Trends in Psychotropic Medication Use among Medicaid-Enrolled Preschoolers

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Abstract

Objective: To examine trends and predictors of psychotropic medication use among preschoolers in Ohio Medicaid across a 7-year time span.

Methods: A longitudinal retrospective analysis of Medicaid claims data was conducted to examine trends in psychotropic medication use among preschool children over the 7-year period from 2002 to 2008. The study population included all children (aged 2 to 5 years) who were continuously enrolled in Ohio’s Medicaid program for at least a 12-month period from July 1, 2001 through June 30, 2008. Children were identified as users of psychotropic medications if they had at least one prescription claim during the study period (n = 23,019).

Results: The overall rate of psychotropic medication use per 1,000 children increased only slightly from 17 to 19 between 2002 and 2008. Significant increases in the use of stimulants, alpha-agonists, and especially antipsychotics, which more than doubled from 2 per 1,000 in 2002 to 5 per 1,000 in 2008, were balanced by significant decreases in the use of antidepressants and mood stabilizers. Of those treated with psychotropic medications, a little over a quarter (28.4%) had a mental health assessment, 23.7% had a visit with a psychiatrist, and 29.7% had a psychosocial visit. Children who were older, white, male, disabled, and in foster care were more likely to receive psychotropic medications. The diagnoses most associated with psychotropic medication use were ADHD, bipolar disorder, and disruptive behavior disorders.

Conclusion: This data suggest growth in the proportion of preschoolers being treated with antipsychotics, stimulants and alpha-agonists, primarily for behavioral disturbances and aggressive symptoms. Most preschool children prescribed psychotropic medication do not receive the psychosocial services recommended by current treatment guidelines.

Methods

Demographic Factors
• Age, race/ethnicity, sex, area of residence, Medicaid eligibility
Clinical Factors
• Primary psychiatric diagnosis
• ICD-9-CM codes: 290-319
• Number of psychiatric disorders
• Comorbid medical conditions
• 12 chronic pediatric conditions
Mental Health Service Use
• Outpatient services
• Inpatient psychotropic

Predictor Variables
• Demographic Factors
• Age, race/ethnicity, sex, area of residence, Medicaid eligibility
• Clinical Factors
• Primary psychiatric diagnosis
• ICD-9-CM codes: 290-319
• Number of psychiatric disorders
• Comorbid medical conditions
• 12 chronic pediatric conditions
• Mental Health Service Use
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Statistical Methods
• Generalized estimated equation (SEE) logistic regression model of psychotropic medication use

Results

Patterns of psychotropic Medication use Among Medicaid-Enrolled Preschoolers

Patterns of Mental Health Service Use for Preschoolers Treated with Psychotropic Medication, Ohio Medicaid, 2002-2008

Summary of Findings

• Trends in Psychotropic Use
• Rates of medication use remained stable between 2002 and 2008.

• Stimulants, alpha-agonists, anxiolytics, antipsychotics most common
• Most drugs prescribed by primary care doctors

• Increased use of:
  • Antipsychotics, stimulants
  • Alpha-agonists
• Decreased use of:
  • Antidepressants
• Mood stabilizers

• Rates of antipsychotic use more than doubled
• Most prescribed risperidone

• Key findings from the multivariate analysis:
  • 1 medication use for older, white, male, disabled, and in foster care
  • 1 medication use for those diagnosed with ADHD, bipolar, disruptive behavior, and autism

Conclusions and Implications

• Increases in the use of psychotropic medications have occurred despite diagnostic challenges, the relative lack of safety and efficacy of these drugs, and concerns about their effects on developing brains of young children.

• Clinicians need to be aware of the current treatment recommendations and the availability of non-pharmacological interventions and carefully weigh the risks and benefits of psychotropic medication in young children.

• Efforts to improve access to non-pharmacological mental health services, psychosocial care for patients and families, and decision support for providers in the general medical setting are warranted.

• Social workers need to be aware of treatment options and availability of services to connect preschool aged children and families to the appropriate resources.

Strengths and Limitations

• Population data

• Examination of prescribing trends

• Examination of context of medication prescribing
  • Type of prescribing provider
  • Specialty vs. non-specialty

• Mental health service use

• Generalizability
• Other state programs: Non-Medicaid populations

• Claim data lack information on:
  • Physician characteristics
  • Patient attitudes about meds
  • Family factors
  • Level of functional impairment

• Pharmacy claims do not measure actual consumption of meds

Background

• Decrease in the use of psychotropic drugs in young children
  • 1991-1995: 1.7-3.1 fold increase in stimulants
  • 50% of children < 6 yrs. with autism prescribed medications, 2001: Rate of antidepressives use more than doubled from 1999 to 2007

• Indications for medication
  • After a trial of psychosocial treatment
  • Moderate to severe symptoms and functional impairment
  • High risk of injury to self or others

• Concerns and issues
  • Lack of data on effectiveness, safety, or dosing of drugs
  • Effects on developing brain unknown
  • Little knowledge of dosing, tolerability, or drug interactions
  • Validity and reliability of many diagnoses not confirmed

• Gaps in Research
  • Recent trend in prescribing to preschoolers
  • The context in which prescribing occurs
  • Factors that affect prescribing occurs

Objectives

• To examine trends in psychotropic medication use and mental health service use patterns for Medicaid-enrolled preschoolers.

• To identify demographic, diagnostic, and service use factors associated with psychotropic medication use.