Welcome to UVM/AHEC ECHO: Children’s Mental Health

Facilitators:
Michael Hoffnung, DO
David Rettew, MD
Kathy Mariani, MD, MPH
Liz Cote

Guest Speaker: Pamela Swift, PhD
• RECORDING OF SESSION TO BEGIN
Agenda

• Introductions
• Objectives
• Didactic Presentation (20-25 min)
• Case presentation
  • Clarifying questions
  • Participants – then faculty panel
• Discussion
• Recommendations
• Summary
• Closing Announcements
  • Submission of new cases
  • Completion of evaluations
CME Disclosures

University of Vermont (UVM) Office of Continuing Medical and Interprofessional Education (CMIE) is approved as a provider of Continuing Medical Education (CME) by the ACCME. UVM designates this internet live activity for a maximum of 1.0 AMA PRA Category 1 Credits. Participants should claim only the credit commensurate with the extent of their participation in the activity.

Interest Disclosures:

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Series Objectives

• By the end of this series, the learners should be able to:
  
  • Feel more comfort and confidence in identifying, treating, and referring a variety of complex children's mental health presentations.
Lecture Objectives

• By the end of this activity, the learners should be able to:

  • Differentiate between common sleep disorders in children/adolescents
  • Identify options for sleep training and understand how to approach those with interested families
  • Discuss sleep hygiene plans and routines with patients and families
Interventions for Sleep Disorders
Outline

• Common sleep disorders
  • Behavioral Insomnia of Childhood / Insomnia
  • Obstructive Sleep Apnea
  • Nightmares and Parasomnias

• Evidence-based treatments

• Case examples
  • CBT-I
  • Sleep Training
Common Sleep Disorders
<table>
<thead>
<tr>
<th>SLEEP COMPLAINT</th>
<th>EXPLORING PERTINENT HISTORY</th>
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<tbody>
<tr>
<td>Difficulty falling asleep</td>
<td>- Habitual bedtimes (sleep onset/offset on weekdays and weekends/holidays)</td>
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<td></td>
<td>- Time taken to sleep onset; “desired” bedtime</td>
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<td></td>
<td>- Duration, frequency, and severity of complaints</td>
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<td></td>
<td>- Inappropriate nap schedules</td>
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<td></td>
<td>- Family history</td>
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<td></td>
<td>- Negative associations (fears, worries) with distressing sensorimotor symptoms of restless legs syndrome, nightmares</td>
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<td>Difficulty staying asleep (and/or multiple nocturnal awakenings &amp; early morning awakenings)</td>
<td>- Difficulty sleeping through the right (nighttime awakenings, early morning awakenings), activities during the awakenings</td>
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<tr>
<td></td>
<td>- Screen for mood and anxiety symptoms</td>
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<td>- Screen for primary sleep disorders (sleep apnea)</td>
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<td></td>
<td>- Family history</td>
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<td></td>
<td>- Use of alerting substances at bedtime</td>
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<tr>
<td>Excessive daytime sleepiness (EDS)</td>
<td>- Total duration of nocturnal sleep</td>
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<td></td>
<td>- Quality of morning awakenings</td>
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<td>- Difficulty to stay awake in the classroom, while driving, watching TV, eating meals</td>
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<td>- Persistent use of stimulants (e.g., nicotine, caffeine) to stay awake</td>
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<td>- Exploring other potential symptoms associated with disorders of excessive sleepiness (such as cataplexy, sleep paralysis, sleep attacks, hallucinations)</td>
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<td>- Daytime consequences of sleepiness (poor academic performance, learning difficulties, impaired concentration, disruptive behaviors, mood symptoms)</td>
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<td></td>
<td>- Family history</td>
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<td></td>
<td>- Medication use (long-acting psychotropic medications with “hangover” effects)</td>
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<td></td>
<td>- Substance use (alcohol and other illicit drugs, over-the-counter medications)</td>
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<tr>
<td>Poor sleep routine and sleep hygiene due to environment and psychosocial variables</td>
<td>- Occupation (odd hours at employment, shift-work schedules)</td>
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<td>- Social environment (co-sleeping/sharing bedroom, sleep patterns of parents and other children, pets in bedroom)</td>
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<td>- Housing (light, noise, and temperature)</td>
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<td></td>
<td>- Activities at bedtime (computer/telephone, homework completion, TV viewing)</td>
</tr>
<tr>
<td></td>
<td>- Substance use (alcohol and other illicit drugs, caffeine intake, nicotine use, over-the-counter medications)</td>
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<td></td>
<td>- Parental involvement (limit setting, adult supervision)</td>
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Behavioral Insomnia of Childhood / Insomnia

• Basic insomnia criteria: trouble falling asleep, trouble maintaining sleep, and/or early morning awakenings
  • At least 3 nights per week for 3 months despite adequate opportunity for sleep

• Estimated to impact approx. 36% of preschoolers, 20% in school age (5–10 year old), and 24% of adolescents

Combs et al., 2016; Hysing et al., 2013
Behavioral Insomnia of Childhood

Table 1—Diagnostic Criteria of Behavioral Insomnia of Childhood

A. A child’s symptoms meet the criteria for insomnia based upon reports of parents or other adult caregivers.
B. The child shows a pattern consistent with either the sleep-onset association type or limit-setting type of insomnia described below:
   i. Sleep-onset association type includes each of the following:
      1. Falling asleep is an extended process that requires special conditions.
      2. Sleep-onset associations are highly problematic or demanding.
      3. In the absence of the associated conditions, sleep onset is significantly delayed or sleep is otherwise disrupted.
      4. Nighttime awakenings require caregiver intervention for the child to return to sleep.
   ii. Limit-setting type includes each of the following:
      1. The individual has difficulty initiating or maintaining sleep.
      2. The individual stalls or refuses to go to bed at an appropriate time or refuses to return to bed following a nighttime awakening.
      3. The caregiver demonstrates insufficient or inappropriate limit setting to establish appropriate sleeping behavior in the child.
C. The sleep disturbance is not better explained by another sleep disorder, medical or neurological disorder, mental disorder, or medication use.

Obstructive Sleep Apnea (OSA)

- Airway completely or partially collapses repeatedly throughout night
- During sleep, soft tissues of throat relax and can block upper airway
Obstructive Sleep Apnea (OSA)

• Can be hard to diagnose in childhood
  • Snoring in childhood is generally not normal

• Symptoms (aside from snoring) can be more subtle
  • Avoiding naps when tired
  • Hyperactivity
  • Irritability
  • Concentration/focus problems
  • Behavioral dysregulation

• Not necessarily overweight
Nightmares and Parasomnias

• Parasomnias include sleep walking, sleep talking, and sleep terrors
  • All generally occur in NREM, primarily SWS
  • Sleeper has no awareness of behaviors

• Nightmares are often more easily remembered, especially if the nightmare was occurring during REM sleep

• **REM Behavior Disorder
Nightmares and Parasomnias

<table>
<thead>
<tr>
<th>Characteristic Features of Sleep Terrors, Nightmares, and RBD</th>
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<tbody>
<tr>
<td><strong>Sleep Terrors</strong></td>
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<tr>
<td><strong>Typical Age of Presentation</strong></td>
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<tr>
<td><strong>Associated Sleep Stage</strong></td>
</tr>
<tr>
<td><strong>Typical Time of Night</strong></td>
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</table>
| **Characteristic Features** | - Abrupt awakening, typically associated with a scream  
- Intense autonomic discharge including tachypnea, tachycardia, and sweating  
- Typically cannot be soothed or comforted during the episode  
- Child is amnestic at the time of event and the following morning  
- Brief, lasting a few minutes | - Awake in state of distress after distressing dream with negative emotional response  
- Mild tachycardia associated with level of anxiety response  
- Consolable  
- Dream is typically recalled in detail after the event and the following morning  
- Associated with prolonged period of wakefulness after the event | - Occurs in last half to third of sleep  
- Talking, shouting, gesturing during sleep  
- Dream enactment behavior with potentially injurious behavior  
- Vivid dream recall after the event  
- May be presenting sign of narcolepsy  
- Can be associated with other neurologic disease |
Nightmares and Parasomnias

Figure. Onset of New Cases of Sleep Terrors and Sleepwalking as a Function of Age
Evidence-Based Treatments (EBTs)
NSF Sleep Recommendations

SLEEP DURATION RECOMMENDATIONS

- Newborn (0-3 months): 14 - 17 hours
- Infant (4-11 months): 12 - 15 hours
- Toddler (1-2 years): 11 - 14 hours
- Preschool (3-5 years): 10 - 13 hours
- School Age (6-13 years): 9 - 11 hours
- Teen (14-17 years): 8 - 10 hours
- Young Adult (18-25 years): 7 - 9 hours
- Adult (26-64 years): 7 - 9 hours
- Older Adult (65+): 5 - 6 hours

- Recommended
- May be Appropriate
- Not Recommended
EBTs: Behavioral Insomnia

• Behavioral Parent Education- Information on...
  • Reinforcers versus Punishers
  • Coercive Parenting Cycle
  • Functions of Behavior
  • Attention versus Ignoring
  • Creating and Following Bedtime Routine
EBTs: Behavioral Insomnia

<table>
<thead>
<tr>
<th>Treatment Method</th>
<th>Most Relevant Population</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age appropriate and consistent bedtime and sleep schedule</td>
<td>All children</td>
<td>Child is put to bed at developmentally appropriate bedtime consistently 7 days a week with minimal variation.</td>
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<tr>
<td>Bedtime routine</td>
<td>All children</td>
<td>A series of subsequent steps taken in the half hour prior to bedtime. Steps are completed in a manner each night to “cue” that initiation of sleep is approaching. Should be no longer than 30 minutes with 2-3 relaxing activities (bath, story) and end in the bedroom. For younger children or developmentally delayed children, incorporate picture charts. Can also check off boxes and earn stickers for completion of each step of the routine or completion of the entire routine.</td>
</tr>
<tr>
<td>Extinction</td>
<td>Young children</td>
<td>“Cry it out” method. Child is placed in bed or crib while still awake, then parents are instructed not to respond to cries or protests. Must warn parents of extinction burst, as protests will start increasing prior to decreasing.</td>
</tr>
<tr>
<td>Graduated extinction</td>
<td>Young children</td>
<td>Child is placed in bed or crib while still awake, then parents leave the room and wait increasing numbers of minutes before re-entering the room for a brief, neutral interaction with the child. After each re-entry, the number of minutes before the next entry is gradually increased over each trial and over the course of several days. Also used to fade parental presence to teach child to fall asleep independently. Rather than leave the room, the parent moves further away from the child every few nights. In both cases, warn parents of extinction burst that may occur within first few nights.</td>
</tr>
<tr>
<td>Positive routines</td>
<td>Young children</td>
<td>Implement bedtime routine that is positive and enjoyable parent-child interaction with one or two of child’s preferred activities. Parent provides consistent praise, but if child refuses a step or tantrums, the routine is ended, child is put to bed, and interaction ceases.</td>
</tr>
<tr>
<td>Faded bedtime</td>
<td>Young children, young children with late bedtime</td>
<td>Child is put to bed close to time he or she is most likely to fall asleep. Once falling asleep within 15–30 minutes, bedtime is moved 15 minutes earlier every 2–3 nights until desired bedtime is reached.</td>
</tr>
<tr>
<td>Faded bedtime with response cost</td>
<td>Young children, children with developmental delays</td>
<td>Child is put to bed close to time he or she is most likely to fall asleep. Once falling asleep within 10–30 minutes, bedtime is moved to minutes earlier every 2–3 nights until desired bedtime is reached. Once in bed, if child does not fall asleep quickly within a set period of time, child is removed from the bed for a specific period of time.</td>
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<tr>
<td>Scheduled awakenings</td>
<td>Young children</td>
<td>Establish baseline pattern of awakenings using sleep diary. Within 15–30 minutes prior to the typical night waking determined from sleep diary, parent preemptively awakens the child by shaking them lightly and asking them to awaken. Once the child responds by opening eyes slightly or mumbling, the parent allows the child to fall back asleep or provides a “typical” response to soothe the child back to sleep (i.e., rocking, tending, patting). Procedure is implemented on a nightly basis for 2–4 weeks.</td>
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<tr>
<td>Parent education</td>
<td>All children</td>
<td>Education regarding sleep hygiene measures, good sleep promoting habits, reduced caffeine, consistent and developmentally appropriate sleep-wake times.</td>
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<tr>
<td>Cognitive-behavioral therapy</td>
<td>Children approximately age 5 or above</td>
<td>Methods include progressive muscle relaxation, deep-breathing exercises, imagery, cognitive techniques to decrease negative thoughts at bedtime, or keeping a worry journal, all of which can be used independently or as a package together to reduce level of arousal and anxiety at bedtime, increasing likelihood of ability to initiate sleep.</td>
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EBTs: Behavioral Insomnia

• Extinction-based methods
  • Unmodified Extinction (Weissbluth)
  • Gradual Extinction (Ferber)
  • Positive routines/Faded Bedtimes
    • Set bedtime delayed paired with positive bedtime routine interactions
  • Scheduled Awakenings
    • Caregivers awaken child 15-30 minutes before a typical awakening followed by soothing. Faded out over time.
  • Parent education/prevention alone

“Cry It Out” (CIO) Methods
**EBTs: Behavioral Insomnia**

<table>
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<tr>
<th>Table 2—Reasons for parents’ difficulties with extinction interventions.</th>
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<tr>
<td><strong>Enduring crying</strong></td>
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<td><strong>Practical considerations</strong></td>
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<tr>
<td><strong>Fear of repercussions</strong></td>
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<tr>
<td><strong>Misinformation</strong></td>
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<td><strong>Incongruence with personal beliefs</strong></td>
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<td><strong>Different cultural practices</strong></td>
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<td><strong>Parent wellness</strong></td>
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EBTs: Insomnia

• Cognitive Behavioral Therapy for Insomnia (CBT-I)

• Framework

• Four main components
  • Sleep Hygiene/Education
  • Sleep Restriction*
  • Stimulus Control
  • Cognitive Therapy
EBTs: Insomnia

• Note on sleep in adolescence

• May benefit from a “clock setting” dose of melatonin (0.3-0.5mg)

• Important to educate parents!

Wahlstrom, 2003; NSF, 2009
**EBTs: OSA**

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**Table 3. Recommendations for the Diagnosis and Management of OSA in Children**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Treatment</th>
<th>Follow-up</th>
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<tbody>
<tr>
<td>All children should be screened for snoring at well-child visits.\textsuperscript{13} Clinical and polysomnographic findings should be integrated to diagnose OSA; clinical indicators alone are not consistently reliable for predicting OSA.\textsuperscript{13,18} Adenotonsillectomy is a low-risk procedure, but should be performed only in those with proven OSA.\textsuperscript{13} Preoperative polysomnography is indicated before adenotonsillectomy in children with OSA.\textsuperscript{13,18} Identifying the severity of OSA helps determine the risk of postoperative respiratory complications.\textsuperscript{13,18}</td>
<td>Adenotonsillectomy is the primary treatment for those with adenotonsillar hypertrophy; it is highly effective and leads to improved quality of life and behavior.\textsuperscript{13}</td>
<td>Patients with mild OSA should receive postoperative and periodic clinical assessments for residual symptoms; if symptoms are present, postoperative polysomnography is indicated.\textsuperscript{13,18} Patients with moderate to severe OSA and obesity should receive postoperative polysomnography to assess for residual symptoms, as well as periodic clinical assessments\textsuperscript{13,18}</td>
</tr>
</tbody>
</table>
EBTs: OSA

• OSA treatments work wonders but adherence is always a struggle

• Desensitization Protocols
  • Spend time with mask on engaging in tasks while awake
  • Spend time relaxing with mask on
  • Spend time in bed with mask on
  • Spend time sleeping with mask on (naps, overnight)
EBTs: Nightmares and Parasomnias

• Tend to reduce/go away with age

• Not particularly concerning for child themselves
  • But can be very alarming for caregivers

• Make sure environment/surroundings are safe
  • Also consider daytime contributors (e.g., stress!) and previous sleeps

• Nightmare Rescripting
  • While awake, exposure to nightmare and then rescripting scary parts
  • “Riddikulus!”
Sleep Hygiene

“...set of behavioral and environmental recommendations intended to promote healthy sleep”

- Caffeine
- Nicotine
- Alcohol
- Exercise
- Meals/Liquids
- Stress
- Bedroom environment
- Naps
- Timing of sleep
Resources

• National Sleep Foundation
  https://www.sleepfoundation.org/

• Assessments/Diaries
  • NSF Sleep Diary
    https://www.sleepfoundation.org/sites/default/files/inlin
e-files/SleepDiaryv6.pdf
  • Insomnia Severity Index
  • Pittsburgh Sleep Quality Index
  • Epworth Sleepiness Scale
Questions? Cases?

Thank you!

Pamela.Swift@uvmhealth.org
Cases/HIPAA

- Names
- Address
- DOB
- Phone/Fax #
- Email address
- Social Security #
- Medical Record #

The discussion and materials included in this conference are confidential and privileged pursuant to 26VSA Section 1441-1443. This material is intended for use in improving patient care. It is privileged and strictly confidential and is to be used only for the evaluation and improvement of patient care.
• RECORDING TO BE STOPPED FOR CASE PRESENTATION
Conclusion

• Volunteers to present cases (this is key to the Project ECHO model)
  • Please submit cases to Michael.Hoffnung@uvmhealth.org

• Please complete evaluation survey after each session

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• Please contact us with any questions, concerns, or suggestions
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  • ahec@uvm.edu