https://doi.org/10.5664/jcsm.9376

JCSM | Journal of Clinical Sleep Medicine

REM: A PUBLICATION FOR RESIDENTS AND FELLOWS

Pediatric behavioral sleep medicine in the era of telemedicine: psychology trainee perspectives

Maureen E. McQuillan, PhD[1]; Adrienne Anderson, MA[1]; Kirsten D. Russo, PhD[2]; Autumn Truss, PsyD[3]; Sarah M. Honaker, PhD[1]; Kate Lyn Walsh, PsyD[1]

[1]Department of Pediatrics, Indiana University School of Medicine, Indianapolis, Indiana; [2]Children's National Hospital, Washington, DC; [3]Vanderbilt University Medical Center, Nashville, Tennessee

The worldwide coronavirus pandemic in 2020 radically changed the landscape of psychology service provision and training, with rapid rollouts of telemedicine to promote safe access to care. In this perspective article, we share the experiences of 4 psychology trainees, all of whom worked as psychology interns or postdoctoral fellows in pediatric behavioral sleep medicine during the pandemic. With restricted in-person visits and upheaval of children's normative sleep and school schedules, we directly observed growth in both need for psychological care and opportunity to provide this care remotely. Here, we summarize the unique challenges and learning opportunities we faced when trying to learn and implement evidence-based assessment and treatment of child and adolescent sleep difficulties during the pandemic.

Keywords: pediatric behavioral sleep medicine, CBT-I, psychology trainees, telemedicine

Citation: McQuillan ME, Anderson A, Russo KD, Truss A, Honaker SM, Walsh KL. Pediatric behavioral sleep medicine in the era of telemedicine: psychology trainee perspectives. *J Clin Sleep Med*. 2021;17(9):1965–1967.

PERSPECTIVE

Providers who specialize in behavioral sleep medicine play an important role in the assessment and management of pediatric sleep disorders. Pediatric behavioral sleep interventions are efficacious, even when administered online[1] or via phone.[2] Yet prior to this year, most pediatric sleep centers, ours included, tended to provide behavioral sleep interventions in person. The coronavirus pandemic brought with it significant changes in children's sleep,[3] and an urgent need for telemedicine.[4] In our own institution, Indiana University School of Medicine, we saw a dramatic increase in telehealth service provision in response to the pandemic. In this perspective article, we discuss ways that we assessed and treated sleep difficulties in children and adolescents via telemedicine during the pandemic. In particular, we highlight challenges and lessons learned to inform future use of telemedicine for pediatric behavioral sleep medicine.

Tele-assessment for pediatric sleep problems

Behavioral sleep medicine specialists often implement assessments to identify how thoughts, behaviors, and emotions may cause or maintain insomnia. Many of these assessments could be easily shared with patients and families remotely. For example, patients were able to access sleep logs and assessments through external websites or by email. For patients who preferred tangible copies and did not have access to a printer, hard copies were mailed.

Challenges and solutions

Processing sleep diary data virtually initially presented a challenge. Previously, we received sleep diaries from the medical assistant who roomed the patient, allowing us to calculate summary indices from the sleep diary prior to meeting with the patient. For virtual visits, we asked patients to share pictures of the completed form via the telemedicine platform or read the information to the provider. We then reviewed and interpreted the data in real-time with the patient. Specifically, while screen sharing, we entered the information into an Excel sheet (Microsoft Corporation, Redmond, WA) that calculated relevant information (eg, total sleep time, total wake time, sleep efficiency), producing a summary graph for the patient. Although this could potentially add overall time to the visit, this process allows patients to identify patterns in their sleep that may have otherwise gone unnoticed while simultaneously gaining familiarity with the summary calculation process. Greater familiarity calculating sleep diary indices could help patients independently manage insomnia symptoms that might re-emerge after treatment discontinuation. Thus, we will likely continue to score and interpret sleep diary data collaboratively with the patient for both virtual and in-person visits.

Using telemedicine for behavioral sleep intervention with young children

With disruption in typical routines caused by the pandemic and necessary restrictions, increased time at home and in front of electronic devices, and fewer opportunities for physical activity and social engagement, we observed associated difficulties in young children's sleep, such as increases in children's separation anxiety and need for parental presence to fall asleep and return to sleep in the night. Additionally, these sleep difficulties were more challenging than usual to address given difficulties engaging young children in virtual care.

Challenges and solutions

To address increases in separation anxiety and sleep-onset associations requiring parental presence, we first assess children's readiness for independent sleep by considering whether the child can be independent during the day and whether they can fall asleep quickly with parental presence. If the child is able to tolerate daytime independence and can fall asleep quickly with parental presence, the family can begin the process of gradually weaning parental presence from bedtime. However, if the child is not comfortable with daytime independence, we commonly recommend a reinforcement program referred to as "brave points," which involves the child practicing daytime independence for brief durations (eg, waiting when a parent briefly steps away or going to another area of the house to retrieve a toy). Whenever the child accomplishes these tasks, they earn a brave point, which is ideally represented by a visual token (eg, a cotton ball in a jar) of their success. After "filling their jar with brave points," the child can earn a prize that the family agrees upon. This technique, which can be easily introduced during virtual visits or in-person, can help increase daytime independence and facilitate readiness for independent sleep.

During in-person visits, clinicians can obtain rich information about parental redirection of child behavior, and child responses to the parent, that can inform case conceptualization and treatment recommendations. However, the snapshot provided by a virtual visit often does not reveal as much information about this dynamic. Furthermore, learning to engage young children in virtual treatment can be challenging, particularly when working with young children who are easily distracted by activities off-camera. Fortunately, several telehealth platforms have integrated design features (eg, whiteboards for drawing, screen sharing, use of stickers/stamps) that can facilitate child engagement. When implementing imagery rehearsal therapy for the treatment of nightmares, for example, young children can be encouraged to draw their rescripted dream using a whiteboard function, which can both increase engagement and facilitate rehearsal of newly learned information. Trainees also screen-shared pictures of bedtime routine steps (eg, taking a bath, putting on pajamas) to collaboratively create new visual sleep schedules, which were then mailed to families. Children were also able to view behavioral sleep intervention videos to learn new skills. It can be difficult for children who are already spending many hours completing e-school to focus on a screen; thus, flexible use of creative visuals on telehealth platforms is essential.

Using telemedicine for cognitive-behavioral therapy for insomnia with adolescents

For many of the adolescents we treated for insomnia, their symptoms were exacerbated in response to factors unique to the pandemic, such as worries about their health or changes in their social and academic functioning with stay-at-home orders and virtual schooling. Teens who were suddenly confined to their homes often enjoyed more relaxed schedules with later wake times, but had to manage their own engagement with virtual schooling, needing to wake up on time and stay accountable during long days in the e-classroom.

Challenges and solutions

Factors that maintain or worsen insomnia, such as excessive screen use, sedentary behavior, and spending time in bed throughout the day, were common for e-learners. Fortunately, we were able to offer cognitive-behavioral therapy for insomnia (CBT-I) via telehealth, discussing ways teens could still practice good sleep habits, a restricted sleep schedule, and stimulus control recommendations. A later school start time for many teens during virtual learning actually allowed for better consistency between weekday and weekend sleep schedules. Although we did encounter teenagers who could not be awakened for their visit, which limited assessment of their perspective on current sleep concerns or treatment response, we learned to address this challenge by scheduling follow-up appointments at times that aligned with the adolescent's circadian phase. Additionally, we observed that modeling relaxation techniques during video visits before asking teens to practice the technique in the comfort and privacy of their own bedroom helped with engagement. The privacy of the bedroom also provided a safe space for adolescents to openly share information about their sleep habits that they may not have felt comfortable sharing in front of a parent, similar to the privacy afforded to patients when parents step out of the room during in-person visits. Of note, meeting with adolescents in their bedroom also allowed us to assess their sleep environment and make recommendations, where needed, to promote better sleep. Overall, the accessibility of telehealth appeared to improve adolescent attendance to and engagement with follow-up appointments.

Overarching limitations of telehealth service provision

It is crucial to note that telemedicine may not have been equally accessible to all patients, particularly those with limited resources who may not have access to the internet or who may experience connectivity issues. These patients may have been systematically left behind during the pandemic and the surge in telehealth service provision. We observed families with limited connectivity using 2 strategies to enable virtual visits—specifically, turning off the video if reception was poor and parking their car outside of public locations with free Wi-Fi, such as a restaurant.

CONCLUSIONS

We have enjoyed adapting assessments and treatments to address pediatric sleep difficulties virtually, learning important lessons along the way, such as the importance of incorporating real-time tools to improve patient engagement and foster the therapeutic relationship between patient and provider/trainee. We look forward to the continued use of telemedicine during and beyond this pandemic.

REFERENCES

1. McLay L, Sutherland D, Machalicek W, Sigafoos J. Systematic review of telehealth interventions for the treatment of sleep problems in children and adolescents. *J Behav Educ*. 2020;29(2):222–245.
2. Meltzer LJ, Moore M, Mindell JA. The need for interdisciplinary pediatric sleep clinics. *Behav Sleep Med*. 2008;6(4):268–282.

3. Liu Z, Tang H, Jin Q, et al. Sleep of preschoolers during the coronavirus disease 2019 (COVID-19) outbreak. *J Sleep Res*. 2021;30(1):e13142.
4. Paruthi S. Telemedicine in pediatric sleep. *Sleep Med Clin*. 2020;15(3 Suppl):e1–e7.

SUBMISSION & CORRESPONDENCE INFORMATION

Submitted for publication November 20, 2020
Submitted in final revised form March 12, 2021
Accepted for publication March 29, 2021

Address correspondence to: Maureen E. McQuillan, PhD, Indiana University School of Medicine, Department of Pediatrics, 705 Riley Hospital Drive, Riley Hospital 3948, Indianapolis, IN 46202; Email: memcquil@indiana.edu

DISCLOSURE STATEMENT

All authors have seen and approved the manuscript. Work for this study was performed at Indiana University School of Medicine. The authors report no conflicts of interest.