

Reports

Psychotropic Medication Use Among Children in Foster Care with Placement Instability: A Statewide Retrospective Analysis

Gelila Yitsege, M.D.¹, Alexis French, Ph.D.², Reginald Lerebours, M.A.³, Ravi Anand, M.D.², Courtney L. McMickens, M.D., M.P.H., M.H.S.²

¹ Duke University School of Medicine, ² Department of Psychiatry, Duke University School of Medicine, ³ Department of Biostatistics and Bioinformatics, Duke School of Medicine

Keywords: polypharmacy, foster care

<https://doi.org/10.62414/001c.157959>

JAACAP Connect

Vol. 13, Issue 3, 2026

This statewide retrospective analysis investigates the prevalence and patterns of high-risk psychotropic medication prescribing among children in foster care with placement instability. With 236 cases examined between June 2022 and June 2023, the study sought to identify sociodemographic differences in prescribing practices. Findings revealed that 37.3% of children in foster care received high-risk prescriptions, with no significant correlation to race or rurality. The results underscore the complex mental health needs of foster children, who are often subjected to medication regimens that include multiple psychotropics despite potential side effects and without thorough medical oversight. Recognizing the limitations inherent to retrospective data analysis, this study calls for further research to enhance understanding of high-risk prescribing for children with complex trauma in foster care.

INTRODUCTION

Children in foster care often experience multiple moves after maltreatment and separation from their family of origin, which can exacerbate mental health symptoms and create barriers to assessment and treatment.¹ Although psychotropic medications can be effective at managing symptoms, inappropriate prescribing and lack of medical monitoring have been a longstanding concern among this population. Compared to children with Medicaid who are not in foster care, children in foster care are 6.8 times more likely to receive a psychotropic medication.² Further, one study found Medicaid-enrolled children in child welfare were prescribed 2 or more psychotropic prescriptions at a higher rate than other Medicaid-enrolled children.³ The widespread use of psychotropic medications in this population is particularly concerning due to the limited availability of safety and efficacy data for children on 2 or more antipsychotics, which presents potential risks with unclear benefits.³ Oversight and monitoring of psychotropic medication use in the child welfare system has a complex history marked by variations in state-level implementation of strategies.⁴ The Child and Family Services Improvement and Innovation Act provides a framework for oversight and safe prescribing of psychotropic medications. However, disparities persist, possibly due to variation between state protocols that fall short of best practice princi-

ples outlined by the American Academy of Child and Adolescent Psychiatry.^{3,5} Understanding the barriers to effectively implementing oversight and monitoring of psychotropic medication is crucial for improving the clinical outcomes of children in foster care.

The ongoing child mental health crisis has seen a substantial rise in emergency room presentations, with a dramatic increase during the second year of the COVID-19 pandemic, exacerbating the demand for inpatient care.⁶ This crisis has disproportionately affected children in foster care with severe mental health needs, highlighting the need for enhanced crisis and emergency mental health services for this vulnerable population.⁷ Additionally, the COVID-19 pandemic aftermath resulted in decreased foster care placements and staffing shortages in mental health services, further straining an already overstretched system.⁷ For children in foster care throughout the state who face difficulties establishing safe housing with appropriate mental health services, the average number of placements was 34 in 2022, and the most common barriers were behavioral concerns, particularly aggression, and limited availability of recommended level of care.⁸ The primary objective of this study was to determine if there were sociodemographic differences by high-risk prescribing.



Table 1. Participant Characteristics and Demographics (By Race)

	Black (n = 109)	White (n = 95)	Multiracial/ unknown (n = 32)	Total (N = 236)	Test statistic	P value
Gender						.51 ^a
Female	54 (49.5%)	42 (44.2%)	13 (40.6%)	109 (46.2%)		
Male	52 (47.7%)	48 (50.5%)	16 (50.0%)	116 (49.2%)		
Transgender male	3 (2.8%)	5 (5.3%)	3 (9.4%)	11 (4.7%)		
Age in years, median (IQR)	14.0 (13.0, 16.0)	15.0 (12.0, 16.0)	14.0 (10.5, 16.0)	14.0 (12.5, 16.0)	0.57	.75 ^b
Range	(6.0–17.0)	(3.0–17.0)	(7.0–17.0)	(3.0–17.0)		
Rurality	38 (34.9%)	54 (56.8%)	8 (25.0%)	100 (42.4%)	14.62	.0007 ^c
Diagnoses type						
Anxiety or stress disorders	70 (64.2%)	69 (72.6%)	24 (75.0%)	163 (69.1%)	2.29	.32 ^c
Mood disorders	67 (61.5%)	56 (58.9%)	12 (37.5%)	135 (57.2%)	6.00	.0497 ^c
Disruptive behavior disorders	72 (66.1%)	49 (51.6%)	19 (59.4%)	140 (59.3%)	4.41	.11 ^c
Neurodevelopmental disorders	76 (69.7%)	68 (71.6%)	21 (65.6%)	165 (69.9%)	0.41	.82 ^c
Number of diagnoses^d					3.23	.52 ^c
0	1 (0.9%)	1 (1.1%)	2 (6.3%)	4 (1.7%)		
1	9 (8.3%)	17 (17.9%)	1 (3.1%)	27 (11.4%)		
2	37 (33.9%)	23 (24.2%)	14 (43.8%)	74 (31.4%)		
3	45 (41.3%)	36 (37.9%)	13 (40.6%)	94 (39.8%)		
4	17 (15.6%)	18 (18.9%)	2 (6.3%)	37 (15.7%)		

^aFisher's exact test.^bKruskal–Wallis test.^cChi-squared test.^dFor the “number of diagnoses” chi-squared test, individuals with 0 diagnoses, 1 diagnosis, and 2 diagnoses were combined to form a “2 or less” diagnoses level for the statistical test.

METHODS

For this retrospective analysis, children were identified based on initial referrals reviewed by a statewide, cross-disciplinary team from June 2022 to June 2023. Recurring referrals and referral cases with insufficient demographic or medication information were excluded for a total of 236 analyzed cases. We defined high-risk prescribing as the prescription of 2 or more antipsychotics, 2 or more mood stabilizers, or at least 1 mood stabilizer and 1 antipsychotic, all of which are deemed outside of best prescribing practices as defined by adopted state guidelines.⁹ Demographic information was reported in case documents by the case social worker. Rural status was identified by the state's county classification system and based on the county with custody of the child.¹⁰ The study analyzed sociodemographic and clinical characteristics as well as the association of race and rurality on high-risk prescriptions using univariable tests (chi-squared, Fisher's exact, and Kruskal–Wallis) and logistic regression, adjusting for confounders (age, gender, and the presence of anxiety or stress disorders, mood disorders, disruptive behavior disorders, and neurodevelopmental disorders). It was approved by the Duke Health Institutional Review Board and classified as exempt (Pro00111867).

RESULTS

A total of 283 cases were extracted from referral data; 47 were excluded due to lack of adequate and complete demographic information. Of the 236 children, 46.2% were Black, 40.3% were White, and 13.6% identified as multiracial or unknown (Table 1). In terms of gender, 46.2% were female (n = 109), 49.2% were male (n = 116), and 4.7% identified as transgender male (n = 11). The median age of the participants was 14.0 years, with an age range of 3 to 17 years. Most children resided in non-rural counties (57.6%). There was an association between race and rurality status (Black children: 34.9% rural, White children: 56.8% rural, multiracial/unknown children: 25% rural; $\chi^2(2) = 14.618$, $P = .0007$). Most children had multiple psychiatric diagnoses: 39.8% had 3 and 15.7% had 4. Overall, 69.1% were diagnosed with an anxiety or stress disorder, 57.2% with a mood disorder, 59.3% with a disruptive behavior disorder, and 69.9% with a neurodevelopmental disorder, which included attention-deficit/hyperactive disorder (ADHD), autism spectrum disorder, and other developmental disorders. Rates of mood disorders differed by race, with 61.5% of Black children, 58.9% of White children, and 37.5% of those with unknown/multiracial status recorded as having such a diagnosis ($\chi^2(2) = 6.0023$, $P = .0497$).

Table 2. High-Risk Prescribing (By Race)

	Black (n = 109)	White (n = 95)	Multiracial/ unknown (n = 32)	Total (N = 236)	Test statistic	P value
Number of psychotropic types prescribed^a						
0	64 (58.7%)	62 (65.3%)	22 (68.8%)	148 (62.7%)	2.50	.64 ^b
1	32 (29.4%)	21 (22.1%)	8 (25.0%)	61 (25.8%)		
2	10 (9.2%)	11 (11.6%)	2 (6.3%)	23 (9.7%)		
4	3 (2.8%)	1 (1.1%)	0 (0.0%)	4 (1.7%)		
High-risk prescription	45 (41.3%)	33 (34.7%)	10 (31.3%)	88 (37.3%)	1.51	.47 ^b
Prescription type						
2 or more mood stabilizers	3 (2.8%)	3 (3.2%)	0 (0.0%)	6 (2.5%)		.87 ^c
2 or more antipsychotics	16 (14.7%)	11 (11.6%)	3 (9.4%)	30 (12.7%)		.74 ^c
At least 1 mood stabilizer and 1 antipsychotic	42 (38.5%)	32 (33.7%)	9 (28.1%)	83 (35.2%)	1.33	.51 ^b

^aFor the “number of psychotropic types prescribed” chi-squared test, individuals with “2 types of prescription types prescribed” and “3 types of prescription types prescribed” were combined to form a “2 or more” prescription types prescribed level for the statistical test.

^bChi-squared test.

^cFisher’s exact test.

More than one-third (37.3%) of prescribing among children met the criteria for high-risk prescribing (Table 2). Among Black children, 41.3% (n = 45) experienced high-risk prescribing practices. One-third of White children (34.7%, n = 33) and one-third of children who identified as multiracial or whose race was unknown (31.3%, n = 10) experienced high-risk prescribing. Approximately one-third (35.0%, n = 35) of those in a rural county experienced high-risk prescribing. A slightly higher proportion of children in non-rural counties (39.0%) experienced high-risk prescribing compared to those in rural counties. There was no association between sociodemographic characteristics or diagnosis and high-risk prescription status in unadjusted or adjusted models.

DISCUSSION

Our study found that 37% of children in foster care referred to the statewide cross-disciplinary team were subject to high-risk prescribing practices, yet no significant association with race or rurality was observed. Prior research on the foster care population has shown high-risk prescribing rates ranging from 26% to 35%.^{2,3} Children in foster care often present with more complex mental health needs compared to those not in foster care. Symptom severity, diagnosis uncertainty, and lack of access to treatments like psychotherapy may play a role in the decision to prescribe multiple psychotropic medications. Davis et al examined polypharmacy prescribing among pediatric Medicaid enrollees and found no significant differences by race, geography, or foster care status, which is consistent with our study’s findings.¹¹

Children in foster care frequently experience complex trauma, and psychotropic medications are often used to treat the symptoms that manifest as a result of untreated trauma and disrupted attachments. When underlying issues

are not treated, children may experience behavioral health concerns that interfere with placement stability and the ability to make meaningful attachments to caregivers, both of which may result in increased need for crisis services. While pharmacological interventions may be necessary to provide symptom relief, careful consideration should be given to the side effect risks of antipsychotic and mood stabilizer medications (eg, weight gain, metabolic abnormalities, neurological side effects). Investment in strategies supports effective oversight and monitoring, including access to psychiatric consultation, continuous quality improvement, education, and information on psychotropic medications. Psychiatric access programs, which are available in nearly all US states, provide clinical training and education about mental health screening, diagnosis, and treatment to primary care providers, thus helping to ensure that psychiatric medications are being appropriately prescribed and monitored. Research has shown that these programs can significantly reduce antipsychotic prescribing to children and increase families’ engagement in psychosocial interventions.^{12,13} Additionally, strategies to meet families’ basic needs and provide access to evidence-based trauma treatments are critical to addressing mental health issues related to disruption of the home environment.

Further research is needed to better understand the factors contributing to high-risk prescribing, specifically for children in foster care with complex trauma. Insight into how placement instability, access to evidence-based psychotherapy, and availability of supportive psychosocial services impact symptoms and lead to prescribing of multiple medications would be valuable. A retrospective analysis of local administrative data has inherent limitations, such as the omission of ethnicity due to inconsistent reporting and gaps in medication histories, including prescriber rationale, dose, and monitoring details. These omissions highlight

the need for improved data collection and the inclusion of comprehensive treatment histories in future research.

PLAIN LANGUAGE SUMMARY

This retrospective analysis study examines high-risk psychotropic medication use in foster care, finding that 37.3% of children received such prescriptions, with no differences detected based on race or rurality status, highlighting the importance of better understanding and oversight of their mental health care.

.....

ABOUT THE AUTHORS

Gelila Yitsege, MD, is with the Duke University School of Medicine, Durham, North Carolina, USA.

Alexis French, PhD, is with the Department of Psychiatry, Duke University School of Medicine, Durham, North Carolina, USA.

Reginald Lerebours, MA, is with the Department of Biostatistics and Bioinformatics, Duke University School of Medicine, Durham, North Carolina, USA.

Ravi Anand, MD, is with the Department of Psychiatry, Duke University School of Medicine, Durham, North Carolina, USA.

Courtney McMickens, MD, is with the Department of Psychiatry, Duke University School of Medicine, Durham, North Carolina, USA.

CORRESPONDENCE TO:

Gelila Yitsege, MD; email: gyitsege@gmail.com, 40 Duke Medicine Circle, 124 Davison Building, Durham, North Carolina.

FUNDING

This project was funded by NC DHHS/SAMHSA for the North Carolina Psychiatric Access Line (NC-PAL) Expansion 00043693/B09SM083820.

DISCLOSURE

Dr. Yitsege, Dr. French, Mr. Lerebours, Dr. Anand, and Dr. McMickens have reported no biomedical financial interests or potential conflicts of interest.

The preliminary findings of this study were presented at the American Academy of Child and Adolescent Psychiatry Annual Meeting; October 23–27, 2023, New York City, New York.

ACKNOWLEDGMENTS

Reginald Lerebours, MA, served as the statistical expert for this research as part of the Duke BERD Methods Core. The Duke BERD Methods Core's support for this project was made possible (in part) by Grant Number UL1TR002553 from the National Center for Advancing Translational Sciences (NCATS) of the National Institutes of Health (NIH), and NIH Roadmap for Medical Research. The authors also thank Gary Maslow, MD, and Nicole Heilbron, PhD, for their support. Gary Maslow, MD, and Nicole Heilbron, PhD, serve as principal investigators of the North Carolina Psychiatric Access Line (NC-PAL).

AUTHOR CONTRIBUTIONS

Submitted: February 29, 2024 EDT. Accepted: February 09, 2026 EDT. Published: March 20, 2026 EDT.

REFERENCES

1. McGuire A, Cho B, Huffhines L, Gusler S, Brown S, Jackson Y. The relation between dimensions of maltreatment, placement instability, and mental health among youth in foster care. *Child Abuse Negl.* 2018;86:10-21. doi:[10.1016/j.chiabu.2018.08.012](https://doi.org/10.1016/j.chiabu.2018.08.012)
2. Keefe RJ, Cummings ADL, Smith AE, Greeley CS, Van Horne BS. Psychotropic medication prescribing: Youth in foster care compared with other Medicaid enrollees. *J Child Adolesc Psychopharmacol.* 2023;33(4):149-155. doi:[10.1089/cap.2022.0092](https://doi.org/10.1089/cap.2022.0092)
3. Radel LF, Ali MM, West K, Lieff SA. Psychotropic medication and psychotropic polypharmacy among children and adolescents in the us child welfare system. *JAMA Pediatr.* 2023;177(10):1107-1110. doi:[10.1001/jamapediatrics.2023.3068](https://doi.org/10.1001/jamapediatrics.2023.3068)
4. *Children's Mental Health: Concerns Remain about Appropriate Services for Children in Medicaid and Foster Care.* US Government Accountability Office; 2012.
5. Lee T, Fouras G, Brown R, American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI). Practice parameter for the assessment and management of youth involved with the child welfare system. *J Am Acad Child Adolesc Psychiatry.* 2015;54(6):502-517. doi:[10.1016/j.jaac.2015.03.005](https://doi.org/10.1016/j.jaac.2015.03.005)
6. Havens JF, Marr MC. Pediatric psychiatric emergency services-stasis in crisis. *JAMA.* 2023;329(17):1453-1454. doi:[10.1001/jama.2023.3693](https://doi.org/10.1001/jama.2023.3693)
7. Overhage L, Hailu R, Busch AB, Mehrotra A, Michelson KA, Huskamp HA. Trends in acute care use for mental health conditions among youth during the COVID-19 pandemic. *JAMA Psychiatry.* 2023;80(9):924-932. doi:[10.1001/jamapsychiatry.2023.2195](https://doi.org/10.1001/jamapsychiatry.2023.2195)
8. McMickens CL, Maslow G, Keeshin B. Child welfare interventions and system transformation to improve the lives of children and families who experience trauma. *J Am Acad Child Adolesc Psychiatry.* 2022;61(10):S60. doi:[10.1016/j.jaac.2022.07.257](https://doi.org/10.1016/j.jaac.2022.07.257)
9. Fostering Health NC Medication Workgroup. *Best Practices for Medication Management for Children & Adolescents in Foster Care.* NC Pediatric Society; 2020. <https://www.ncdhhs.gov/cws-18-2021a4/download?attachment>
10. United States Census Bureau. Population Division; Office of Management and Budget, July 2015 delineations. April 2016. Accessed July 15, 2023. <http://www.census.gov/population/metro/data/def.html>
11. Davis DW, Lohr WD, Feygin Y, et al. High-level psychotropic polypharmacy: A retrospective comparison of children in foster care to their peers on Medicaid. *BMC Psychiatry.* 2021;21(1):303. doi:[10.1186/s12888-021-03309-9](https://doi.org/10.1186/s12888-021-03309-9)
12. Barclay RP, Penfold RB, Sullivan D, Boydston L, Wignall J, Hilt RJ. Decrease in statewide antipsychotic prescribing after implementation of child and adolescent psychiatry consultation services. *Health Serv Res.* 2017;52(2):561-578. doi:[10.1111/1475-6773.12539](https://doi.org/10.1111/1475-6773.12539)
13. Barclay RP, Dillon-Naftolin E, Russell D, Hilt RJ. A second-opinion program for the care of youths prescribed five or more psychotropics in Washington State. *Psychiatr Serv.* 2021;72(3):362-365. doi:[10.1176/appi.ps.202000234](https://doi.org/10.1176/appi.ps.202000234)