PAWSS: Validation of the Prediction of Alcohol Withdrawal Severity Scale (Poster)

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## Introduction

The ability to accurately predict which patients are likely to go into complicated alcohol withdrawal would significantly decrease the amount of in-hospital morbidity and mortality as well as the increased costs associated with increased lengths of hospitalization. Alcohol use disorder is one of the largest substance abuse problems in America, with a twelve month and lifetime prevalence of 13.5% and 29.1% respectively. In a third of all hospitalized patients there is a strong likelihood that they possess an alcohol use disorder. On average about 20% of patients will develop symptoms of complicated alcohol withdrawal, exhibiting seizures and delirium tremens (DTs) and associated mortality. The Prediction of Alcohol Withdrawal Severity Scale (PAWSS) is the first screening tool developed for Alcohol Withdrawal Syndromes (AWS). The PAWSS pilot study reported a sensitivity and specificity of 100% with a sample size of 17. This study will reexamine this tool’s sensitivity and specificity with a larger sample size.

## Methodology

The PAWSS questionnaire was administered to Adults (18 years and older) treated in the Cooper ED and Trauma Admitting and admitted into Cooper University Hospital. Alcohol withdrawal symptoms were measured and documented using the Glasgow Modified Alcohol Withdrawal Scale (GMAWS) within 48 hours of admission. Demographic information such as age, gender, ethnicity, and visit information was obtained. A positive PAWSS was considered a score of 4 or greater. Patients were considered to have undergone alcohol withdrawal if they had AWS as a primary diagnosis or they scored a 2 or greater on the GMAWS.

According to the study, the PAWSS was shown to have a sensitivity of 46%, and a specificity of 97%. With a positive predictive value of 79% and a negative predictive value of 88% the PAWSS can be used as an effective tool to predict alcohol withdrawal but it is important to be aware of its limitations and how it can be further improved. This survey tool could be further refined by narrowing down the most pertinent questions as well as the threshold questions.

## Discussion

The PAWSS was shown to have a sensitivity of 46%, and a specificity of 97%. With a positive predictive value of 79% and a negative predictive value of 88%. A total of 19% of the patients surveyed underwent symptoms of moderate to severe AWS.

## Study Results

### Calculating specificity, sensitivity, positive predictive value (PPV), and negative predictive value (NPV).

- **Sensitivity** = TP/AWS + = 27/58 = 46%
- **Specificity** = TN/AWS – = 243/250 = 97%
- **PPV** = TP/PAWS + = 27/34 = 79%
- **NPV** = TN/PAWS – = 243/274 = 88%

### Conclusion

With a PPV of 79% and a NPV of 88% the PAWSS can be used as an effective tool to predict alcohol withdrawal but it is important to be aware of its limitations and how it can be further improved. This survey tool could be further refined by narrowing down the most pertinent questions as well as the threshold questions. Possible reasons for the false positives could be due to the way the PAWSS threshold questions are worded. The question asks if alcohol has been consumed in the past 30 days, which can result in patient being misclassified.

## References

- Padron, A5@Rowan.edu
- Sachdeva, A. The Prediction of Alcohol Withdrawal Severity Scale (PAWSS) is the first screening tool developed for Alcohol Withdrawal Syndromes (AWS). The PAWSS pilot study reported a sensitivity and specificity of 100% with a sample size of 17. This study will reexamine this tool’s sensitivity and specificity with a larger sample size.
- Grant, BF. Epidemiology of DSM-IV Alcohol Use Disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. JAMA Psychiatry. 2015;72(8):757-766
- Alexander Padron, MS4; Matthew Salzman, MD