Serious Mental Illness and Outcomes in Inpatient Detoxification and Rehabilitation: A Retrospective Cohort Study

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SUBMISSION DETAILS

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Summary Background: Serious mental illness (SMI) and substance use disorders frequently co-occur and are associated with increased psychosocial complexity, healthcare utilization, and poorer outcomes. However, little is known about treatment engagement among patients with SMI receiving inpatient addiction treatment in detoxification and rehabilitation settings.

Methods: We conducted a retrospective cohort study of patients admitted to an inpatient detoxification and rehabilitation unit at an urban academic behavioral health center between January and March 2024. SMI was defined as a history of psychotic disorder, bipolar disorder, or prior psychiatric hospitalization. Sociodemographic characteristics, clinical history, treatment course, and post-discharge outcomes were obtained through structured electronic medical record review. Groups with and without SMI were compared using chi-square and t-tests. Kaplan-Meier survival analysis evaluated time to readmission, and multivariable logistic regression examined predictors of one-year readmission.

Results: Among 198 patients, 90 (45.5%) met criteria for SMI. Compared with patients without SMI, those with SMI had higher rates of trauma history, violence history, unemployment, and prior detoxification/rehabilitation admissions. Despite greater psychosocial complexity, there were no significant differences in detoxification completion, transition to rehabilitation, rehabilitation completion, length of stay, or one-year readmission rates. Time to readmission was also similar between groups. In adjusted analyses, SMI was associated with lower odds of one-year readmission (OR=0.49, 95% CI 0.25–0.98), while greater prior detoxification/rehabilitation utilization predicted increased readmission risk (OR=1.04 per admission).

Conclusions: Patients with SMI demonstrated comparable treatment engagement and outcomes

despite greater clinical complexity. Structured inpatient addiction treatment settings may help mitigate disparities often observed among individuals with co-occurring psychiatric illness and substance use disorders.

The questions following the above will ask you to breakdown your summary.

Background Patients with co-occurring serious mental illness and substance use disorders experience high rates of trauma exposure, unemployment, homelessness, healthcare utilization, and relapse. While integrated treatment approaches have demonstrated benefit, most research has focused on outpatient settings, psychiatric hospitalization, or emergency department utilization. Relatively little is known about how SMI influences treatment engagement and outcomes within inpatient detoxification and rehabilitation programs. Understanding whether patients with SMI successfully engage in structured addiction treatment is important for reducing disparities and informing service delivery. This study addresses a gap in knowledge regarding treatment completion, transition to rehabilitation, and readmission outcomes among patients with and without SMI receiving inpatient addiction treatment. Findings may help clinicians better understand the role of structured treatment environments in supporting recovery among dual-diagnosis populations.

Educational Learning Objectives

Learning Objective 1 Identify clinical characteristics associated with SMI in detox patients.

Learning Objective 2 Compare treatment outcomes in patients with and without SMI.

Learning Objective 3 Recognize predictors of readmission after addiction treatment.

Methods This retrospective cohort study included all patients admitted to an inpatient detoxification and rehabilitation unit at an urban academic behavioral health center between January 1 and March 31, 2024. SMI was defined as a history of psychotic disorder, bipolar disorder, or prior psychiatric hospitalization. Sociodemographic, clinical, treatment, and outcome variables were abstracted from the electronic medical record using a standardized protocol. Group differences were evaluated using chi-square tests and independent-samples t-tests. Kaplan-Meier survival analysis examined time to readmission. Multivariable logistic regression assessed predictors of one-year readmission while controlling for treatment utilization, substance use severity, and psychosocial factors.

Results Of 198 patients, 90 (45.5%) met criteria for SMI. Compared with patients without SMI, those with SMI had higher rates of trauma history (62.2% vs 38.9%, $p=0.001$), violence history (17.8% vs 6.5%, $p=0.014$), unemployment (93.3% vs 75.0%, $p<0.001$), and prior detoxification/rehabilitation admissions (10.4 vs 6.3, $p=0.016$). Despite these differences, there were no significant group differences in detoxification completion, transition to rehabilitation, rehabilitation completion, length of stay, or one-year readmission. Time to readmission was also similar. In adjusted analyses, SMI was associated with lower odds of readmission (OR=0.49, 95% CI 0.25–0.98), while greater prior detoxification/rehabilitation utilization predicted increased readmission risk (OR=1.04 per admission).

Conclusion Patients with SMI entering inpatient addiction treatment demonstrated substantially greater psychosocial and clinical complexity but achieved treatment engagement outcomes comparable to patients without SMI. These findings suggest that structured inpatient detoxification and rehabilitation settings may provide an effective environment for individuals with co-occurring psychiatric illness and substance use disorders. Prior treatment utilization emerged as an important marker of future readmission risk and may help identify patients requiring enhanced discharge planning and longitudinal support.

Scientific Significance Research examining dual-diagnosis populations in inpatient detoxification and rehabilitation settings remains limited. This study demonstrates that patients with SMI can successfully engage in addiction treatment despite greater psychosocial adversity and treatment history. The findings challenge assumptions that SMI necessarily predicts poorer treatment engagement in structured addiction treatment environments and support continued efforts to integrate psychiatric and addiction care. Identifying prior detoxification and rehabilitation utilization as a predictor of readmission may also inform risk stratification and targeted interventions aimed at improving long-term outcomes among patients with substance use disorders.

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