"HIDDEN COSTS OF THE PANDEMIC: EXAMINING SPECIFIC POLICY APPROACHES TO COMBATING COVID-19 RELATED LEARNING LOSS IN SCHOOL-AGED CHILDREN WITH ADHD"

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INTRODUCTION

Attention-deficit hyperactivity disorder (ADHD) is the most common behavioral disorder among children and adolescents living in the US and is growing in prevalence (Davidovitch et al., 2017). CDC scientists estimate that 6.1 million children ages 2-17 years living in the U.S. have been diagnosed with ADHD (Centers for Disease Control and Prevention, 2022). ADHD, characterized by inattention, impulsivity, and hyperactivity, significantly affects a child's behavior and performance both in school and at home (Davidovitch et al., 2017). When left untreated, the condition often leads to learning disabilities that hinder educational progress. Students with ADHD may struggle with academic motivation, exhibit poor planning and time management skills, and achieve lower academic outcomes compared to their peers. Accordingly, researchers have found that even after adjusting for social status, IQ, and learning disabilities, students with ADHD are significantly more likely to have repeated a grade or dropped out of high school (Fried et al., 2016).

Teachers play a significant role in the initial detection of classroom behaviors consistent with ADHD (Pearcy et al., 1993). When such behaviors are observed by either a teacher or parent, the student must undergo a medical assessment based on the American Psychiatric Association's *Diagnostic and Statistical Manual, Fifth edition Text Revision* (DSM-5 TF) to access appropriate treatment and school accommodations (U.S. Department of Education, 2016; Cleveland Clinic, 2024). Medications, often categorized as stimulants or non-stimulants, are prescribed with careful consideration of their therapeutic benefits and potential adverse effects. Behavioral therapy works alongside medication by addressing challenging behaviors, building self-regulation skills, encouraging positive habits, and reducing harmful patterns (Centers for Disease Control and Prevention, 2024). Studies show that a combination of behavioral therapy and medications results in the best outcomes for students with ADHD (Davidovitch et al., 2017).

However, barriers to diagnosis and treatment of ADHD remain high, especially for students from marginalized backgrounds (Barkley et al., 2006). ADHD diagnosis relies on access to a physician, a stipulation which is prohibitive for many students. Furthermore, individual physicians may feel more or less inclined to give ADHD diagnoses based on similar symptoms, leading to underdiagnosis in some cases (Kovshoff et al., 2011). Racial and ethnic minorities and students whose families have a lower socioeconomic status are underdiagnosed and undertreated for ADHD

compared to white children and those from higher socioeconomic backgrounds (Morgan et al., 2013). Even among students prescribed ADHD medication, adherence is inconsistent, with many discontinuing or cycling on and off treatment over the years (Charach & Fernandez, 2013). This fluctuation is often driven by concerns about balancing medication benefits and side effects, the perception of ADHD as primarily a childhood or academic issue, and systemic challenges in accessing necessary services (Titheradge et al. 2022). The shortage of mental health providers further exacerbates these barriers, with 77% of U.S. counties reporting severe shortages of mental health professionals (America's Health Ranking, 2023).

Due to the COVID-19 pandemic, many students with ADHD experienced new or worsening symptoms and fell further behind in the classroom. This policy brief will examine current policies to remediate pandemic learning losses in students with ADHD and recommend new federal and school-based policies to fill the gaps.

BACKGROUND

Since early 2020, novel coronavirus disease (COVID-19) has both caused and worsened psychosocial problems (He et al., 2021). COVID-19-initiated school closures have catalyzed the implementation of online distance learning globally. Students with ADHD faced significant difficulties in this environment due to their heightened academic and behavioral needs. The unstructured nature of remote learning contributed to an increase in referrals for ADHD assessments and a worsening of symptoms among those already diagnosed (Rosenthal et al., 2021). During lockdowns, young people with ADHD were reported to exhibit elevated activity levels, disruptive behaviors, and increased irritability (Shah et al., 2021). While further research with larger, more geographically diverse samples is necessary, early findings from Bangladesh suggest that the prevalence of ADHD may have tripled during the pandemic (Malik & Radwan, 2021).

Many of the therapies supporting students with ADHD were discontinued during the pandemic. The majority of adolescents receiving pre-pandemic school counseling, behavioral therapy, or tutoring did not continue to receive these services during remote learning (Segenreich, 2022). Existing issues surrounding ADHD diagnosis worsened as providers struggled to determine if growing adolescent distractibility and restlessness were rooted in circumstances or underlying conditions. Research has also revealed that students with ADHD struggled to take medication during the pandemic as parents faced difficulties with determining the effectiveness of medication without teacher feedback (Becker et al., 2020).

CURRENT POLICIES TO SUPPORT STUDENTS WITH ADHD

Students with ADHD require greater amounts of support and educational accommodation than their classmates during the transition back into the classroom. This support may come from local, state, and federal policies designed to enhance equitable learning in schools.

As required by national law, two main forms of support exist for students with ADHD: Individualized Education Plans (IEPs) and 504s. IEPs convene the child, parents, and teachers to set appropriate goals, discuss strategies for success, and implement appropriate accommodations. Significantly, IEPs require diagnosis of ADHD by a physician outside of the school environment,

which creates health access issues. 504 plans are formal plans that parents, administrators, and teachers develop to provide accommodations to students, such as fidget toys and breaks throughout the day (Jones, 2022). Approximately 52% of adolescents with a history of ADHD have an Individualized Education Program (IEP) or 504 Plan to receive school interventions and accommodations (Becker et al., 2020).

Most states have laws and procedures that allow for school-based administration of ADHD medications. However, since 2000, researchers have reported a decline in the administration of ADHD medications given by school nurses–despite an increase in the incidence of ADHD in school-age populations. While some of this decline may be attributed to the increasing prevalence of once-daily medication, it is still vital that extra supply of medications be available in the case that families forget to administer the necessary medication. Additionally, to request ADHD medication for their children, guardians must go to a school and formally request a medication authorization form and then have the form signed off by a physician and an administrator (DuPont et al., 2007). This process represents a significant barrier to medication administration for socioeconomically or geographically disadvantaged families. Issues with medication distribution have worsened due to increased demand due to remote learning (Broadway, 2023).

Recognizing the severe impact of pandemic-related learning loss, the federal government apportioned significant funding to schools through the Coronavirus Aid, Relief, and Economic Security Act (CARES Act), the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA), and the American Rescue Plan (ARP). Together, these initiatives aim to distribute over $200 billion to K-12 education programs (The Varnett Public Schools, n.d.).

Despite this significant investment, comprehensive federal policies to specifically address pandemic-related learning loss do not yet exist. While some states and school districts have introduced measures such as summer programs and extended school years to help students catch up, much of the burden has fallen on parents to address their children's academic challenges (ABC7 San Francisco, 2021). For families of children with ADHD, this task is especially challenging, as they face a disproportionate burden in remediating pandemic-induced learning setbacks (Rosenthal et al., 2021).

POLICY RECOMMENDATIONS

In the wake of the expiration of many of the provisions of the CARES Act, national policies must be revised to address learning losses, particularly those affecting children with ADHD (U.S. Government Accountability Office, 2023). Beyond funding, more tailored solutions at the national, state, and district levels are essential to support these students. The gaps in the underlying infrastructure supporting students with ADHD have only worsened due to the pandemic. Funding should be apportioned to address three critical areas of concern: workforce shortages, accurate ADHD diagnosis of school children, and medication access.

National policies should be put in place to increase the workforce of therapists. Government funding must be funneled towards loan forgiveness for behavioral therapists in order to attract new talent. U.S. Representative Clark's law to bring $75,000 loan forgiveness to addiction counselors should be extended to other mental health careers (National Health Service Corps, n.d.).

Additionally, federal funds should support community colleges in offering education, training, credentials, and skills to entry-level practitioners to increase the behavioral health professional pipeline.

To address the problem of over and under-diagnosing students, the federal government must invest in professional development in schools. The national government should invest in interactive training courses designed to give teachers practical strategies and resources for working with students with ADHD. Research shows that ADHD teacher training programs may be effective in improving teachers' knowledge so they may serve as more informed partners in 504 Plans and IEPs (Ward et al., 2022). Training should emphasize integrative classroom management of students with ADHD, increased teacher vigilance for ADHD symptoms, and earlier identification of students with ADHD. Teacher's aides, educational professionals who assist classroom teachers, may also serve to support students that require extra support while maintaining classroom order and learning.

Finally, barriers to accessing medications for students with ADHD must be lowered by loosening existing national guidelines. To ensure that ADHD medication is accessible in schools, the federal government should provide exemptions on medication distribution regulations for ADHD. Administrators should work with pediatricians and behavioral therapists to create streamlined pathways for students in their schools to access ADHD medications.

LINKS TO ADDITIONAL RESOURCES

- Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD), an ADHD advocacy organization: https://chadd.org/
- Kaiser Permanente Resources for Children & Teens: https://thrive.kaiserpermanente.org/care-near-you/northern-california/gsaa/wp-
- Kaiser Permanente Resources for Children & Teens: https://thrive.kaiserpermanente.org/care-near-you/northern-california/gsaa/wp-content/uploads/sites/18/2016/-5/ADHD-esouces-for-Children-Teens.5.2014.pdf

REFERENCES

ABC7 San Francisco. (2021, August 17). *Bay Area school districts ready to tackle learning loss after a year of online learning.* Retrieved March 8, 2023, from https://abc7news.com/coronavirus-education-learning-loss-distance/10949663/

America's Health Rankings. (n.d.). *Mental Health Providers in the United States.* Retrieved March 2, 2023, from https://www.americashealthrankings.org/explore/annual/measure/MHP

Barkley, R., Fischer, M., Smallish, L., & Fletcher, K. (2006). *Young adult outcome of hyperactive children: Adaptive functioning in major life activities.* Journal of the American Academy of Child and Adolescent Psychiatry, 45(2), 192–202. https://doi.org/10.1097/01.chi.0000189134.97436.e2

Becker, S. P., Breaux, R., Cusick, C. N., et al. (2020, December). *Remote learning during COVID-19: Examining school practices, service continuation, and difficulties for adolescents with and without attention-deficit/hyperactivity disorder.* The Journal of Adolescent Health: official publication of the Society for Adolescent Medicine, 67(6), 769–777. https://doi.org/10.1016/j.jadohealth.2020.09.002

Broadway, C. (2023, January 26). *Survey: ADHD prescriptions, medication use jump among teens.* ADDitude. Retrieved March 9, 2023, from https://www.additudemag.com/adhd-prescriptions-medication-use-jump-adolescents-study/

Centers for Disease Control and Prevention. (2022, August 9). *National prevalence of ADHD and treatment: Information on children and adolescents,* 2016. Retrieved March 2, 2023, from https://www.cdc.gov/ncbddd/adhd/features/national-prevalence-adhd-and-treatment.html

Centers for Disease Control and Prevention. (2024). *Treatment of ADHD.* Centers for Disease Control and Prevention. https://www.cdc.gov/adhd/treatment/index.html

Charach, A., & Fernandez, R. (2013). *Enhancing ADHD medication adherence: Challenges and opportunities.* Current Psychiatry Reports. Retrieved March 2, 2023, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3718998/

Cleveland Clinic (2024, May 16). *ADHD screening: What to expect.* https://my.clevelandclinic.org/health/diagnostics/24758-adhd-screening

Davidovitch, M., Koren, G., Fund, N., Shrem, M., & Porath, A. (2017, December 29). *Challenges in defining the rates of ADHD diagnosis and treatment: Trends over the last decade.* BMC Pediatrics,*17*(1), 218. https://doi.org/10.1186/s12887-017-0971-0

DuPont, R., Bucher, R., & Coleman, J. (2007). *School-based administration of ADHD drugs decline, along with diversion, theft, and misuse. J Sch Nurs. 2007 Dec;23(6):349-52. doi: 10.1177/10598405070230060801. PMID: 18052521.*

Fried, R., Petty, C., Faraone, S. V., Hyder, L. L., Day, H., & Biederman, J. (n.d.). *Is ADHD a risk factor for high school dropout? A controlled study.* Journal of Attention Disorders. Retrieved March 2, 2023, from https://pubmed.ncbi.nlm.nih.gov/23382575/

He, S., Shuai, L., Wang, Z., et al. (2021). *Online learning performances of children and*

adolescents with attention deficit hyperactivity disorder during the COVID-19 pandemic. Inquiry: A Journal of Medical Care Organization, Provision and Financing. Retrieved March 2, 2023, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8524690/

Jones, C. (2022, March 31). *Parents' guide to 504 plans and IEPs: What they are and how they're different.* EdSource. Retrieved March 3, 2023, from https://edsource.org/2022/parents-guide-to-504-plans-and-ieps-what-they-are-and-how-theyre-different/669493#:~:text=What's%20the%20difference%3F,as%20speech%20or%20occupational%20therapy

Kovshoff, H., Williams, S., Vrijens, M., et al. (2011, December 18). *The decisions regarding ADHD management (DRAMA) study: Uncertainties and complexities in assessment, diagnosis and treatment from the clinician's point of view.* European Child & Adolescent Psychiatry. Retrieved March 2, 2023, from https://link.springer.com/article/10.1007/s00787-011-0235-8

Mallik, C. I., & Radwan, R. B. (2021). *Impact of lockdown due to covid-19 pandemic in changes of prevalence of predictive psychiatric disorders among children and adolescents in Bangladesh.* Asian Journal of Psychiatry, 56, 102554. https://doi.org/10.1016/j.ajp.2021.102554

Morgan, P. L., Staff, J., Hillemeier, M. M., Farkas, G., & Maczuga, S. (2013). *Racial and ethnic disparities in ADHD diagnosis from kindergarten to eighth grade.* Pediatrics. Retrieved March 2, 2023, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3691530/

National Health Service Corps. (n.d.). *Substance use disorder workforce loan repayment program.* NHSC. Retrieved March 2, 2023, from https://nhsc.hrsa.gov/loan-repayment/nhsc-sud-workforce-loan-repayment-program

Pearcy, M., Clopton, J., & Pope, A. (1993). I*nfluences on teacher referral of children to mental health services.* Journal of Emotional and Behavioral Disorders. Retrieved March 3, 2023, from https://journals.sagepub.com/doi/10.1177/106342669300100304

Rosenthal, E., Franklin-Gillette, S., & DuPaul, G. (2021). *Impact of COVID-19 on youth with ADHD: Predictors and outcomes.* Journal of Attention Disorders, *26*(9), 1223–1234. https://doi.org/10.1177/10870547211063641

Segenreich, D. (2022, April 6). *The impact of the COVID-19 pandemic on diagnosing and treating attention deficit hyperactivity disorder: New challenges in initializing and optimizing pharmacological treatment.* Frontiers in psychiatry, 13, 852664. https://doi.org/10.3389/fpsyt.2022.852664

Shah R, Raju VV, Sharma A, et al. (2021) *Impact of COVID-19 and lockdown on children with ADHD and their families—an online survey and a continuity care model.* J Neurosci Rural Pract 12: 71-79. doi: 10.1055/s-0040-1718645

The Varnett Public Schools. (n.d.). *Addressing student learning loss after the pandemic.* Retrieved March 3, 2023, from https://www.varnett.org/apps/pages/addressing-learning-loss-after-pandemic

Titheradge, D., Godfrey, J., Eke, H., Price, A., Ford, T., & Janssens, A. (2022). *Why young*

people stop taking their attention deficit hyperactivity disorder medication: A thematic analysis of interviews with young people. Child: care, health and development, 48(5), 724–735. https://doi.org/10.1111/cch.12978

U.S. Department of Education. (2016). *Know your rights: Students with ADHD.* Retrieved March 3, 2023, from https://www2.ed.gov/about/offices/list/ocr/docs/dcl-know-rights-201607-504.pdf

U. S. Government Accountability Office. (n.d.). *Covid-19 relief: Funding and spending as of Jan. 31, 2023*. COVID-19 Relief: Funding and Spending as of Jan. 31, 2023 | U.S. GAO. https://www.gao.gov/products/gao-23-106647

Ward, R. J., Bristow, S. J., Kovshoff, H., Cortese, S., & Kreppner, J. (2022, January). *The effects of ADHD teacher training programs on teachers and pupils: A systematic review and meta-analysis.* J Atten Disord. 2022 Jan;26(2):225-244. doi: 10.1177/1087054720972801. Epub 2020 Dec 17. PMID: 33331193; PMCID: PMC8679179.

Young, S., Asherson, P., Lloyd, T., et al. (2021, March 19). *Failure of healthcare provision for attention-deficit/hyperactivity disorder in the United Kingdom: A consensus statement.* Frontiers in Psychiatry, *12*, 649399. https://doi.org/10.3389/fpsyt.2021.649399