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# The Behavioral Health Needs of Youth With Preexisting Psychiatric Disorders in the Aftermath of COVID-19

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Children and adolescents with psychiatric disorders are a sizable population of children and youth with special health care needs. While the capabilities of behavioral health resources to meet these youth's needs were already strained, the Coronavirus Disease 2019 (COVID-19) pandemic extended resource limitations just as this subgroup of children and youth with special health care needs faced new stressors and potential exacerbations of their underlying psychiatric illnesses. In this article, we provide a brief narrative review of the factors' manifestations with an emphasis upon their disproportionate impact upon children of color and their families and particularly those from disadvantaged communities. We proceed to provide policy proposals for addressing these disparities. These include raising reimbursement for behavioral health services,

increasing telehealth care delivery, reducing inter-state licensing requirements, increasing community-based services, and addressing social determinants of health. Conclusions and directions for strengthening behavioral health service delivery capabilities and addressing systemic injustices are made. *J Pediatr Health Care.* (2023) 37, 137–141

## KEY WORDS

Behavioral health, COVID-19, service access, child and adolescent psychiatry

## INTRODUCTION

On December 7, 2021, the U.S. Surgeon General issued an advisory in which a national youth mental health crisis was highlighted as being exacerbated by the COVID-19 pandemic (U.S. Department of Health and Human Services, 2021). The advisory emphasized the presence of a preexisting and alarming youth mental health crisis. Children and adolescents with preexisting psychiatric disorders are a sizable population of children and youth with special health care needs (CYSHCN), and our mental health service system was already strained to support these youth. A shortage of psychiatrists and mental health workers has grossly affected youths' ability to access care (Weiner, 2022). The current attrition rate of behavioral health care providers is between 30% and 35% per year, which has implications for patients receiving access to consistent and appropriate care measures (Johnson-Kwochka et al., 2020). The impact of the COVID-19 pandemic highlights our shortcomings in supporting CYSHCN and allows for delineations of room for improvement.

Young people are contending with adverse childhood experiences, racial reckoning, political turmoil, and environmental concerns across the country. These forces represent chronic stressors and disruptive life events that have impacted

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youth behavioral health and their in-person schooling, health care services, and access to resources. Families are under stress and may not have comparable resilience to support their children as before the pandemic: for all individuals, depressive and anxiety symptoms rose by 50% (Aknin et al., 2022).

Symptoms rose specifically among youth as well. In one study, children with attention deficit hyperactivity disorder were found during the pandemic to have increased symptoms of negative emotions or behaviors such as irritability and impulsivity (Shah et al., 2021). Specific trends in nonsuicidal self-injury and substance use disorders are known for pediatric populations on a month-by-month timeline specific to geographic regions in the U.S. Fair health report (FAIR Health, 2021). In 2021, emergency visits for suicide attempts were 51% higher for adolescent girls and 4% higher for adolescent boys compared with 2019 (Yard et al., 2021). These pandemic shifts occur amidst trends over the last decade in which mental health problems have risen: sadness or hopelessness rose by 40%, suicidal ideation rose by 36%, and the creation of suicide plans rose by 44% among high schoolers in the United States between 2009 and 2019 (Centers for Disease Control and Prevention, 2020).

CYSHCN requires access to resources at different levels of various ecologic systems. Preexisting structural and systemic health care inequities have made it difficult for CYSHCN youth to receive the required physical, emotional, and social support necessary for their development. The pandemic further exacerbated those health care disparities. In the 2021 Children's Mental Health Report (Osgood et al., 2021), Cynthia Martin mentioned that of the children she sees who have neurodevelopmental disorders with other present comorbidities, those from lower socioeconomic backgrounds faced the greatest amount of disruption in their access to mental health providers, educators, and advocates.

COVID-19 has also had a disproportionately high impact on children, youth and families of color and particularly those from disadvantaged communities; those with higher rates of loss, infection, and hospitalizations; and those with exposure to adverse childhood experiences (Smitherman et al., 2021) have impacted these youth. These factors are responsible for health disparities (Shim, 2020).

In what follows, we detail our observations as a child and adolescent clinicians who work with the underserved in New York City and make proposals for the coming months and years to help correct these disparities.

### **Raise Reimbursement**

Despite progress through the mental health Parity and Addiction Equity Act of 2008 (Centers for Medicare and Medicaid Services, 2008) to eliminate disparities between mental health and medical or surgical services, mental health service reimbursement by public and private insurers remains lacking.

In New York City, only 64% of inpatient behavioral health services costs are reimbursed by Medicaid (Greater New York Hospital Association, 2021). Low reimbursement rates for inpatient child and adolescent behavioral health

services lead to difficulty retaining qualified staff and maintaining available inpatient behavioral health beds, leading to long wait times in emergency departments nationwide (Bebinger, 2021). As private insurance may reimburse more, hospitals may be incentivized to fill beds with children and adolescents with commercial insurance, leaving children with lower-reimbursing public sector insurance with long waits in emergency department settings. In a study of emergency department overcrowding in the Southwestern United States, patients with Medicaid and Hispanics waited for the longest for bed availability, whereas Whites waited for the least (de Araujo et al., 2013). It should be noted that though this study was not specific to youth behavioral health, and its findings may be interpreted in many ways, it demonstrates that inequalities linked with negative health outcomes do exist on the basis of ethnicity and insurance status. In contrast, governmental agencies are limited in how they can affect reimbursement by third-party private insurance carriers; it is within governmental control to close this gap through adjustment of Medicaid reimbursement rates and potentially close a significant disparity.

Reimbursement differentials in the outpatient setting are also marked. In some areas of the country, especially major metropolitan areas, few private practitioners accept any insurance plans, leading to a two-tiered system in which those who can pay out-of-pocket gain access to more experienced providers relative to providers in hospital-based or community clinic settings, in which providers may be trainees or early career clinicians. These differentials can exacerbate economic, and racial and ethnic disparities in access to quality care among poor youth of color that predate the current crisis (Alegria et al., 2015), and these factors may make CYSHCN particularly vulnerable. Including psychiatric care, access to subspecialty care is strained for CYSHCN as a whole (Keller et al., 2020). In a study of Ohio wait times for families seeking psychiatric care for their adolescents, the median wait time was 50 days, and those with Medicaid waited longer than those with private insurance at a level of statistical significance (Steinman et al., 2015).

Reimbursement rates also impact staff turnover, which existed in behavioral health before COVID-19 but has worsened during the pandemic (Barna, 2022). The times have been called "The Great Resignation" (Sheather & Slattery, 2021). Staff turnover may be rapid, making forming an attachment as a medium for therapeutic growth difficult. This may be particularly difficult for children and adolescents with histories of abandonment or neglect.

We propose that state and federal agencies raise reimbursement rates for inpatient and outpatient Medicaid services, including through negotiations in contracts for Medicaid plans managed through commercial insurers. In New York, the Subway safety plan (New York City Office of the Mayor, 2022) was a positive step in raising Medicaid rates for inpatient psychiatric hospitalizations by 20%. In contrast, governmental agencies have little direct control over third-party outpatient reimbursement rates; these rates may rise with increased rates for Medicaid reimbursement.

Both public and private sectors should ideally better match out-of-pocket market rates. This may lead to the retention of experienced staff available to serve low-income CYSHCN in hospital and community clinic settings and to increase the quality education and training of rising mental health clinicians available for CYSHCN. A systematic review of factors related to emergency physician retention found salary, which will be influenced by increased reimbursement, to be important (Darbyshire et al., 2021). Incentivizing clinical work in poverty-impacted communities via educational loan remission programs may also provide a means to increase provider availability and increase health care access for underserved CYSHCN. Support-for-service programs demonstrably bring physicians to underserved areas and result in satisfied physicians (Pathman et al., 2004).

### **INCREASE TELEHEALTH CARE DELIVERY**

The COVID-19 pandemic demonstrated the benefits of remote psychotherapy and psychiatric medication management provision. Patients sheltering-in-place or did not wish to risk exposure remained able to receive care. There is significant evidence base of the benefits of telehealth in behavioral health, with one recent scoping review finding psychiatry as a field with the third largest number of supporting publications (Doraiswamy et al., 2020). In contrast, other fields, such as surgery, may only provide care components remotely; telehealth provides a rich opportunity for outpatient psychiatric care for children and adolescents. Play therapy may be adapted to the virtual medium and produce a rich clinical process (Udwin et al., 2021). Telehealth reduces no-show rates (Greater New York Hospital Association, 2021) and helps disadvantaged CYSHCN by reducing transportation costs and/or eliminating the need for a parent to take time off from work to accompany a child (van Cleave et al., 2022). Ongoing training of providers on telehealth services for children and adolescents should focus on addressing critical issues such as ensuring quality care, fidelity to evidence-based practices, and attention to privacy and safety in the clinical milieu.

Although patients are generally satisfied with the option of telehealth, pressures against telehealth include differential reimbursement rates by third-party payers for in-person as opposed to telehealth services, access to and knowledge of the required technology, and internet access (Gajarawala & Pelkowski, 2021; Moreno et al., 2020). We recommend a hybrid model of retaining telehealth as an option for clinical care alongside in-person treatment.

### **REDUCE INTERSTATE LICENSING REQUIREMENTS**

During the COVID-19 pandemic, many states reduced limitations on providing remote services through telehealth. The goal was to facilitate access to care. We believe that these temporary modifications should be made permanent. The Interstate Medical Licensure Compact and changes on a federal level may achieve this goal and increase accessibility to the underserved, including CYSHCN (Adashi et al., 2021). Licensing facilitations should be made for all

members of the allied mental health disciplines; for example, states which facilitated temporary licenses for telehealth practice during COVID-19 can make these licenses permanent. The benefits of reducing legal barriers to telehealth adoption for the elderly population have been described (Sklar & Robertson, 2020), and we believe these avenues will yield benefits to children and adolescents.

### **INCREASE COMMUNITY-BASED CARE SERVICES**

The COVID-19 pandemic led to changes in the movement of children and adolescents to available inpatient child and adolescent psychiatry beds. Services appeared to decrease, at least at the start of the pandemic (Dror et al., 2022; Reece & Sams, 2022; Wan Mohd Yunus et al., 2022). More recent data may show an increase in service use. In New York City, we had seen an increase in admissions for youth suicide attempts relative to suicidal ideation during the pandemic, suggesting that the safety network, which would catch youth before an event, was not functioning (Shanker et al., 2022). Today, again, there is a bottleneck in emergency departments in which children wait days and, at times, even weeks for bed availability (Bebinger, 2021).

We recommend increasing outpatient services at various levels of care, including home-based wrap-around, clinic, intensive outpatient, and partial hospitalization services. These services can expand the safety net that prevents CYSHCN from presenting to the behavioral health system through the inpatient setting via events such as suicide attempts. The cost of outpatient services is significantly less than inpatient services, and when they are well-functioning, there will be less of a need for more costly acute services, both through a reduction of admissions and through the increased facility of step-down from inpatient to outpatient settings when services are robust. This fact could drive support among policymakers for fund allocation and appropriate staffing. In New York State, the Office of Mental Health recently enacted a Youth Assertive Community Treatment program to provide intensive community-based services to address the mental health needs of children and adolescents with severe emotional disturbance.

### **ADDRESS SOCIAL DETERMINANTS OF HEALTH**

Community-based care services may help to provide services for CYSHCN, who are most disadvantaged. As many families have been driven below the poverty line by the pandemic with risks of housing, food, and health service shortages (Brundage & Ramos-Callan, 2020), community engagement and support are crucial. Moreover, the loss of access to teachers, coaches, mentor figures, faith-based communities, and others during the pandemic isolated youth. Action must be taken to reengage children and adolescents with their communities. Of the many children who lost a parent or caretaker to COVID-19—roughly one in 450 youth in the United States (Treglia et al., 2021)—reconnection with the community takes on pressing urgency. Productive grief and successful mourning may be particularly



challenging for CYSHCN suffering a parent's death (Rice, 2022). Addressing our communities' shortcomings to support these youth through these tasks is paramount.

The COVID-19 pandemic amplifies challenges for CYSHCN from low-income families and those from racial and ethnic minority groups. An increased burden of stressors through trauma, health disparities, and social determinants of health, such as limited economic opportunities before the pandemic, would likely present greater risks for these youth during the pandemic (Cortés-García et al., 2022). Many African Americans who need mental health care do not receive care (McGuire & Miranda, 2008), and further, for Black children, suicide is the second leading cause of death for those aged 10–14 years and the third leading cause of death for those aged 15–19 years (U.S. Department of Health and Human Services Office of Minority Health, 2021). Communities of color were disproportionately exposed to the virus, and Black and Hispanic children experienced parental/caregiver deaths from COVID-19 at twice the rate of Asian and White Children (Brundage & Ramos-Callan, 2020). Studies have shown that Hispanic adults were more likely to experience depression (Saltzman et al., 2021) and worsening mental health during the pandemic (Swaziek & Wozniak, 2020); however, the expectation of worsened mental health challenges for CYSHCN from minority backgrounds have not been explored, and further study is needed.

## CONCLUSIONS

These policy proposals may strengthen our mental health service delivery capabilities to meet the needs of CYSHCN with preexisting psychiatric disorders affected by the pandemic. Implementing these proposals would align with addressing systemic injustices and racism by confronting the disparities that unduly affect racial and ethnic minorities and the underserved. Although the pandemic brought many tragedies on scales from the individual to the international, mobilizing the revealed disparities to action in the service of improvement can yield one beneficial outcome of the pandemic.

## REFERENCES

- Adashi, E. Y., Cohen, I. G., & McCormick, W. L. (2021). The interstate medical licensure compact: Attending to the underserved. *Journal of the American Medical Association, 325*(16), 1607–1608.
- Aknin, L. B., de Neve, J. E., Dunn, E. W., Fancourt, D. E., Goldberg, E., Helliwell, J. F., Jones, S. P., Karam, E., Layard, R., Lyubomirsky, S., Rzepa, A., Saxena, S., Thornton, E. M., VanderWeele, T. J., Whillans, A.v., Zaki, J., Karadag, O., & Ben Amor, Y. (2022). Mental health during the first year of the COVID-19 pandemic: A review and recommendations for moving forward. *Perspectives on Psychological Science, 17*(4), 915–936.
- Alegria, M., Green, J., McLaughlin, K., & Loder, S. (2015). Disparities in child and adolescent mental health and mental health services in the U.S. [http://cfs.cbcs.usf.edu/projects-research/\\_docs/Disparities\\_in\\_child\\_and\\_adolescent\\_health.pdf](http://cfs.cbcs.usf.edu/projects-research/_docs/Disparities_in_child_and_adolescent_health.pdf)
- Barna, M. (2022). *Mental health workforce taxed during COVID-19 pandemic: Worker shortage hinders access*. The Nation's Health.
- Bebinger, M. (2021). No vacancy: How a shortage of mental health beds keeps kids trapped inside ERs. <https://www.wbur.org/news/2021/05/17/children-teens-emergency-room-boarding-mental-health>
- Brundage, S., & Ramos-Callan, K. (2020). *COVID-19 ripple effect: Impact of COVID-19 on children in New York State*. United Hospital Fund.
- Centers for Disease Control and Prevention. (2020). Youth risk behavior surveillance data summary and trends report: 2009–2019. <https://www.cdc.gov/healthyyouth/data/yrbps/pdf/YRBSDataSummaryTrendsReport2019-508.pdf>
- Centers for Medicare and Medicaid Services. (2008). The mental health parity and addiction equity Act (MHPAEA). [https://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/mhpaea\\_factsheet](https://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/mhpaea_factsheet)
- Cortés-García, L., Hernández Ortiz, J., Asim, N., Sales, M., Villareal, R., Penner, F., & Sharp, C. (2022). COVID-19 conversations: A qualitative study of majority Hispanic/Latinx youth experiences during early stages of the pandemic. *Child and Youth Care Forum, 51*(4), 769–793.
- Darbyshire, D., Brewster, L., Isba, R., Body, R., Basit, U., & Goodwin, D. (2021). Retention of doctors in emergency medicine: A scoping review of the academic literature. *Emergency Medicine Journal, 38*(9), 663–672.
- de Araujo, P., Khraiche, M., & Tukan, A. (2013). Does overcrowding and health insurance type impact patient outcomes in emergency departments? *Health Economics Review, 3*(1), 25.
- Doraiswamy, S., Abraham, A., Mamtani, R., & Cheema, S. (2020). Use of telehealth during the COVID-19 pandemic: Scoping review. *Journal of Medical Internet Research, 22*(12), e24087.
- Dror, C., Hertz-Palmor, N., Barzilay, Y., Gila, S., Tali, B. Z., Alex, G., Tal, L., Maya, K.-L., Talia, S., Doron, G., & Bloch, Y. (2022). Youth psychiatric hospitalization in Israel during COVID-19: A multi-center study. *International Journal of Environmental Research and Public Health, 19*(16), 9870.
- FAIR Health. (2021). The impact of COVID-19 on pediatric mental health: A study of private healthcare claims. <https://s3.amazonaws.com/media2.fairhealth.org/whitepaper/asset/The%20Impact%20of%20COVID-19%20on%20Pediatric%20Mental%20Health%20-%20A%20Study%20of%20Private%20Health%20Care%20Claims%20-%20A%20FAIR%20Health%20White%20Paper.pdf>
- Gajarawala, S. N., & Pelkowski, J. N. (2021). Telehealth benefits and barriers. *Journal for Nurse Practitioners, 17*(2), 218–221.
- Greater New York Hospital Association. (2021). Access to Mental Health Services in New York City Hospitals. <https://www.gnyha.org/wp-content/uploads/2021/12/GNYHA-Testimony-Mental-Health-Services-in-Hospitals.pdf>
- Johnson-Kwochka, A., Wu, W., Luther, L., Fischer, M. W., Salyers, M. P., & Rollins, A. L. (2020). The relationship between clinician turnover and client outcomes in community behavioral health settings. *Psychiatric Services, 71*(1), 28–34.
- Keller, D. M., Davis, M. M., & Freed, G. L. (2020). Access to pediatric subspecialty care for children and youth: Possible shortages and potential solutions. *Pediatric Research, 87*(7), 1151–1152.
- McGuire, T. G., & Miranda, J. (2008). *New evidence regarding racial and ethnic disparities in mental health: Policy implications: 27* (pp. 393–403). Health Affairs.
- Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., Cannon, M., Correll, C. U., Byrne, L., Carr, S., Chen, E. Y. H., Gorwood, P., Johnson, S., Kärkkäinen, H., Krystal, J. H., Lee, J., Lieberman, J., López-Jaramillo, C., Männikkö, M., ... Arango, C. (2020). How mental health care should change as a consequence of the COVID-19 pandemic. *Lancet Psychiatry, 7*(9), 813–824.
- New York City Office of the Mayor. (2022). *Mayor Adams releases Subway safety plan, says safe Subway is prerequisite for New*

- York City's recovery. . <https://www1.nyc.gov/office-of-the-mayor/news/087-22/mayor-adams-releases-subway-safety-plan-says-safe-subway-prerequisite-new-york-city-s#/0>
- Osgood, K., Sheldon-Dean, H., & Kimball, H. (2021). 2021 Children's Mental Health Report. The Impact of the COVID-19 Pandemic on Children's Mental Health: What We Know So Far. *Child Mind Institute*. <https://childmind.org/wp-content/uploads/2021/10/CMHR-2021-FINAL.pdf>
- Pathman, D. E., Konrad, T. R., King, T. S., Taylor, D. H., & Koch, G. G. (2004). Outcomes of states' scholarship, loan repayment, and related programs for physicians. *Medical Care*, 42(6), 560–568.
- Reece, L., & Sams, D. P. (2022). The impact of COVID-19 on adolescent psychiatric inpatient admissions. *Clinical Child Psychology and Psychiatry*, 27(1), 112–121.
- Rice, T. (2022). Children who lose a parent in the COVID-19 era: Considerations on grief and mourning. *Psychoanalytic Study of the Child*. doi:10.1080/00797308.2022.2120336
- Saltzman, L. Y., Lesen, A. E., Henry, V., Hansel, T. C., & Bordnick, P. S. (2021). COVID-19 mental health disparities. *Health Security*, 19(Suppl. 1), S5–S13.
- Shah, R., Raju, V. V., Sharma, A., & Grover, S. (2021). Impact of COVID-19 and lockdown on children with ADHD and their families—An online survey and a continuity care model. *Journal of Neurosciences in Rural Practice*, 12(1), 71–79.
- Shanker, P., Martin, D., Becker, T., Lynch, S., Staudenmaier, P., Leong, A., & Rice, T. (2022). Suicidal ideation, attempts, and self-harm among children and adolescents admitted to a New York City psychiatric unit before and during the COVID-19 era. *Journal of the American Academy of Child and Adolescent Psychiatry*, 61(10), S219.
- Sheather, J., & Slattery, D. (2021). The great resignation—How do we support and retain staff already stretched to their limit? *British Medical Journal*, 375, n2533.
- Shim, R. S. (2020). Mental health inequities in the context of COVID-19. *JAMA Network Open*, 3,(9) e2020104.
- Sklar, T., & Robertson, C. T. (2020). Telehealth for an aging population: How can law influence adoption among providers, payors, and patients? *American Journal of Law and Medicine*, 46(2–3), 311–324.
- Smitherman, L. C., Golden, W. C., & Walton, J. R. (2021). Health disparities and their effects on children and their caregivers during the coronavirus disease 2019 pandemic. *Pediatric Clinics of North America*, 68(5), 1133–1145.
- Steinman, K. J., Shoben, A. B., Dembe, A. E., & Kelleher, K. J. (2015). How long do adolescents wait for psychiatry appointments? *Community Mental Health Journal*, 51(7), 782–789.
- Swaziek, Z., & Wozniak, A. (2020). Disparities old and new in US mental health during the COVID-19 pandemic. *Fiscal Studies*, 41(3), 709–732.
- Treglia, D., Cutuli, J., Arasteh, K., Bridgeland, J., Edson, G., Phillips, S., & Balakrishna, A. (2021). Hidden pain: Children who lost a parent or caregiver to COVID-19 and what the nation can do to help them. [https://static1.squarespace.com/static/61a64e1a01b4c521a44ec3c6/t/61b16e89a967215661af926c/1639018124637/HIDDEN+PAIN\\_2021%2C12%2C08.pdf](https://static1.squarespace.com/static/61a64e1a01b4c521a44ec3c6/t/61b16e89a967215661af926c/1639018124637/HIDDEN+PAIN_2021%2C12%2C08.pdf)
- Udwin, S., Kufferath-Lin, T., Prout, T. A., Hoffman, L., & Rice, T. (2021). Little girl, big feelings: Online child psychotherapy during the COVID-19 pandemic. *Journal of Infant, Child, and Adolescent Psychotherapy*, 20(4), 354–371.
- U.S. Department of Health and Human Services. (2021). *U.S. Surgeon General issues advisory on youth mental health crisis further exposed by COVID-19 pandemic*. . <https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html>
- U.S. Department of Health and Human Services Office of Minority Health. (2021). *Mental and behavioral health – African Americans*. <https://www.minorityhealth.hhs.gov/omh/browse.aspx?MI=4&Mid=24>
- van Cleave, J., Stille, C., & Hall, D. E. (2022). Child health, vulnerability, and complexity: Use of telehealth to enhance care for children and youth with special health care needs. *Academic Pediatrics*, 22(2S), S34–S40.
- Wan Mohd Yunus, W. M. A., Kauhanen, L., Sourander, A., Brown, J. S. L., Peltonen, K., Mishina, K., Lempinen, L., Bastola, K., Gilbert, S., & Gyllenberg, D (2022). Registered psychiatric service use, self-harm and suicides of children and young people aged 0–24 before and during the COVID-19 pandemic: A systematic review. *Child and Adolescent Psychiatry and Mental Health*, 16(1), 15.
- Weiner, S. (2022). *A growing psychiatrist shortage and an enormous demand for mental health services*. AAMC News. <https://www.aamc.org/news-insights/growing-psychiatrist-shortage-enormous-demand-mental-health-services>
- Yard, E., Radhakrishnan, L., Ballesteros, M. F., Sheppard, M., Gates, A., Stein, Z., Hartnett, K., Kite-Powell, A., Rodgers, L., Adjemian, J., Ehlman, D. C., Holland, K., Idaikkadar, N., Ivey-Stephenson, A., Martinez, P., Law, R., & Stone, D. M. (2021). Emergency department visits for suspected suicide attempts among persons aged 12–25 years before and during the COVID-19 pandemic — United States, January 2019–May 2021. *MMWR. Morbidity and Mortality Weekly Report*, 70(24), 888–894.