

Managing Adult and Pediatric Sleep Concerns during a Global Pandemic:
Recommendations of the Society of Behavioral Sleep Medicine (SBSM)

COVID-19 Task Force

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SBSM and the COVID-19 Task Force

The Society of Behavioral Sleep Medicine (SBSM) is an interdisciplinary organization committed to advancing the scientific approach to studying the behavioral, psychological, and physiological dimensions of sleep and sleep disorders and the application of this knowledge to the betterment of individuals and societies worldwide. The mission of the SBSM is to set standards and promote excellence in Behavioral Sleep Medicine (BSM) healthcare, education, and research.

In light of the current pandemic, and in line with the mission statement of SBSM, we convened a Task Force of BSM experts with the goal to discuss, summarize, and disseminate the most salient information needed by healthcare providers and patients to prevent the development or worsening of sleep issues and assist with interventions to address clinical sleep concerns during this crisis. This document and the supplementary patient handouts are the result of these efforts.

Introduction

On January 30th, 2020, the World Health Organization (WHO) declared a public health emergency of international concern over the global outbreak of coronavirus disease 2019 (COVID-19; World Health Organization, 2020). Precautionary measures to mitigate the risk of infection and slow community spread of the virus have led to large-scale changes in the daily lives of most individuals, including closing of businesses and schools, home confinement, social distancing, and self-quarantine for persons potentially exposed to or showing symptoms of COVID-19 (Centers for Disease Control and Prevention, 2020). The societal disruption during this pandemic has been exceptional, reshaping individuals' work lives, family dynamics, finances, and overall well-being, and there are no assurances as to when the crisis will end and circumstances may return to normal.

How COVID-19 can affect Sleep

Healthy sleep is imperative for optimal functioning during the day, affecting our immune defense, emotion regulation, thinking/memory, metabolism, and a host of other roles that allow us to stay healthy and tackle life's daily responsibilities (Buysse, 2014). Due to COVID-19 and the requisite precautions, the factors that support healthy sleep-wake patterns are more likely to be disrupted. For many individuals, home confinement has uprooted routines, reduced daily activity, and decreased opportunities for natural light exposure. Furthermore, the frequency of new, daily challenges can make finding strategies to effectively cope with stress like trying to hit a moving target. In this context, sleep issues such as insomnia, delayed or irregular sleep-wake patterns, and nightmares are more likely to emerge and may necessitate intervention.

On the other hand, there may be some aspects of the current circumstances that can also support individuals' receiving healthier sleep. For instance, home confinement could potentially allow for more flexible work and school schedules and thus better alignment with individual sleep requirements, as well as more awareness of and attunement to individual sleep needs and those of family members, especially children. Thus, identifying both factors likely to contribute to and mitigate the negative effects of home confinement on sleep represents an important component of educating providers and patients and in reducing the likelihood of development and/or worsening of sleep problems.

Focus of this document:

The goal of this paper is to present the potential ways that the COVID-19 pandemic may be impacting sleep and provide practical advice for improving sleep in these situations. While there have been other resources focused on providing evidence-based recommendations for sleep during this time (e.g., Altena et al., 2020), we have taken a slightly different approach in sharing this information. We have developed a series of vignettes--based on clinical interactions and observations since the crisis began--to illustrate how aspects of the pandemic, community-based precautions, and guidelines for individual behavior have had real-world implications on sleep. These case examples are then accompanied by explanations for the etiology of each sleep-related difficulty, and recommendations on possible pathways for intervention. The final section of the document contains additional recommendations that we felt were highly-relevant when conceptualizing how to address sleep concerns at this time.

In addition to the recommendations presented within this document, we have also included an Appendix containing handouts with general information and sleep recommendations

during COVID-19, as well as targeted suggestions for some of the special populations mentioned above.

Vignettes: How COVID-19 can impact sleep and recommendations for intervention

We have structured this section as a series of brief case summaries followed by explanations of the sleep-related processes/concepts demonstrated in each case, and recommendations of the Task Force for management of these concerns. All examples are fictional but are based on the real-world clinical experiences of the SBSM COVID-19 Task Force.

Stress and Acute Insomnia

Case example: 28-year-old male. Samir left his family and moved to the US from India several years ago to pursue a degree in engineering. He lives alone and has been working for a biotechnology company for the past four years. Due to the pandemic, Samir's employer has asked everyone to work from home. Despite being separated from the rest of the team, he is expected to continue working on a major project that requires concentration and creativity, and he has been feeling a lot of pressure to remain productive in spite of the current crisis. Rather than engage in his usual stress-reducing activities (e.g. visiting with friends, playing basketball), he now spends hours watching TV, and for the first time in his life has started to have trouble falling and staying asleep at night. When he gets into bed he fixates on whether he will be fired, or get sick, or will always be as miserable and alone as he feels right now. After he does fall asleep, he frequently wakes at 4:30 a.m. and will just lie in bed ruminating about his dwindling productivity. He is now perpetually exhausted and completely unable to concentrate on his work

except for an hour or so later in the morning. Desperate for something to improve, he starts to drink a few glasses of wine each night before bed to help him fall asleep faster, but finds that this just causes him to wake up even earlier.

What's going on? Due to COVID-19 itself, many individuals are experiencing significantly increased stress. Primary stressors may include fear of contagion, social isolation, balancing new roles/responsibilities, potential job loss/furlough, financial concerns, inconsistent guidance on policies and safety information, uncertainty about the future, and a sense of losing control. During this time of increased stress, many individuals may be experiencing insomnia for the first time, with problematic sleep for a few days or weeks (i.e., acute insomnia). When sleep problems and resultant impairments in daily functioning persist for more than 3 nights per week, and continue unabated for at least three months, this is considered insomnia disorder (AASM, 2014). Regardless of whether it has been three weeks or three months, experiencing insomnia symptoms can be frustrating and serve to further exacerbate stress and impair functioning.

Exposure to stress associated with the COVID-19 pandemic has been substantial. Although data are still emerging, a large epidemiologic study from over 150 cities in China reported that 53% of respondents rated the psychological impact of the pandemic as moderate or severe (Wang, et al., 2020). Individuals who report greater stress levels often experience shorter sleep duration and poorer sleep quality (Johnson et al., 2016; Van Laethem, Beckers, Dijksterhuis, & Geurts, 2017), and stress is frequently the trigger that sets-off an insomnia episode (Spielman 1987). Importantly, sleep plays a role in stress appraisal, meaning that individuals feel less stressed after sleeping well (Sin et al., 2017; Lee, Crain, McHale, Almeida, & Buxton, 2017). Therefore, improving sleep has important implications for helping individuals cope with the effects of the COVID-19 pandemic and stress created by changes in work status or

family responsibilities. Further, maladaptive coping strategies, such as increased alcohol consumption, nicotine use, or use of other substances may have deleterious effects on sleep, particularly in the form of early morning awakenings.

Sleep expert recommendations. In this example, we are able to see how stress, social isolation, and lack of sleep have a reciprocal, interdependent relationship. Initial concerns and frustrations with insomnia can develop into conditioned cognitive and somatic hyperarousal, resulting in extended difficulties falling/returning to sleep as these individuals just lay in bed despite not sleeping.

In this context, these individuals may turn to over-the-counter medications, alcohol, or other substances to try to get more sleep and cope with daytime stress, which can lead to dependence. A new report shows that use of sleeping medications is increasing during this public health crisis (Express Scripts, 2020). However, the recommended first-line approach is actually not to use medications but to adopt behavioral and environmental controls to prevent a short-term insomnia from becoming a long-term problem (Qaseem et al., 2016). As an alternative or adjunct to behavioral approaches, there are some indications that prescription sleep medications, especially those with FDA indications for insomnia, might be effective in the short term., (Sateia, Buysse, Krystal, Neubauer, & Heald, 2017). However, these medications should be considered as a temporary measure to ameliorate the sleep loss dealt by the current crisis, and many can cause dependence (Aguiluz, Alvarez, Pimentel, Abarca, & Moore, 2018). With regard to over-the-counter (OTC) options, melatonin may be considered given relative absence of serious adverse effects and effectiveness for sleep onset concerns (Andersen, Gögenur, Rosenberg, & Reiter, 2016; Auld, Maschauer, Morrison, Skene, & Riha, 2017). When considering an OTC sleep aid, it is recommended to consult with a competent medical professional prior to initiation

so-as to discuss risks/benefits as well as targeted information on dosing. If insomnia is acute (< 1 month), individuals have a very good prognosis to recover quickly. The next recommended step is to assist the patient in making changes to their behavior and environment to prevent worsening of their sleep patterns. These approaches include: DETECT (track your sleep with a sleep diary in order to gain insight and determine whether sleep opportunity should be extended, reduced, or kept the same), DETACH (practice stimulus control and get out of bed when not sleeping), and DISTRACT (practice cognitive control and imagery distraction techniques; Ellis, Cushing, & Germain, 2015). By protecting sleep in this way, long-term insomnia may be prevented.

Circadian dysregulation during home confinement

Case example: 22-year-old female. Kaylee is a 22-year-old college senior. She lives alone in an apartment near campus. Prior to the COVID-19 pandemic, she was attending classes full time at the university and working part time in the library on campus. As a result of campus closures, she is now attending classes online and no longer working. Due to social distancing, she has not seen her friends or boyfriend in a month. Prior to the pandemic, she was going to bed around midnight and waking at 8:00 AM. Now, she has no consistent schedule for sleeping, waking, as well as eating or exercise. She was previously very active but now feels lethargic during the day. She is staying up at night watching movies until 1:00-3:00 AM and waking at irregular times, depending on when her online classes are meeting (10:00 AM to 2:00 p.m.).

What's going on? The stay-at-home orders and changes to work and school schedules have significant implications for circadian rhythms. The term circadian means “about a day” and refers to the 24- hour rhythms generated by the central pacemaker in the brain, the suprachiasmatic nucleus (SCN). The timing of sleep and wake as well as many other

physiological and behavioral processes are regulated by the central circadian rhythm. This rhythm runs independently but is entrained, or locked in, to the 24-hour day by “zeitgebers” (timecues), including the light/dark cycle, physical activity, and also the naturally-released hormone melatonin. For some individuals, A more flexible schedule this may be an opportunity to shift their sleep to their preferred timing (i.e., go to bed later and wake up later). For other individuals, the loss of structure of their work or school schedule may lead to an irregular pattern for their sleep/wake schedule and other daily rhythms (e.g., irregular timing of meals, activity). The absence of a specific time to be at work or school may lead some individuals to stay up late binge-watching shows, and/or to go to bed and to wake up at variable times in the morning, which can have implications for sleep and daytime functioning. These irregular sleep/wake schedules can result in a diminished or misaligned circadian rhythm, contributing to the development of insomnia and daytime sleepiness, and have downstream consequences for neurologic and metabolic health (Baron & Reid, 2014).

Sleep expert recommendations. This case demonstrates how the loss of work and school schedules can impact circadian rhythms through the loss of social time cues. As a consequence, this patient is experiencing fatigue, daytime sleepiness and mood dysregulation. Her now flexible sleep schedule is later than the schedule she had typically been keeping during her regular school and work hours, but she should keep it consistent even if it is delayed (e.g. 2:00 AM to 10:00 a.m.). The recommendation for this patient would be to keep a consistent bedtime and wake time (e.g. within 60-90 minutes) even though she does not have work or school right now. Wake time is particularly important, because patients usually have more control over what time they wake, by setting an alarm clock, versus what time they go to sleep. Also, increasing exposure to bright light for 30-60 minutes--preferably in the morning, upon rising--and increasing activity in the

daytime are important to entraining and enhancing circadian rhythms. When possible, it is recommended that she seek outdoor light and activity. Maintaining regular activity and regular meal times can also act as social time cues to maintain a regular and healthy circadian rhythm. Other light exposure (e.g. sitting near a window, on a porch, backyard or garden) is also helpful for entrainment of circadian rhythms. As light, especially blue wavelength light from screens, suppresses evening release of melatonin, she should also consider dimming lights in the evening (e.g., avoiding use of electronic devices), avoiding bright overhead lights) and taking time to wind down prior to bed.

Considerations for essential employees and healthcare workers

Case example: 32-year-old female. Maria is a critical care provider at a large hospital. She is warm, kind, and widely-known by the ease with which she can connect with patients. For the past month, this connection has been compromised by the universal requirement to don full personal protective equipment (PPE) with all of her patients, and she notes frustration with this development. Maria is also struggling with the uncertainty of what work will look like in the upcoming weeks, as she has been told she may deploy to another unit but does not know where or when, and guidance on other protocols that affect her ability to care for patients never seems very transparent. When not at the hospital, she spends her time isolating at home, and though she has a deep appreciation for the importance of this precaution, she is struggling to reconcile this with feeling lonely and overworked. Her innate concern about the safety and wellbeing of her patients has developed into an increased anxiety about her own health. She checks her temperature multiple times per day and perseverates on any new potential COVID-19 symptom that she experiences (e.g., a sneeze, a tickle in her throat). She is eventually unable to redirect her

thoughts from monitoring for signs that she may have the virus, fearing that she might miss this and then become contagious to her patients.

Maria is a self-described “good sleeper”. Over the past month, after going to bed at 11:00 p.m., she is wide-awake at 2:30 a.m. and struggling with how to get back to sleep. She notices her mind racing with both mundane and anxious thoughts. Typically, she watches a show on her phone or finds herself going down the rabbit hole of news stories on the internet. She usually falls back to sleep around 4:00 a.m. and is “dead to the world” when her alarm goes off at 5:30 a.m.. On days home, she will often take a late afternoon nap. She is able to function well at work but recognizes feeling more sluggish, generally anxious, and sometimes irritable at home. After several weeks she notices her bedtimes becoming later and later, as she finds it more difficult to wind down at night and “shut off” her racing thoughts.

What’s going on? The growing death toll and chronic stress of saving lives is taking a toll on our front-line healthcare professionals and emergency personnel. In some areas of the world, these individuals are feeling overwhelmed due to extended work hours, lack of resources, the repeated trauma of working with critically-ill patients, and fearing for their own lives and those of their families and loved ones. In this context, disruptions to sleep become a common occurrence.

Maria’s story illustrates a common theme of individuals attempting to balance their work and personal lives during the stress of this pandemic, in which case sleep sometimes takes a back seat. Balancing these dual roles is challenging in normal circumstances and heightened by the current crisis. Given the underlying stress of both contexts, it is not surprising that Maria is waking up in the middle of the night and having difficulty going back to sleep. This is confounded by the loneliness of social isolation, and growing concerns about her health.

Sleep expert recommendations. Anxiety and hyperarousal are known precipitants of disrupted sleep. In this scenario, Maria is experiencing stress in her professional role as an essential healthcare employee, as well as in her personal life with few adaptive resources to help her cope during this time. Treatment should include an approach that fosters validation of the unpredictability and uncertainty of this time and exploration of small behaviors to foster some sense of control and connection. Sleep difficulties are a normal response to stress and threats to our own wellbeing. Worries and fears about safety/death activate the arousal system and disrupt sleep in the interest of vigilance. In this context, it is important to implement strategies that can mitigate and quiet down the arousal system at bedtime.

Sleep issues that develop in the setting of acute stressors typically resolve spontaneously, so initial interventions for essential healthcare employees with new-onset insomnia should focus on mitigating the risk for this to develop into a chronic issue. Encourage patients to maintain the bedroom as a haven for sleep; while this may be challenging when individuals are confined to their rooms, it is important to designate a place for sleep (even if it is one side of the bed) that is comfortable, relaxing, and sleep-promoting. Next steps can focus on boundary-setting (e.g., limit media exposure), enhancing communication/connection, and developing more adaptive coping behaviors to mitigate the effects of stress and isolation. As a provider, offering a space where individuals can openly discuss difficult thoughts and feelings helps decrease the impact with which these anxieties can interfere with sleep and daytime functioning. To avoid becoming disconnected and buffer feelings of isolation, encouraging patients to remain in close contact with co-workers, friends, and loved ones can be an invaluable outlet to express concerns and hear a familiar and supportive voice. This may also be an opportunity to introduce mindfulness skills to help individuals ground themselves in the present moment when their mind is hooked by

unhelpful thoughts and images. Engaging in values-consistent activities, even in a modified fashion, can help facilitate some feelings of control and foster resilience during this and similar crises. During breaks or non-work hours, engaging in physical activities/movement that bring joy and are values-consistent can be powerful techniques benefitting both sleep and mood. Finally, with all patients experiencing stress--and especially those doing so under the current circumstances--frequent check-ins to assess safety and ensure that these individuals have appropriate mental healthcare support is critical. Many hospitals are also increasing availability of their employee wellness programs at this time, such as psychotherapy and mindfulness sessions, which should be encouraged. See the Appendix for additional Recommendations for Essential Employees/Healthcare Workers for use with these patients.

Increased frequency/new nightmares in children and adults

Case example: 8-year-old female. Sally is an 8-year-old female who lives with her biological parents and younger brother (age 2). Her mother stays home with Sally and her brother while attempting to work from home, but her father is gone most of the day due to an essential job. Sally's school activities are currently a mixture of online and parent supervised (mother) schoolwork, but due to her mother's work schedule, she typically does not start her schoolwork until the evening. Because of this, and in order to see her father after work, she is typically going to bed at 11:00 p.m. and waking at 8: a.m., though this varies from day to day. Sally is frequently awoken by nightmares in the early morning hours, with the dreams commonly consisting of her father getting sick and not coming home.

What's going on? COVID-19 is a universally-stressful event, and as such it is not surprising that many individuals are experiencing an increase in bad dreams and nightmares as a

result of the pandemic. In this example we could note several factors that are affecting Sally's sleep, potentially leading to nightmares. First, and likely most importantly, Sally appears to be experiencing significant anxiety, which is associated with nightmares in children and adolescents (Nielsen, Leberge, Paquet, Tremblay, Vitaro, & Montplaisir, 2000). This is likely due not just to the situation, but also to the novel context and lack of support of not being physically in school with her classmates. Additionally, Sally's bedtime has shifted later in the evening, which shifts her REM sleep, increasing her odds of having bad dreams and nightmares in the early morning hours (AASM, 2014)

Sleep expert recommendations. Nightmares in children during stressful or traumatic times are normal and developmentally appropriate, though they can still cause significant distress for children and parents alike. To address these concerns, it is helpful to examine what has changed for the child, and how has the child reacted. If the child is showing increased worries, stress, or anxiety, as we see with Sally, this may be able to be directly addressed. For instance, Sally's fears of abandonment are expected, and should be addressed calmly by the caregivers during the day, at least several hours before bed. Relaxation exercises such as deep breathing, or progressive muscle relaxation for older children, may also prove fruitful. After making the child's living situation as normal as possible, and addressing anxiety and worry, one can choose to address the nightmares directly through having the child write down or draw a new dream that they would like to have instead of the nightmare, and to practice drawing that dream over the next few days. Additionally, there may be some minor modifications to the sleeping environment that may help the child feel more safe during this time such as having a pet or sibling sleep in the room, leaving the door open, having a night light, or having a security object in bed such as a special blanket or stuffed animal. Should the nightmares persist after the

stressful time ends for a month or more, or should they present in the context of generalized anxiety, direct clinical intervention would likely be warranted.

Case example: 45-year-old male. Pierre is a 45-year-old male in a dual-income family with a spouse and three children. Pierre works in a service industry and because of this was recently laid off from his job. Although he is thankful to be able to stay at home with his family and to do jobs around the house, Pierre has found himself obsessed with watching the news regarding COVID, often watching for six or more hours per day. Pierre worries that he will be out of work for many months and even if he is able to return to that job at all; these worrisome thoughts have led to considerable stress as his family is struggling to get by with the bare necessities on one income. Pierre starts having nightmares about his partner getting ill, leaving the family without an income. He also is having frequent nightmares about the news coverage that he has been watching throughout the day.

What's going on? The causes and results of recurrent, disturbing dreams can vary greatly between children and adults. Pierre illustrates a few other common situations we encounter in those reporting nightmares during this time. Bad dreams and nightmares commonly are related to frequent worries or the thoughts one ruminates about during the day. Here, this is occurring with Pierre's dreams about his partner getting ill and his concerns about how his family will survive. Relatedly, watching news coverage for extended periods of time, especially when it is anxiety provoking like the COVID news coverage, can also lead to negative dreams about that content.

Sleep expert recommendations. Nightmares and bad dreams are expected during stressful or traumatic times, particularly when having the opportunity to sleep for longer and get more

rapid eye movement (REM) sleep, but there are steps that can be taken to help minimize their occurrence. First, keeping a consistent wake and sleep time, particularly when you are not going to bed later than normal, can prove helpful for many aspects of sleep in addition to reducing nightmares and bad dreams. In addition, try to obtain an adequate amount of sleep at night, about 7-9 hours for young and middle-aged adults (Watson et al., 2015). Second, reducing stress and anxiety as much as possible is very helpful. This can be done by reducing the amount of news coverage read/watched on COVID-19 and using relaxation strategies such as deep breathing, mindfulness meditation, or progressive muscle relaxation to help cope with worry associated with issues outside of one's own control. Should the bad dreams and nightmares persist a month after the pandemic ends, then nightmare treatment such as imagery rehearsal therapy for insomnia could be considered. See the Appendix for additional Education on Nightmares and Sleep Expert Recommendations for use with these patients.

Considerations for parents of children / teenagers

Case example: Mother of 7-year-old female twins. Sophia is the primary parent for Lauren and Emily, and stays home with them while their father goes out to an essential job each day. Prior to the COVID-19 pandemic, both girls had experienced periodic episodes of insomnia and nightmares--particularly relating to some major family stressors--and were occasionally allowed to co-sleep with Sophia and her husband. Lauren and Emily had their own classroom aide who was assisting with their studies, but with the abrupt school closures their mother is now struggling to teach the materials herself until she can set up regular virtual contacts with an intervention specialist for the twins. The girls tell their mother that they are missing their teachers and school friends. Sophia struggles with her daughters not always cooperating with

their usual bedtime routine of taking a shower and brushing their teeth prior to bedtime and occasionally requesting to come into the parents' bed to co-sleep after waking during the night. Sophia isn't certain how strict she should be right now about the twins' pre-bedtime routine and whether she should allow one or both girls to co-sleep with their parents, as they had been doing off and on before the pandemic, given the increased stress they are experiencing.

What's going on? Parenting during the COVID-19 pandemic entails many challenging situations, and one that is an area of particular hardship and confusion for many parents is the sleep of their children. Parents are also being immediately thrust into the role of learning coaches with some having a much more difficult adjustment to this role due to their own obligations and educational background in addition to the temperament, learning style, and potential behavioral/psychological challenges of their children. This vignette illustrates how some parents of younger school-age children are wondering whether they should allow their child to co-sleep when they are struggling with so many other daytime issues, including missing their teachers and friends while parents have to serve as learning coaches and constant companions. Parents with children in this developmental stage are now trying to figure out how much they should enforce the same bedtime routines when their children may be having difficulty with simple tasks such as grooming. How much should household sleep rules and routines be enforced when they might engender increased parent/child conflict and intensify everyone's stress?

Sleep expert recommendations. During this time, parents must focus on what is most important to them and their families, including health and safety, while also prioritizing the parent/child relationship. Professionals working with parents of younger children can support them in setting up calming and regular bedtime routines and deciding which behaviors are

negotiable for each particular family and which are not. For this family, as periodic co-sleeping was occurring before the pandemic, now might not be the optimal time to strictly enforce independent sleeping in the child's bedroom unless this is creating a significant negative effect on either of the parents' sleep or the child's sleep. If so, then a BSM provider can assist the family in selecting steps for helping the child feel more comfortable sleeping in their own bedroom. This process can include having the parent sleep beside the child on a separate mattress/sleeping bag or sit in the bedroom at wake ups and then over time having the parent escort the child back to bed and tuck them in briefly before leaving. To mitigate the incidence, frequency, and severity of nighttime sleep disturbances, these parents should also be advised to continue to encourage daytime health behaviors that build up a strong need for sleep (e.g., physical activity and time outside; Owens & Mindell, 2015).

Case example: Mother of 13-year-old male. Thomas lives with his two younger sisters and single mother, Sharon, who works part-time as a delivery driver. Before COVID-19, Thomas was having problems with getting up for school, and was actually switched to attending school online before any of his classmates did due to school closures. Sharon is noticing that her son is getting very little of his school work done each day and feels unable to give him her full attention as she is continuing to work and mostly focused on taking care of Thomas' younger sisters when she gets home. Thomas' sleep has gradually become even more irregular since the pandemic, and he has shifted to sometimes going to sleep at 6:00 a.m. and getting up at 3:00-4:00 p.m. before Sharon gets home from work. Thomas' mother has noticed that her son has had a lot of difficulty making friends and is spending a lot of time playing video games since reverting to home school. Lately, he has made new friends in other countries who are in different time zones, and Sharon notices that he seems more like himself when interacting with his new friends online.

Although she is excited that Thomas is enjoying new friendships, his mother is growing increasingly concerned about his late nights and poor school performance, fearing that Thomas will not be promoted to 9th grade next year.

What's going on? This vignette illustrates how, during this particularly disruptive time, parents of teenagers may wonder how much they should be monitoring their children's sleep and enforcing healthy sleep and study habits. Some parents may not prioritize how much sleep is essential for important tasks of adolescence like learning and may be more likely to encourage socialization with peers and their child's growing independence in lieu of negotiating healthier sleep routines.

Sleep expert recommendations. Professionals working with parents of teens can offer recommendations that parents be warm and empathetic with their adolescents when setting healthy guidelines for balancing sleep with social and recreational activities. For Sharon, negotiating a regular wake-up time for Thomas (e.g., between 9:00-11:00 a.m.) will still allow him to connect with his online friends with ample time for school work. Time online with friends could also serve as a reward for getting up earlier and completing his work (the "Premack principle"). Additionally, encouraging Thomas to seek light exposure in the morning (even if just sitting by a window with natural light streaming in) and negotiating a daily schedule to engage in some physical, outdoor activities (e.g., riding his bike) during the day could help increase his sleep drive and advance his typical bedtime. Sharon might get creative to help Thomas practice healthier daytime behaviors, such as keeping the fridge stocked with some of his favorite snacks for when he returns from biking outside. See the Appendix for additional Recommendations for Parents with Children/Teenagers for use with these patients. Considerations for older adults

Case example: 75-year-old female. Annie works part time as an office assistant at a local mortgage company. She lives with her 85-year-old husband in a single family house in the suburbs. Due to the COVID-19 pandemic, she is working from home, about 6 hours per day. Before the pandemic, she was typically on the go most of the day and now she is home almost all the time. She regularly attended yoga and resistance training classes at the local rec center but has not been attending since they closed a month ago. She has not been seeing her children and grandchildren. She describes herself as generally a light sleeper who is prone to insomnia during times of stress. Since the onset of the pandemic, she reports increased insomnia symptoms, including middle of the night and early morning awakenings. She falls asleep easily around 9:30 p.m. but then is awake from midnight to 3:00 a.m. most nights. Some nights she feels that she does not return to sleep at all. When awake at night, she is worrying about her children who live in New York, thinking about who would care for her husband if she was hospitalized and many other worries. As a result of her insomnia, she is dozing off while watching TV during the day. She reports feeling depressed and bored. She would like to complete projects at home (e.g., organizing photos) but lacks the energy and motivation to get started.

What's going on? Older adults are at increased risk for sleep disorders including insomnia and obstructive sleep apnea. The causes of sleep disorders among older adults are multifactorial and include decreased homeostatic sleep pressure, reductions in the robustness of the circadian rhythm and decreases in the sleep promoting hormone melatonin (Li, Vitiello, & Gooneratne, 2018). Furthermore, increases in comorbid medical, psychiatric diagnoses and medications also significantly increase the risk for sleep problems among older adults (Taylor, Mallory, Lichstein, Durrence, Riedel, & Bush, 2007).

The COVID-19 Pandemic may be particularly stressful for older adults because this group has an increased risk for COVID-19 related death and older adults may be more likely to experience social isolation as a result of home confinement. For example, older adults may not be able to visit with their children and grandchildren during this time. Those older adults who are caregivers may be experiencing less support due to fewer family members being able to visit. They may have concerns about outdoor exercise due to risk of falls or difficulty accessing medical care if telehealth sessions are needed. These changes in social activity may be even more severe for older adults who live in nursing homes, where visitors have been limited or banned.

As a result of the pandemic, Annie has experienced many changes to her daily routines, decreased physical and social activity and also increased anxiety. She has been compensating for poor sleep at night by napping during the day, which is decreasing her sleep drive at night. Her decrease in activities have diminished her circadian rhythm.

Sleep expert recommendations: In general, behavioral techniques are effective for improving sleep among older adults. Annie would benefit from techniques based in CBT-I including sleep restriction and stimulus control. She could reduce anxiety and enhance her circadian rhythms by working to increase daytime activities. In many cases, this will mean finding new ways to connect with friends and family members (e.g., online book club, virtual family get-togethers). For those older adults who fear falls with outdoor exercise, they could consider using free indoor resistance training exercises, even chair workouts that are free and available on many cable providers and YouTube. Other recommendations include reducing stress by seeking support from family and friends, spending time each day journaling.

Considerations for hypersomnia / excessive daytime sleepiness

Case example: 32-year-old woman. Suzanne has a history of being a “night owl” and struggling with insomnia. With the current pandemic, her schedule has gotten much more irregular. She stays up late, often until 2:00 a.m. or later, and often awakens sometime after noon. At first, this was great -- she felt that she was finally able to sleep according to her natural schedule. But over time, her schedule became more and more problematic. She would spend more and more time in bed, chasing sleep across all hours of the day, and this led her to be more inactive during the day. She asks, “Why am I so sleepy? I haven’t done anything all day!”

What’s going on? Excessive daytime sleepiness refers to an inability to stay awake during normal waking hours. People with excessive daytime sleepiness (sometimes referred to as “EDS”) have difficulty staying awake, even when they are trying to. People who seem to be able to fall asleep at any time of the day may experience EDS. “Hypersomnia” is related to EDS and refers to an extreme need for sleep. Patients describe this as being hungry for sleep but never getting enough. People with hypersomnia can sleep for 10 or 12 or more hours and still not feel rested.

Sleep expert recommendations. For people experiencing EDS or hypersomnia, the first thing to consider is whether this is a result of problems with nighttime sleep or disrupted sleep schedules, or whether this is a symptom of another condition. It is possible that there are a combination of contributing factors. To rule out sleep-related contributors, encourage patients to set aside at least 7-8 hours for sleep then build a regular schedule into your day. Patients should maintain good sleep habits and make their sleep as consolidated as you can. If they feel the need to nap during the day, try to schedule this into your day rather than just falling asleep without this intention. If patients notice that their sleep schedule is drifting all across the day, set some boundaries and try to rein it in to a set window. For patients who have optimized their nighttime

sleep and kept a regular sleep-wake routine that includes scheduled naps, but continue to experience hypersomnia or EDS, they should consider further evaluation by a sleep specialist.

Additional Considerations for BSM providers during COVID-19

COVID-19 has certainly disrupted “business as usual” with regard to provision of BSM services, as well as the ability and capacity of patients to implement and adhere to interventions to improve their sleep. For this reason, this section includes some pertinent considerations to keep in mind when adjusting your practice to provide effective solution-focused and supportive interventions for sleep during this time.

Providing BSM services via telephone/video telehealth. In response to the COVID-19 Crisis, ambulatory settings have quickly transitioned from in-person visits to telemedicine. There is an accumulating body of preliminary research suggesting that CBT-I delivered via telemedicine can be effective when conducted individually via telephone (McCurry et al., 2016), individually via video conferencing (Arendt et al., 2019; Conroy et al., 2019; Scogin et al., 2019), and in groups via videoconferencing (Gehrman, Shah, Miles, Kuna, & Godleski, 2016). When choosing between these modalities, there are certainly benefits to being able to connect visually with video (i.e., body language cues, forced attention). However, for many individuals with lower access/tech fluency, video can be prohibitively burdensome and thus a telephone option is preferred.

Sleep logs. How patients track their sleep might have to be modified as well. If your work is primarily by phone or the individual does not have consistent access to a computer/internet, this information can be communicated verbally or based on brief verbal estimations from the

patient. If access and/or time is not an issue, sleep diaries can be uploaded via secure messaging/email or even by placing the diary in front of the camera to be transcribed over video.

Negotiating new family sleep routines. Closing of schools/businesses and changes to daily routines may mean that families need to re-negotiate their sleep schedules as well. This can be most notable for teenage children who may shift towards later bed and wake times that are more in-line with their circadian rhythm. Although others in the household may also have shifting sleep schedules, keeping a consistent sleep/wake schedule is critical for those receiving BSM treatment. Environmental modifications may be helpful, including minimizing light with an eye mask or blackout curtains, and using fans or other white noise machines to reduce disruptions from other family members

Encourage values-focused discussions about sleep. As BSM specialists, we are guided by specific principles and theories that have shown to be highly effective in helping individuals improve their sleep. During the current pandemic, increased *flexibility* may be needed when planning goals for therapy. These conversations may borrow from Acceptance and Commitment Therapy (ACT; Hayes et al., 2012), whereby providers can encourage patients to acknowledge their difficult thoughts and emotions (i.e., fears, anxiety, thoughts of death), and detach from the “shoulds” of sleep while focusing more on setting goals for the small values-consistent behaviors over which they do have control. Discussions about expectations for sleep and daytime functioning that integrate self-compassion, kindness, and mindfulness in the context of value-centered living are recommended as a vital aspect of these provider/patient conversations for setting treatment targets.

Conclusion

The recommendations contained in this document were developed by a SBSM panel of experts in the field of behavioral sleep medicine to best address sleep-related concerns specific to the COVID-19 pandemic. Although all of the situations detailed in the above vignettes are unique, there are some considerable similarities within our recommendations which highlight that healthy sleep can be more attainable during this crisis when individuals' a) optimize consistency in sleep/wake schedules, b) identify and set boundaries with the factors that can interfere with sleep (e.g., work, news coverage), and c) search for creative ways to increase routine daytime activities. In the supplementary materials which accompany this report, we have provided a series of patient-focused handouts that were developed based on the panel's recommendations.

Sleep is a vital ingredient for nearly every aspect of health. At the SBSM, we believe that targeting improvements in sleep can also support improvements in mental health, daytime function, and quality of life among our patients. Our intention with these resources is to best support these goals.

If you are having trouble with your sleep, you can find more information about sleep disorders and search for a Behavioral Sleep Medicine provider in your area on the SBSM website at: <http://www.behavioralsleep.org/>

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