Title: National Trends in the Use of Psychotropic Medications in Pediatric Mental Health Emergency Department Visits Between 2006 and 2018
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Background: Psychotropic medications are a common component of treatment plans for children in mental health crisis, however, little is known about the use of psychotropic medications in pediatric mental health emergency department (ED) visits. The objectives of this study are to (1) describe national trends in psychotropic medication use in pediatric mental health ED visits between 2006 and 2018; and (2) explore the association between psychotropic medication use and demographic and visit characteristics.

Methods: We conducted an observational analysis of pediatric (6-17 years) mental health ED visits using the National Hospital Ambulatory Medical Care Survey between 2006-2018. Mental health visits were identified using ICD-9/10 diagnostic codes. Drug data was categorized by the National Center for Health Statistics drug classification scheme. We described the types of psychotropic medications used (antidepressants, antipsychotics, anxiolytics/sedatives, and stimulants) and explored trends in psychotropic medication use over time using descriptive statistics. We used survey weighted logistic regression to examine the relationship between psychotropic medication use and socio-demographic (age, sex, race/ethnicity and payer type) and visit (arrival time, weekday vs. weekend, school vs. summer months, geographic region, and disposition type) characteristics.

Results: Our sample was representative of 10,391,370 pediatric mental health ED visits between 2006-2018. A psychotropic medication was prescribed in 16.9 % of pediatric mental health ED visits. The most commonly used medications were anxiolytic/sedatives (11.1%), followed by anti-psychotics (5.2%) and anti-depressants (3.6%). Between 2006 to 2018 the proportion of ED visits in which a medication was prescribed decreased from 21.7 to 15.4%. Visits for patients of black non-Hispanic race/ethnicity were associated with a decreased odds of psychotropic medication use compared to visits for white non-Hispanic patients (OR 0.51, 95% CI 0.31 - 0.47, p=0.008). No other socio-demographic or visit characteristics were associated with psychotropic medication use.

Conclusions: Prescribing psychotropic medications for children seeking mental health care in the ED is common but decreasing over time. The most frequently prescribed medications are anxiolytics/sedatives – a different distribution than psychotropic medication use in the outpatient setting. Black non-Hispanic children are less likely to receive psychotropic medications in contrast to white non-Hispanic children, however the etiology for these differences is unclear.

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