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Postgraduate Certificate in Sleep Dentistry

## Pediatric Sleep Medicine

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### Key Terms and Vocabulary for Pediatric Sleep Medicine

Sleep disorders in children can have a significant impact on their overall health and well-being. Understanding the key terms and vocabulary related to pediatric sleep medicine is essential for healthcare professionals working in this field. In this guide, we will explore the important concepts and terminology used in the diagnosis and treatment of sleep disorders in children.

#### Sleep Architecture

Sleep architecture refers to the patterns of sleep stages that occur during a typical night's sleep. These stages include non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep. Understanding sleep architecture is crucial for assessing the quality of a child's sleep and identifying any abnormalities that may be present.

For example, a child with disrupted sleep architecture may experience frequent awakenings during the night, leading to daytime sleepiness and behavioral problems.

#### Polysomnography

Polysomnography is a comprehensive sleep study that involves monitoring various physiological parameters during sleep, such as brain waves, heart rate, and breathing patterns. This test is often used to diagnose sleep disorders in children, such as obstructive sleep apnea or narcolepsy.

For instance, polysomnography can help identify episodes of apnea (breathing pauses) that occur during sleep, which are characteristic of obstructive sleep apnea in children.

#### Obstructive Sleep Apnea (OSA)

Obstructive sleep apnea is a common sleep disorder in children characterized by partial or complete blockage of the airway during sleep, leading to disrupted breathing patterns. OSA can result in poor sleep quality, daytime sleepiness, and long-term health consequences if left untreated.

For example, a child with OSA may exhibit symptoms such as loud snoring, gasping or choking during sleep, and bedwetting.

#### Continuous Positive Airway Pressure (CPAP)

Continuous positive airway pressure is a treatment for obstructive sleep apnea that involves using a

machine to deliver a steady stream of air pressure through a mask worn over the nose and mouth during sleep. CPAP helps keep the airway open and prevents breathing interruptions, improving sleep quality and reducing symptoms of OSA.

For instance, a child with severe obstructive sleep apnea may benefit from using CPAP therapy to alleviate breathing difficulties and improve overall sleep patterns.

### Narcolepsy

Narcolepsy is a neurological disorder characterized by excessive daytime sleepiness, sudden loss of muscle tone (cataplexy), and vivid hallucinations during sleep onset or awakening. Children with narcolepsy may struggle to stay awake during the day and experience disrupted nighttime sleep.

For example, a child with narcolepsy may fall asleep unexpectedly during school or other activities, impacting their academic performance and social interactions.

### Actigraphy

Actigraphy is a non-invasive method of monitoring sleep-wake patterns using a small device worn on the wrist that measures movement and light exposure. Actigraphy can provide valuable information about a child's sleep habits and circadian rhythms, helping healthcare providers assess sleep disorders and develop appropriate treatment plans.

For instance, actigraphy data may reveal irregular sleep patterns or delayed sleep onset in a child with insomnia or circadian rhythm disorders.

### Circadian Rhythm

The circadian rhythm is the body's internal clock that regulates the sleep-wake cycle and other physiological processes over a 24-hour period. Disruptions to the circadian rhythm, such as jet lag or shift work, can lead to sleep disturbances and impact overall health.

For example, a child with a delayed sleep phase disorder may have difficulty falling asleep at a typical bedtime and struggle to wake up in the morning for school.

### Restless Leg Syndrome (RLS)

Restless leg syndrome is a neurological disorder characterized by uncomfortable sensations in the legs and an irresistible urge to move them, particularly during rest or sleep. RLS can disrupt sleep and lead to daytime fatigue and irritability in children.

For instance, a child with RLS may complain of leg discomfort or tingling sensations that worsen at night, making it challenging to fall asleep or stay asleep.

## Behavioral Insomnia of Childhood

Behavioral insomnia of childhood is a sleep disorder characterized by difficulty falling asleep or staying asleep due to behavioral factors, such as bedtime resistance, inadequate sleep routines, or parental interactions. Addressing these behavioral issues is essential for improving a child's sleep quality and overall well-being.

For example, a child with behavioral insomnia of childhood may have prolonged bedtime routines, frequent nighttime awakenings, or excessive reliance on parental presence to fall asleep.

## Parasomnias

Parasomnias are disruptive sleep disorders that involve abnormal behaviors or movements during sleep, such as sleepwalking, night terrors, or confusional arousals. These conditions can affect children's sleep quality and may require intervention to prevent injury or distress.

For instance, a child experiencing night terrors may exhibit sudden episodes of intense fear or agitation during deep sleep, often accompanied by screaming or thrashing movements.

## Sleep Hygiene

Sleep hygiene refers to the habits and practices that promote healthy sleep patterns and optimal sleep quality. Good sleep hygiene practices include maintaining a consistent bedtime routine, creating a comfortable sleep environment, and avoiding stimulants or electronic devices before bedtime.

For example, establishing a calming bedtime routine, such as reading a book or taking a warm bath, can help children relax and prepare for sleep.

## Adenotonsillectomy

Adenotonsillectomy is a surgical procedure to remove the adenoids and tonsils, which may be enlarged and obstructing the airway in children with obstructive sleep apnea. This surgery can improve breathing during sleep, reduce symptoms of OSA, and promote better sleep quality.

For instance, a child with severe obstructive sleep apnea and enlarged tonsils may undergo adenotonsillectomy to alleviate breathing difficulties and restore normal sleep patterns.

## Conclusion

Understanding the key terms and vocabulary related to pediatric sleep medicine is essential for healthcare professionals working with children who have sleep disorders. By familiarizing themselves with concepts such as sleep architecture, obstructive sleep apnea, narcolepsy, and sleep hygiene, providers can effectively diagnose and treat pediatric sleep disorders, improving the overall health and well-being of their young patients.