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# Teletherapy and Medication Management of Attention-Deficit/Hyperactivity Disorder with Co-occurring Internalizing Symptoms and Suicidality During the Pandemic

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**CASE:** Sam (he/him) is an 11-year-old cisgender white male with previous diagnoses of attention-deficit/hyperactivity disorder, anxiety, and major depressive disorder who was referred to an outpatient psychiatry clinic after hospitalization for suicidal ideation and agitation. Family history is significant for bipolar disorder, depression, anxiety, substance use/abuse, and suicidality. Sam started a trial of atomoxetine 10 mg po QAM in December 2019 due to increasing inattention in the backdrop of worsening anxiety. Sam received school-based counseling through his IEP, which Sam declined due to embarrassment from being pulled out of the classroom, and services were quickly discontinued. In January 2020, obsessive-compulsive symptoms emerged, specifically obsessions about cleanliness with related compulsions. He started biweekly cognitive behavioral therapy with an outpatient provider to target obsessive-compulsive disorder symptoms. Concomitantly, a developmental-behavioral pediatrician who diagnosed obsessive-compulsive disorder started Sam on fluoxetine 10 mg po QAM. Atomoxetine was also increased to 25 mg po QAM for 4 weeks and built up to 40 mg po QAM in February 2020.

Depressive symptoms emerged in Spring 2020, around the time of the COVID-19 pandemic, despite ongoing treatment with fluoxetine. There was a significant increase in aggression, agitation, and compulsive cleaning, which did not respond to the addition of lorazepam 0.5 mg po daily. Owing to concerns that medication was exacerbating his presentation, his prescriber began to wean him off both atomoxetine and fluoxetine.

Sam presented to the Emergency Department in the summer of 2020 due to worsening symptoms, including suicidal ideation and aggression, in the context of medication adjustment, social isolation, and academic difficulty with virtual schooling. He completed a 3-week inpatient hospitalization followed by a 2-week virtual partial hospitalization program, during which Sam struggled with attention and engagement. As part of his discharge plan, he was referred to the outpatient psychiatry department to continue outpatient therapy and medication management.

During the virtual transfer appointment to outpatient therapy, his parents reported persistent concerns for ongoing attention-deficit/hyperactivity disorder, depression, anxiety, and obsessive-compulsive symptoms, along with a fear of a resurgence of suicidal thinking. Sam reported exhaustion from virtual partial hospitalization program sessions he attended earlier in the day and was eager to leave the appointment. He minimized concerns, denied suicidal ideation or intent, and reported a strong disinterest in doing “another virtual therapy.” In-person sessions would be ideal for Sam, given his history of attention difficulties, clinical complexity, and acuity and his self-identified dislike for virtual settings. However, services needed to be done virtually due to the quarantine shutdown. How would you proceed with treating Sam?

**Index terms:** complex ADHD, depression, suicidality, telehealth, pandemic, COVID-19, virtual therapy

## Heather Potts, PhD

Sam was 1 of many individuals with attention-deficit/hyperactivity disorder (ADHD) who experienced mental/behavioral health challenges during the COVID-19 pandemic. Even before the pandemic, children with ADHD were at a higher risk for developing an internalizing disorder, with estimates ranging from 10% to 30% in childhood and up to 70% across the lifespan.<sup>1</sup>

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Rates of disruptive behaviors, depression, anxiety, and learning challenges, along with ADHD symptom severity, increased significantly in response to the multiple stressors of the pandemic, such as disruption in routines and habits, social isolation, excessive media usage, and virtual learning.<sup>2,3</sup>

With complex and high-risk cases, a comprehensive evaluation of past and current symptoms and functional impairment is recommended to individualize the treatment plan.<sup>4</sup> Sam's recent hospitalization, combined with family history of suicide, necessitated that treatment focus on frequent evaluation and monitoring of safety risks. Sam consistently verbalized adherence to his safety plan; however, he had a history of internalizing his thoughts and feelings. Therefore, from a safety management perspective, obtaining regular collateral information from his parents and school was important to corroborate his self-report. Given symptoms of impulsivity and dysregulation, his parents were reminded to ensure that the home was a safe environment (e.g., safely storing sharps, medications, and heavy items that could be thrown).

Along with risk assessment/monitoring, treatment targeted underlying depression and anxiety using evidence-based treatment of cognitive behavioral therapy along with other third-wave therapies, such as dialectical behavior therapy (DBT).<sup>5</sup> Though Sam had completed a course of DBT through virtual PHP, Sam had difficulty remembering most DBT skills due to frequent inattention, so we spent time reviewing the content. Motivational interviewing (MI) was beneficial for increasing his engagement, as he often expressed boredom and disinterest in learning and reviewing skills. We also used a strengths-based approach to foster protective factors and his resiliency, which additionally helped with Sam's participation in sessions.

Sam's depression and anxiety were interwoven with ADHD symptoms, and sessions shifted toward targeting ADHD symptoms as needed. This included psychoeducation on ADHD with a focus on challenges and strengths in this population and executive functioning skills training. Caregiver behavior management training helped his parents manage disruptive and dysregulated behaviors and reinforce his use of adaptive skills and behaviors.

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## Rose Ashraf, PhD

Sam appeared unmotivated for therapy, especially virtual therapy. During initial appointments, he sat on the couch and engaged in passive-off-task behaviors (e.g., looking away, laying head down). At times, he was suspected of accessing other websites on the computer, and he became more irritable in response to frequent redirection. The stakes were high: Suicide is the second leading cause of death for 10- to 34-year-old youth in the United States, and research consistently illustrates that children with ADHD are at an elevated risk for suicidal behavior and self-harm<sup>6</sup>—especially when it affects social and academic functioning.<sup>7</sup> Sam's engagement in treatment was essential, and changes were needed.

We often modify the office environment to support a patient's need for structure, sensory seeking, or distractibility. Similar strategies could be implemented in a telehealth environment. In collaboration with his parents, a less distracting, comfortable, and private space was identified for therapy with the computer set up outside of arm's reach to reduce the temptation to access other websites. Therapy materials were sent to his parents to print and place in a binder so that he could review them during and after the session. Ways to motivate and reinforce Sam's engagement were considered. He was given preferred yet still healthy snacks during the session, which helped to regulate his mood and attention, and after discussing with Sam's parents, a reward system was implemented: Sam earned video game time after each session.

To highlight what Sam was doing well during the session, frequent positive attention and labeled praise were provided, and his parents were coached to praise Sam's practice and use of skills between sessions. Rapport building is especially important, though complicated in establishing a therapeutic alliance through teletherapy. Several strategies can be beneficial for increasing engagement.<sup>8,9</sup> Additional time was spent to learn about Sam's interests, values, environment, and culture. Embracing a motivational interviewing approach of partnership and autonomy, we developed personal therapeutic goals that aligned with his values and interests. To promote generalization and skills practice, we created a "skills toolbox" document that we frequently reviewed and updated in session and that his parents printed and had available for Sam to reference between sessions. Frequent check-ins with Sam helped identify modifications to therapy sessions to increase motivation and engagement, such as access to fidgets or his dog during sessions. We also incorporated creativity, humor, and multimodal learning into each session as much as possible, as he had difficulty sustaining motivation for repetitive activities. In close collaboration with his parents, we switched to in-person sessions as soon as quarantine lifted, as Sam needed far more accommodations/modifications to support his engagement virtually compared with office visits.

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## Deepika Shaligram, MD

Sam's longstanding struggles with anxiety disorder and ADHD came to a head with the academic and social complexities of middle school. Atomoxetine was likely chosen for the management of ADHD (rather than a stimulant) to avoid worsening anxiety. However, Sam's anxiety symptoms rapidly escalated due to social and academic stressors after atomoxetine was initiated. He also became increasingly preoccupied with cleanliness during this time, which made medication management with a Selective Serotonin Reuptake Inhibitor (SSRI) like fluoxetine a logical next step.

Atomoxetine is metabolized primarily through the CYP2D6 enzymatic pathway. Hence, concurrent therapy with potent inhibitors of the CYP2D6 enzyme, such as fluoxetine, can result in a marked increase in atomoxetine plasma exposure.<sup>10</sup> The increase in atomoxetine from 25 to 40 mg/day along with fluoxetine 10 mg/day, thus, had the potential to amplify side effects. These medication changes occurred during the time frame of academic and social stresses of virtual schooling, which compounded the problem. It is notable that both atomoxetine and fluoxetine independently carry a black-box warning for suicidal ideation.<sup>11</sup> Furthermore, fluoxetine is associated with an increased risk of agitation and anxiety when compared with other SSRIs.<sup>12</sup> In addition, it is possible that the daily use of lorazepam over 1 week to target anxiety and aggression caused paradoxical

excitation, further contributing to increasing agitation and aggression.<sup>13</sup>

Sam gradually improved after being weaned off atomoxetine and fluoxetine during inpatient psychiatric hospitalization. Guanfacine extended release 1 mg po QHS was introduced in place of atomoxetine for ADHD, and escitalopram 5 mg po QAM was introduced in place of fluoxetine during inpatient psychiatric hospitalization. He reported feeling less anxious and better able to regulate emotion and impulsive aggression with this medication combination. Suicidal ideation resolved during the admission. Cleaning compulsions decreased when the antianxiety benefits of low-dose escitalopram became effective.

Over 3 years of subsequent outpatient psychiatry treatment, escitalopram was built to 20 mg/day to target residual anxiety symptoms, and guanfacine extended release was built to 3 mg/day to target impulsivity with significant benefits. After a successful transition to high school and a few years of stability in mood, anxiety, and ADHD symptoms, Sam expressed a desire to reduce his medication and frequency of therapy. Psychoeducational counseling about medication, pros and cons of medication changes, and a plan for moving therapy to maintenance were agreed upon. After several discussions with Sam and his parents, it was agreed to lower the dose of guanfacine extended release to 2 mg/day, while keeping escitalopram at 20 mg/day, which he tolerated quite well. Therapy was faded to accommodate his busy high school and sports schedule. Sam expressed appreciation for being included in these treatment conversations, and he continues to be adherent with his medication regime and to seeking support when needed.

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## Elizabeth Diekroger, MD and Jason Fogler, PhD

This case highlights many of the key components of the SDBP Complex ADHD Guideline, including the importance of a comprehensive assessment to identify all co-existing diagnoses, the importance of coordinating an interdisciplinary team, and effective prioritization and treatment of all conditions causing impairment.<sup>14</sup> This case also thoughtfully reviews some of the challenges created by the COVID-19 pandemic and the resultant rapid move to telehealth and considers some strategies to problem solve around these issues.

Among the many thoughtfully articulated points in this case, 4 stand out in particular. First, research consistently illustrates that individuals with ADHD are at elevated risk for suicidal thoughts, suicidal behavior, and self-harm.<sup>15</sup> Impulsivity and emotion dysregulation are core features of ADHD in youth, which may explain the elevated risk for suicidal behavior.<sup>16</sup> The association between ADHD and suicidal behavior is moderated by comorbid

psychiatric diagnoses; by treating depression and anxiety, the risk for suicidality decreases.

Second, and closely related, frequent assessment and monitoring for suicidal thinking is critical in this population.<sup>15</sup> Parents are important historians, especially for a young child who may struggle with insight and self-reflection; therefore, it was important to use parent-report symptom measures along with Sam's report.

Third, executive dysfunction, particularly in the context of major stressors (such as a pandemic), can exacerbate academic and social problems.<sup>17</sup> Sam's frustration with his academic performance may have contributed to poor self-esteem and worthlessness, which also posed an increased risk for suicidal ideation and behavior. Concurrent treatment of EF skills training and behavior management would be beneficial in these cases. Routinely assessing for impairment helps to identify the best course of action. Similarly, medication management for ADHD lowers the level of risk for both externalizing behaviors and suicidality.<sup>17</sup>

Fourth, service coordination was critical to successfully implementing Sam's treatment plan during the COVID-19 pandemic, which by itself led to higher levels of family stress. Parent involvement in treatment helped support their ability to cope as a family system,<sup>18</sup> and Sam responded well to treatment overall. It must be said that Sam's family came to treatment with many strengths. They were highly motivated and engaged in treatment, were well-educated regarding school systems and IEPs, had consistent access to the technology and insurance coverage necessary for telehealth, and lived in an area with various mental health resources at all levels of care. For families with different socioeconomic resources or located in less healthcare-rich regions, the same level of treatment may not have been possible.

Teletherapy has a host of benefits for many clients, including increasing access to care and decreasing attrition. However, it is important to recognize that telemedicine may not always be the best option. For some, the home environment may be too distracting or they cannot access a private, safe space for sessions. Conducting a thorough assessment of risks and protective factors is critical to leveraging strengths and working to resolve barriers to care. We highlight the need to consider the individual in the context of systems of care (family, school, and healthcare system) functioning, conducting a thorough assessment of risks and protective factors, and strategically using new models of healthcare delivery as critical to leveraging strengths and working to resolve barriers to care.

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