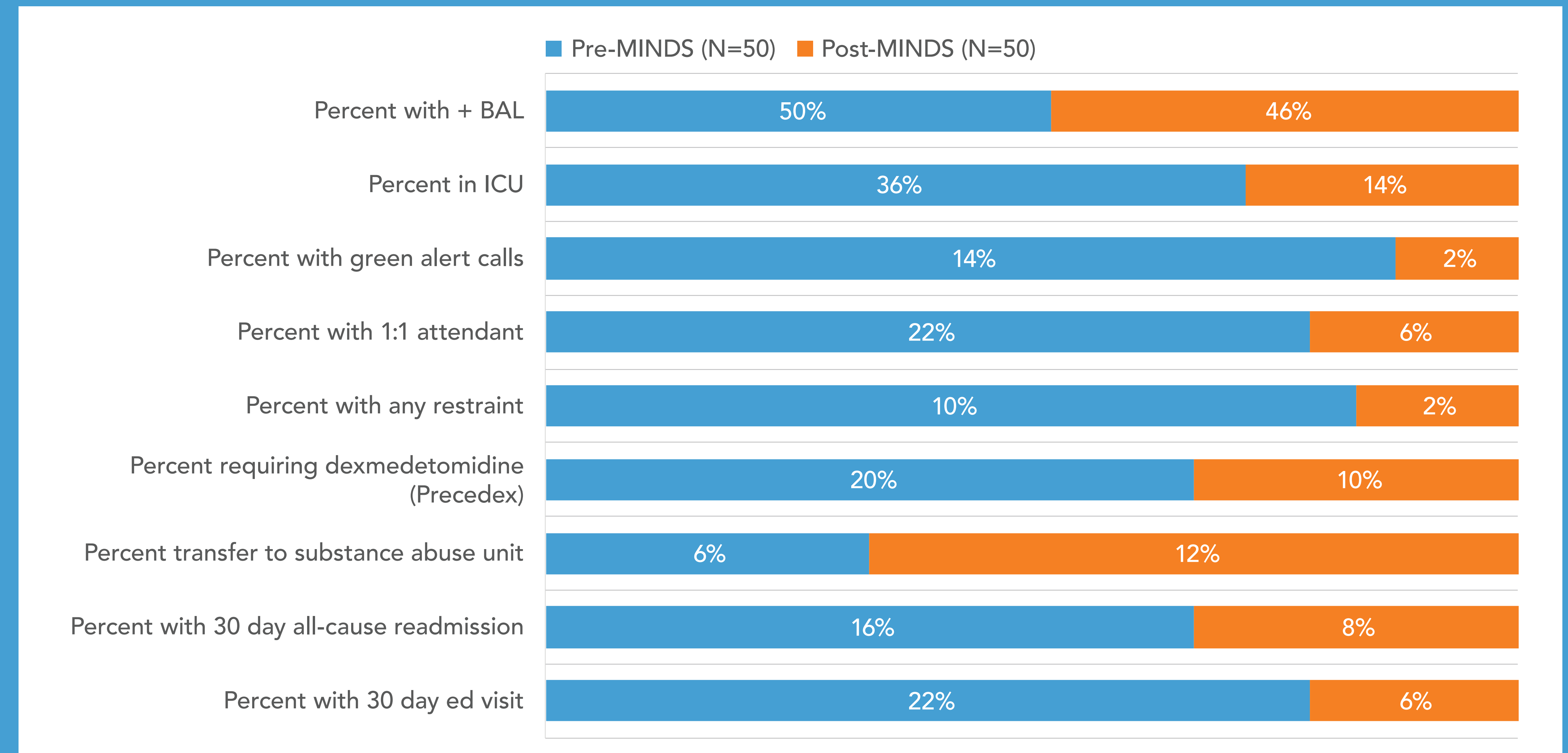
Secondary outcomes

- Readmissions (ED or all-cause readmission within 30 days)
- Calendar days receiving benzodiazepines and total dose administered
- Number of ICU stays
- Number of Green alerts, restraints used, and 1:1 attendant use

METHODS

- Data collected from patients who have been treated for alcohol withdrawal at Allina Health hospitals both before and after implementation of MINDS protocol, between January 2013 and December 2017.
- Based on existing data, an estimated 25,000 patients will contribute data.

Patient Data Pre and Post Implementation of the MINDS Alcohol Withdrawal Protocol at Unity Hospital (2013-2014)



Review of Patient Data Pre and Post Implementation of the MINDS Alcohol Withdrawal Protocol at Unity Hospital

Timeline: Implementation of the MINDS protocol began in February 2014 and completed in May 2014

	Pre-MINDS	Post-MINDS
Patient Admission Dates	03/01/2013 through 01/26/2014	03/10/2014 through 11/05/2014
Number	50 patients	50 patients
Age	50.7 years	52.5 years
Gender	80% male	58% male
Hospital LOS from arrival to DC	113.05 hours (4.71 days)	76.5 hours (3.2 days)
Hospital LOS following last Benzodiazepine dose	46 hours (1.92 days) Range: 2-386 hours	30.1 hours (1.24 days) Range: 0.2-174.4 hours
Calendar days receiving Benzos	3.6 days	2.52 days
Diazepam Equivalent	102.4 mg Range: 0-520 mg	87.3 mg Range: 0-360 mg
Calendar days on Medical Surgical unit	3.66 days	3.58 days

RESULTS / CONCLUSIONS

- Review of patient data pre-implementation, 03/01/2013 - 01/26/2014, and post implementation, 03/10/2014 - 11/05/2014, of the MINDS protocol at Unity Hospital demonstrated a pre-MINDS LOS of 113.05 hours/4.71 days, and a post-MINDS LOS of 76.5 hours/3.2 days.
- The average total diazepam equivalents administered pre-MINDS was 102.4 mg, and post-MINDS 87.3 mg.
- Preliminary data suggests use of the MINDS alcohol withdrawal protocol reduced hospital LOS and benzodiazepine total dose administered.