RWD78

Psychotropic Medication Treatment Patterns in Employee Dependents with Autism Spectrum Disorder

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Background

- In children with autism spectrum disorder (ASD), various psychotropic medications are prescribed to manage behavioral symptoms and comorbidities, including attention deficit hyperactivity disorder (ADHD), depression, anxiety, and sleep disturbances.
- While recent claims-based analyses focused on cross-sectional treatment patterns, there is a gap in literature following the medication changes in cohort of individuals with ASD over time.
- Additionally, limited studies have focused specifically on children with ASD who are dependents of employees. As caring for children with complex treatment can influence caregivers' absenteeism and employment, understanding medication patterns in these children may be of interest to employers to shed light on medication burden and medication-related needs faced by dependents.

Objective

To describe the 3-year changes in medication use in different age groups of children with ASD based on a sample of commercially insured employee dependents in the US

Methods

- Data source: Workpartners Research Reference Database (RRDb), a national US-based employee database
- Study population: employees' dependents aged <18 years
  - Three age groups were compared: 0 to <5 years, 5 to <10 years, and 10 to <18 years
- Inclusion criteria: having 2 medical claims with ICD-10 code of autism disorder (F84.0) from 2016 to 2023, and having 3 years of post-index continuous data
  - Index: first available diagnosis of ICD-10 code of F84.0
  - Follow-up period: 3 years
- The use of 6 psychotropic medication classes was evaluated: Antidepressant/anxiolytic agents, anti-seizure medications, antipsychotics, alpha agonists, stimulants, sleep medications
- Drug classes with at least 30 days of prescription overlap were considered concurrent use.

Results

Table 1. Dependent baseline characteristics

Characteristic	Dependent, n (%)
Age (years) at index – Mean (SD)	9.3 (4.6)
0 to <5 years	641 (23.3%)
5 to <10 years	892 (32.5%)
10 to <18 years	1,214 (44.2%)
Sex	
Male	2,128 (77.5%)
Female	619 (22.5%)
Co-occurring conditions (up to 12 months pre-index)	
ADHD	555 (20.2%)
Anxiety disorder	350 (12.7%)
Conduct disorder	145 (5.3%)
Depressive disorder	113 (4.1%)
Bipolar disorder or other mood disorders	116 (4.2%)
Seizure disorder	110 (4.0%)
Sleep disorder	107 (3.9%)
Baseline medication usage (up to 12 months pre-index)	
None	1,838 (66.9%)
Stimulant	473 (17.2%)
Antidepressant / anxiolytic agents	368 (13.4%)
Antipsychotic	232 (8.4%)
Anti-seizure medications	193 (7.0%)
Sleep medications	43 (1.6%)
Alpha agonists	339 (12.3%)

SD, standard deviation

Table 2. Employee baseline characteristics

Characteristic	Employee, n (%)
Age (years) at index – Mean (SD)	42.1 (7.4)
Sex	
Male	1,822 (66.3%)
Female	925 (33.7%)
Race and ethnicity	
White	729 (26.5%)
Black	96 (3.5%)
Asian	99 (3.6%)
Hispanic	209 (7.6%)
Other	31 (1.1%)
Unknown	1,583 (57.6%)
Region	
Northeast	787 (28.6%)
Midwest	291 (10.6%)
South	936 (34.1%)
West	733 (26.7%)
Annual salary (inflation-adjusted to 2023 US dollars)	
Mean annual salary (SD)	$125,404 ($77,274)
Unknown	262 (9.5%)
<$50,000	250 (9.1%)
$50,000 to <$100,000	776 (28.2%)
$100,000 to <$150,000	720 (26.2%)
$150,000 or more	739 (26.9%)

SD, standard deviation

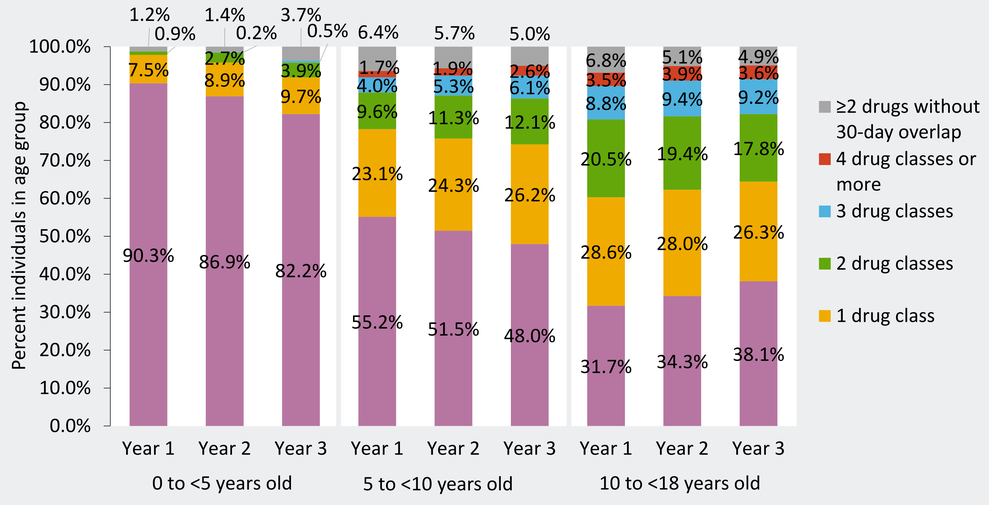

Figure 1. Number of concurrent psychotropic drug classes in different age groups

- At Year 1, only 8.4% of the 0 to <5 years age group took ≥1 concurrent psychotropic drug classes. In contrast, significantly larger proportions of the two older age groups took ≥1 concurrent medication, with 15.4% of 5- to <10-year-olds and 32.9% in the 10- to <18-year-olds on ≥2 concurrent drug classes.
- From Year 1 to Year 3, the use of ≥2 concurrent medications increased in the 0 to <5 years and 5 to <10 years age groups.

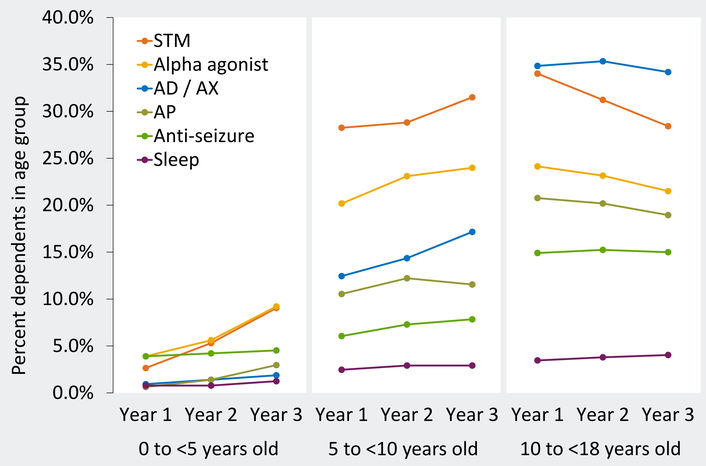

Figure 2. Use of psychotropic drug classes in different age groups
AD/AX, antidepressant/anxiolytic; AP, antipsychotics; STM, stimulants

- The most prescribed drug classes were stimulants, antidepressant/anxiolytic agents, and alpha agonists.
- Antipsychotic use was highest in the 10 to <18 years group.

Discussion

- Psychotropic medication use, especially the use of antipsychotics, was more prevalent in older age groups, with increasing number of patients prescribed multiple drug classes in older groups.
- Limitations:
  - This sample included commercially insured individuals and may not be representative of utilization patterns in the uninsured children or those with Medicaid coverage.
  - First available diagnosis in claims data may not be the true first clinical diagnosis.
  - Each pre-defined age group may contain children with heterogenous features and varying developmental trajectories.
- Given the medication burden in children with ASD, future research should investigate the impact of complex medication regimens in dependents on employee outcomes, such as absenteeism and productivity.

Conclusion

The findings of this analysis highlighted the burden of polypharmacy with increasing age and over time in employee dependents with ASD.

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