RETENTION TIME AND IMPACT ON EMERGENCY DEPARTMENT UTILIZATION AMONG ADOLESCENT AND YOUNG ADULT PATIENTS IN AN OUTPATIENT MEDICATION ASSISTED TREATMENT PROGRAM FOR OPIOID USE DISORDER

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Introduction:
Medication assisted treatment (MAT) is associated with longer retention time in the opioid treatment program, resulting in improved health outcomes and reduced mortality, among adult patients with opioid use disorder (OUD). MAT remains underutilized among adolescent and young adult (AYA) patients with OUD. Factors associated with retention time are not well-defined among AYA patients, and the effect of retention time on treatment outcomes in this population is unknown.
Objectives:
To determine patient characteristics associated with retention time in an outpatient, office-based opioid treatment program for adolescent and young adult patients, and to assess the impact of retention time on emergency department utilization in this cohort.
Methods:
This was a retrospective cohort study utilizing data from an electronic medical record (EMR) of AYA patients from January 1, 2009, to December 31, 2020. Patients were included if they had at least two urine drug screen (UDS) results available. Retention time was defined as the difference between the first and last date of UDS. Subsequent treatment episodes were defined as any result >70 days from the last result available and were excluded from the analysis. A follow up period of one year and two years were observed for retention time and emergency department utilization. The primary endpoint was emergency department utilization.
Results:
410 patients were included in the analysis. Utilizing linear regression, factors found to be associated with retention time at one-year follow-up were: anxiety (B=0.310), depression (B=0.220), white race (B=0.141), insomnia (B=0.098), nicotine use disorder (B=0.109), and stimulant/cocaine use disorder (B=-0.108) (all $p<0.025$). The same variables remained significant in the two-year follow-up linear regression (all $p<0.019$).
Negative binomial regressions were used to associate retention time with risk of emergency department utilization. In both one-year [RR=0.842, 95% CI 0.718-0.987] and two-year [RR=0.791, 95% CI 0.648-0.966] follow-up periods, longer retention time was associated with reduced emergency department utilization (both $p<0.035$).
Conclusions:
We found diagnosis of anxiety, depression, and nicotine use disorder, as well as white race, to be associated with longer retention times. Diagnosis of stimulant or cocaine use disorder was associated with shorter treatment retention. Additionally, longer retention time was associated with lower emergency department utilization. MAT programs including mental health services

may be beneficial for retaining AYA patients with opioid use disorder in opioid treatment programs.

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