Sleep Disorders

Mental Health Care Guide for Providers

OPAL-K

Oregon Psychiatric Access Line about Kids







Oregon Council of Child & Adolescent Psychiatry



Oregon Pediatric Society

OPAL-K Sleep Disorder Care Guide

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1: OPAL-K Insomnia Assessment & Treatment Flow Chart

Identify possible causes of insomnia: behavioral factors, environmental factors, medical illness or medications, psychiatric disorders or substance abuse

2) Sleep onset associations are highly problematic and demanding 3) In the absence of associated conditions sleep is delayed 4) Nighttime awakenings require caregiver intervention 5) The child has difficulty initiating or maintaining sleep 6) Child stalls or refuses to go to bed 7) The caregiver demonstrates insufficient or inappropriate limit setting 8) The sleep problem is not better explained by medical, psychiatric, medication, or neurological factors Parental and vouth coaching 1) Establish a consistent bedtime routine that does not include stimulating activities, such as television viewing

Behavioral Insomnia of Childhood Criteria: 1)

Falling asleep is an extended process

2) Introduce more appropriate sleep associations that will be readily available to the child during the night, such as use of a transitional object (e.g., blanket, stuffed animal)

3) Encourage development of self-soothing skills, that is having children fall asleep independently at bedtime without parental presence

4) Practice bedtime fading, which involves temporarily setting the child's bedtime to the current sleep-onset time and then gradually advancing bedtime

5) Decrease parental attention for problematic bedtime behaviors, such as stalling and additional requests

6) Provide positive reinforcement for appropriate behaviors, such as stickers for remaining in bed

7) Teach self-relaxation techniques and cognitivebehavioral strategies, which can also be beneficial in older children.

Environmental Causes:

- Poor sleep milieu (noise, bright light, etc.)
-Poor sleep hygiene
-Family mental illness/Substance use disorder
-Too much caffeine

Trauma:

-Abuse or neglect -Domestic Violence -Being bullied at school -Cyberbullying

Eliminate/Ameliorate

media from bedrooms

excessive noise or light

appropriate referrals

safety plan

3) No caffeinated beverages

4) Address family mental health

and make appropriate referrals

collaborate with mental health

professional/school on devising a

Environmental Causes:

1) Remove stimulating electronic

2) Organize sleeping area to eliminate

issues/substance problems and make

5) Address domestic violence issues

6) Identify abuse and or bullying and

Psychiatric Disorders: -ADHD -PTSD -Bipolar Disorder -Substance use disorders -Anxiety Disorder -Major Depression -Adjustment Reaction -Psychotic Disorder - Obsessive Compulsive Disorder (OCD) - Tic Disorders

ADHD Insomnia – treat with alpha 2 agonist. Consider evening dose of stimulant for rebound

Depression Insomnia – treatment with antidepressant consider mirtazapine or doxepin if SSRI does not resolve insomnia

Anxiety related insomnia – treat with hydroxyzine or alpha 2a agonists and or SSRI

PTSD insomnia – alpha 2a agonists or prazosin if alpha 2as ineffective

Psychosis/Mania – antipsychotics

Substance use disorders – abstinence, clonidine can help with withdrawal syndromes

OCD- SSRI, Cognitive Behavioral Therapy

Tic Disorders- alpha 2a agonists, antipsychotics

Causes: -Delayed Sleep phase syndrome (DSPS) -Restless Leg syndrome (RLS) -Asthma -Cystic Fibrosis -Pain syndromes -Cancer -Rheumatic Disorders - Medication side-effects -Parasomnias and Obstructive sleep apnea

Medical or Medication

DSPS – usually treated with shifting internal clock using strict schedule, light therapy in AM, not light exposure at night, melatonin **Restless Leg Syndrome** – eliminate (caffeine, nicotine, antihistamines, SSRIs), exercise, and treat possible underlying causes like anemia **Asthma, Cystic Fibrosis** – Treat underlying disorder and causes of air hunger **Pain syndromes from Rheumatic**

Pain syndromes from Kneumatic Disorders and cancer - treatment of underlying disease and proper pain control

Parasomnias & Obstructive sleep apnea-refer to sleep specialist

2: OPAL-K Sleep Disorders Treatment Guidelines

- There are no medications FDA approved for pediatric insomnia.
- Use sleep hygiene education and behavioral interventions first, (80%-90% of Behavioral Insomnia resolves with behavioral/environmental interventions) before considering use of medications or naturopathic interventions
- Youth with psychiatric illness and insomnia should have their psychiatric illness adequately treated before considering use of sleep medications or naturopathic interventions.
- More complex psychosocial causes of insomnia may need a multidisciplinary team to adequately address problems such as domestic violence, bullying and substance abuse in the home
- Refer suspected cases of Obstructive Sleep Apnea syndromes (OSAS) and narcolepsy to a sleep center for further assessment with Polysonography (PSG) and/or Multiple Sleep Latency Test (MSLT).
- The treatment of choice for OSAS is adenotonsillectomy. Continuous Positive Airway Pressure (CPAP) can be used if surgery is not possible or if OSAS persists after adenotonsillectomy.
- A follow-up polysomnogram should be done in any child continuing to have OSAS symptoms after adenotonsillectomy.
- Delayed Sleep Phase Syndrome (DSPS) is common and can be readily treated with chronotherapy, light therapy and potentially melatonin as long as the patient is motivated.
- Educate parents and the youth on sleep needs and hygiene and refer them to appropriate sources of information (see Suggested Readings).
- Treat Parasomnias with reassurance and safety measures, using benzodiazepines sparingly for severe, potentially dangerous cases.
- Behavioral interventions are the treatment of choice for young children with bedtime struggles and frequent awakenings. Resist using medications unless the child is neuro-developmentally compromised and unresponsive to behavioral treatments.

3: OPAL-K Evaluation for Pediatric Insomnia

- Consider sleep disorders in the differential diagnosis when evaluating children and adolescents with cognitive, emotional and behavioral problems.
- Screen all children and adolescents for OSA by asking parents about snoring, apnea, and labored breathing
- Ask screening questions for narcolepsy, e.g., cataplexy, sleep paralysis, and hypnagogic hallucinations
- Carefully assess sleep schedules and sleep amounts on weekdays, weekends and school holidays. Consider use of a sleep diary
- Remember that insufficient sleep is the most common cause of excessive day time sleepiness (EDS)
- Assess bedtime routines and sleep-onset associations especially in younger children with behaviorally based sleep disorders
- Conduct a physical exam particularly assessing risk factors for Obstructive sleep apnea (OSA) such as craniofacial anomalies, tonsillar size, septal deviation of the nose

4: BEARS Screening Algorithm
The "BEARS" instrument is divided into five major sleep domains, providing a comprehensive screen for the major sleep disorders affecting children
in the 2- to 18-year old range. Each sleep domain has a set of age-appropriate "trigger questions" for use in the clinical interview.
B = bedtime problems
E = excessive daytime sleepiness
A = awakenings during the night
R = regularity and duration of sleep
S = snoring

Examples of developmentally appropriate trigger questions:

| | Toddler/preschool (2-5 years) | School-aged (6-12 years) | Adolescent (13-18 years) |
|---|---|--|--|
| 1. Bedtime problems | Does your child have any problems going to bed? Falling asleep? | Does your child have any problems at bedtime? (P) Do you have any problems going to bed? (C) | Do you have any problems falling asleep at bedtime? (C) |
| 2. Excessive daytime sleepiness | Does your child seem overtired or sleepy a lot during the day? Does she still take naps? | Does your child have difficulty waking in the morning, seem sleepy during the day or take haps? (P) Do you feel tired a lot? (C) | Do you feel sleep a lot during the day? In school? While driving? (C) |
| 3. Awakenings during the night | Does your child wake up a lot at night? | Does your child seem to wake up a lot at night? Any sleepwalking or nightmares? (P) Do you wake up a lot at night? Have trouble getting back to sleep? (C) | Do you wake up a lot at night? Have trouble getting back to sleep? (C) |
| 4. Regularity and duration of sleep | Does your child have a regular bedtime and wake time? What are they? | What time does your child go to bed and get up on school days? Weekends? Do you think he/she is getting enough sleep? (P) | What time do you usually go to bed on school nights? Weekends? How much sleep do you usually get? (C) |
| 5. Snoring | Does your child snore a lot or have difficult breathing at night? | Does your child have loud or nightly snoring or any breathing difficulties at night? (P) | Does your teenager snore loudly or nightly? (P) |

(P) Parent-directed question (C) Child-directed question

Source: "A Clinical Guide to Pediatric Sleep: Diagnosis and Management of Sleep Problems" by Jodi A. Mindell and Judith A. Owens; Lippincott Williams & Wilkins

5 - 6: CHILDREN'S SLEEP HABITS QUESTIONNAIRE (ABBREVIATED)

The following statements are about your child's sleep habits and possible difficulties with sleep. Think about the past week in your life when you answer the questions. If last week was unusual for a specific reason, choose the most recent typical week. Unless noted, check <u>Always</u> if something occurs every night, <u>Usually</u> if it occurs 5 or 6 times a week, <u>Sometimes</u> if it occurs 2 to 4 times a week, <u>Rarely</u> if it occurs once a week, and <u>Never</u> if it occurs less than once a week.

BEDTIME

Write in your child's usual bedtime: Weeknights ______ am/pm

Weekends _____ am/pm

| | 7 Always | 5-6 Usually | 2-4 Sometimes | 1 Rarely | 0 Never |
|---|-------------|----------------|------------------|-------------|------------|
| 1. Child goes to bed at the same time at night. | () | () | () | () | () |
| 2. Child falls asleep within 20 minutes after going to bed. | () | () | () | () | () |
| 3. Child falls asleep alone in own bed. | () | () | () | () | () |
| 4. Child falls asleep in parent's or sibling's bed. | () | () | () | () | () |
| 5. Child falls asleep with rocking or rhythmic movements. | () | () | () | () | () |
| 6. Child needs special object to fall asleep (doll, special blanket, stuffed animal, etc.). | () | () | () | () | () |
| 7. Child needs parent in the room to fall asleep. | () | () | () | () | () |
| 8. Child resists going to bed at bedtime. | () | () | () | () | () |
| 9. Child is afraid of sleeping in the dark. | () | () | () | () | () |

SLEEP BEHAVIOR

Write in your child's usual amount of sleep each day (combining nighttime sleep and naps):

| | 7 Always | 5-6 Usually | 2-4 Sometimes | 1 Rarely | 0 Never |
|---|-------------|----------------|------------------|-------------|------------|
| 10. Child sleeps about the same amount each day. | () | () | () | () | () |
| 11. Child is restless and moves a lot during sleep. | () | () | () | () | () |

hours and minutes

| | 7 Always | 5-6 Usually | 2-4 Sometimes | 1 Rarely | 0 Never |
|--|-------------|----------------|------------------|-------------|------------|
| 12. Child moves to someone else's bed during the night (parent, sibling, etc.). | () | () | () | () | () |
| 13. Child grinds teeth during sleep (your dentist may have told you this). | () | () | () | () | () |
| 14. Child snores loudly. | () | () | () | () | () |
| 15. Child awakens during the night and is sweating, screaming, and inconsolable. | () | () | () | () | () |
| 16. Child naps during the day. | () | () | () | () | () |
| Write in the number of minutes the nap usually lasts: minutes | | | | | |

WAKING DURING THE NIGHT

| | 7 Always | 5-6 Usually | 2-4 Sometimes | 1 Rarely | 0 Never |
|---|-------------|----------------|------------------|-------------|------------|
| 17. Child wakes up once during the night. | () | () | () | () | () |
| 18. Child wakes up more than once during the night. | () | () | () | () | () |

MORNING WAKE UP

Write in the time child usually wakes up in the morning: Weekdays

Weekdays ____: ____ am/pm

Weekends _____ am/pm

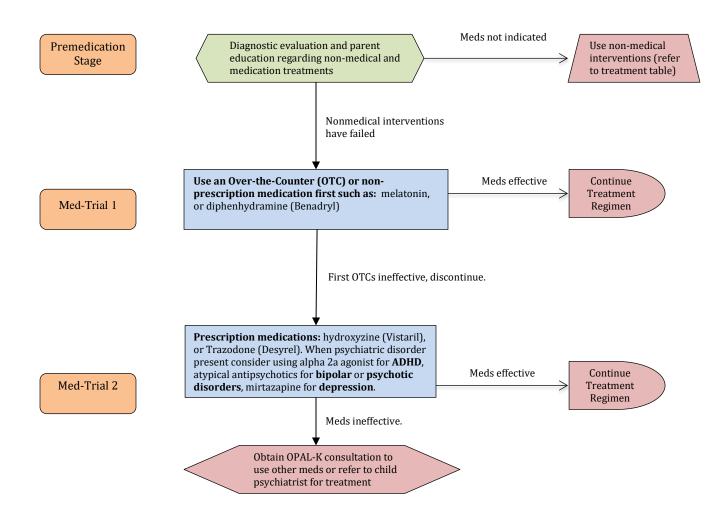
| | 7 Always | 5-6 Usually | 2-4 Sometimes | 1 Rarely | 0 Never |
|---|-------------|----------------|------------------|-------------|------------|
| 19. Child wakes up by him/herself. | () | () | () | () | () |
| 20. Child wakes up very early in the morning (or, earlier than necessary or desired). | () | () | () | () | () |
| 21. Child seems tired during the daytime. | () | () | () | () | () |
| 22. Child falls asleep while involved in activities. | () | () | () | () | () |

7: Mindell's Sleep Hygiene Suggestions for Older Children

- 1. Choose a set wake-up time. Wake up at the same time every day, no matter how much sleep you got the night before.
- 2. Choose a bedtime. Choose the earliest possible bedtime that enables you to get the sleep you need. However, too much time in bed will lead to lighter, more interrupted sleep, so an appropriate bedtime is one that enables you to get the sleep that you need but doesn't let you be in bed too long. You only want to spend the amount of time in bed that you actually need for sleep.
- 3. Go to bed when you are sleepy, but not before your chosen bedtime. Don't go to bed until you are sleepy. So if you are still wide-awake at your chosen bedtime, wait a while longer until you are sleepy enough to fall asleep quickly.
- 4. Get out of bed when you can't sleep. If you are lying in bed and can't sleep, get out of bed and do something relaxing out of the bedroom. Read a book, watch television, or do something else relaxing; then go back to bed when you feel sleepy enough to fall asleep quickly. Again, if you do not fall asleep quickly, get up. Keep repeating this cycle until you fall asleep. You need to get out of bed when you can't sleep both at bedtime and in the middle of the night.
- 5. Don't worry or plan in bed. When lying in bed at night, don't spend the time worrying or planning for the next day. Set aside another time of the day to do these things. If you automatically start thinking and worrying when you get in bed, get up and don't head back to bed until your thoughts won't interfere with falling asleep. Thinking in bed is a habit, and one that you can break.
- 6. Only use your bed for sleep. Don't do anything but sleep in your bed. That is, don't do other activities, such as eat, watch television, or [do homework].
- 7. Avoid naps. Naps will interfere with your ability to fall asleep at bedtime, so no naps.

From Mindell JA, Owens JA. Clinical guide to pediatric sleep: diagnosis and management of sleep problems, 2nd edition. Philadelphia: Lippincott Williams & Wilkins; 2009; with permission.

8: OPAL-K Sleep Medication Algorithm (v.101514)



9: OPAL-K Insomnia Medication Table

(Medication information based on www.epocrates.com)

| Drug | Dosing/ Half-life | FDA Approval | Comments/ Monitoring | Warnings/ Precautions | Cost for Monthly Supply |
|---|---|--|---|--|-------------------------------|
| Melatonin | 0.5-9mg prior to desired bedtime | FDA Approval | Available over the counter. Some studies report decrease in sleep latencies in youth with ADHD & Autism | | \$ |
| Diphenhydramine (Benadryl) | >12 yrs 250- 50 mg po ghs 30 minutes before desired bedime | FDA cautions: Do not give to children under 2 yrs and younger FDA approved for allergic reactions 2yrs+ | Available over the counter. | Do not give to children 2 yrs and younger | \$ |
| Hydroxyzine (Vistaril Atarax) | 0.6mg/kg for presurgical sedation 25- 50mg po ghs for sleep | FDA cautions: Do not give to children 2yrs and younger | Approved for rx of anxiety, nausea, and pruritus in 6yrs+ | Do not give to children 2 yrs and younger | \$\$ |
| Trazodone (Desyrel) | Typical doses 25-50mg po qhs for adults | FDA approved in adults for depression | Anecdotal evidence that long-term treatment is well tolerated | | \$\$ |

10: Sleep Hygiene Checklist for Families with Children Who Can't Sleep

Living with a child who can't sleep can be very frustrating and at times overwhelming. The following checklist can help families become more effective in managing the behavior issues associated with children with sleep problems.

Checklist for parents:

- □ The American Academy of Pediatrics recommends that children should not have televisions, video game electronics, or electronic media residing in their room
- □ Help your child keep a consistent bedtime and wake time every day of the week. Late weekend nights or sleeping in till noon can disrupt school night bedtimes
- □ Make sure the schedule includes exercise, when to sleep, and when to eat, not too late at night.
- □ Avoid letting your child spend lots of awake time in their bed. Spending lots awake or time in bed may prevent the bed from being associated with sleeping
- □ Bedrooms should be comfortable and not be too warm or cool. Excessive lights or noise in or near the bedroom environment should be eliminated at bedtime
- □ Remove clocks from bedrooms of children who tend to stare or ruminate about the clock.

Checklist for younger children:

- Avoid highly stimulating or scary play, television shows, or movies just before bedtime.
- □ Children should be put in bed when they are drowsy, but still awake.
- □ Avoid allowing young children to fall asleep in any other places except their bed. Letting them fall asleep other places can form habits that are hard to break.
- □ If a child does not fall asleep within 20 minutes, they should be taken out of bed and engaged in low stimulation activities like reading until drowsy and then return to bed.
- □ When checking to see if young children are asleep, minimize any stimulation or talking.
- □ If you child is never drowsy at bedtime, try rescheduling bedtime later in the evening, after consistent sleep patterns arise then bedtime should be gradually advanced earlier until the desired bed time is reached.
- □ Sometimes providing a security or transitional object liked a stuffed animal or special blanket helps young children feel more relaxed and ready to sleep.

Checklist for older child:

- Make sure you don't eat chocolate or drink, energy drinks, coffee, caffeinated soda, or black tea
- Try to exercise everyday, this will help you sleep better, but don't exercise just prior to going to bed
- □ Make a bedtime routine and schedule and try hard to stick with it every night
- □ If you are unable to sleep because of lots of worry devise a plan with your parents, doctor or therapist
- Avoid using any electronic media entertainment or texting or internet activities at bedtime or late at night
- Get your doctor of therapist to help you learn relaxation techniques such as deep breathing or guided imagery to help you get ready for sleeping.
- □ Have a plan for engaging in quiet activities if you have been wide-awake over 20 minutes, then retry to sleep when drowsy.
- □ Keep a sleep diary to track naps, sleep times, and other activities to find patterns and target problem areas for change when sleep patterns are bad
- Use Sleep Hygiene Suggestions list

11: Family Sleep Resources

<u>Books</u>

Sleeping Through the Night, Revised Edition: How Infants, Toddlers, and Their Parents Can Get a Good Night's Sleep Author: Jodi A. Mindell, PhD Publisher: Collins Living, 2005

Solve Your Child's Sleep Problems: New, Revised, and Expanded Edition Author: Richard Ferber, MD Publisher: Fireside, 2006

Take Charge of Your Child's Sleep: The All-in-One Resource for Solving Sleep Problems in Kids and Teens Authors: Judith A. Owens, MD, and Jodi A.Mindell, PhD Publisher: Da Capo Press, 2005

Websites

Home of the National Sleep Foundation. Excellent resource for parents and clinicians. <u>http://www.sleepfoundation.org/</u>

Specific pediatric content from the National Sleep Foundation directed at parents, teachers and kids. <u>http://sleepforkids.org/</u>

Content from the American Academy of Sleep Medicine for patients. <u>http://sleepeducation.com/</u>

12: Clinician Sleep Resources

<u>Books</u>

A Clinical Guide to Pediatric Sleep: Diagnosis and Management of Sleep Problems, Second Edition Authors: Jodi A. Mindell, PhD, and Judith A. Owens, MD Publisher: Lippincott Williams & Wilkins, 2010 (Practical review of pediatric sleep disorders for clinicians. Includes online access to excellent handouts and questionnaires.

Clinician's Guide to Pediatric Sleep Disorders Editors: Mark Richardson, Norman Friedman Publisher: Informa Healthcare, 2007

Sleep and Psychiatric Disorders in Children and Adolescents Editor: Anna Ivanenko, MD Publisher: Informa Healthcare, 2008

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