



## Medical Issues with Child and Adolescent Behavioral Health

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This module, led by Dr. Andy Barnes, equips providers to recognize behavioral and developmental concerns that overlap with or are influenced by underlying medical issues. By integrating medical, behavioral, and developmental perspectives, clinicians can better support children and adolescents in primary care and beyond.

### WHY COORDINATED CARE AND BIDIRECTIONAL COMMUNICATION IS IMPORTANT

Collaborative, interprofessional care between primary care, behavioral health, and families is critical for children and youth with special healthcare needs. Providers should communicate clearly and consistently—sharing templated reports and reinforcing to families that the medical home is a central resource for developmental and behavioral support.

### COMMON ISSUES IN PRIMARY CARE

**Sleep:** Sleep disorders are common and often under-recognized in youth, especially those with developmental disabilities or autism.

- Disorders include nightmares, night terrors, GERD, and sleep apnea. These can lead to significant daytime behavioral issues.
- Sleep logs, video monitoring, and referrals to sleep specialists may be warranted.

**Nutrition:** Dietary issues and micronutrient deficiencies can influence behavior and sleep.

- Deficiencies in iron, zinc, and vitamin D are associated with sleep disturbances, hyperactivity, attention issues, and depression.
- Synthetic food dyes (e.g., Red#40, Yellow 6) may increase hyperactivity in a subset of children.
- There is no evidence that supports reduction of sugar for behavior; in fact, sugar restriction may worsen behavior, due to conflict.

**Pain:** Unrecognized pain—especially in nonverbal children—can present as behavioral challenges.

- Pain sources include gastrointestinal pain, dental issues, headaches, seizures, and medical trauma.
- Non-verbal pain scales (e.g., Non-Communicating Children's Pain Checklist) are available for pain assessment.

**Sensory Impairments:** Vision and hearing impairments often go undetected and can affect behavior.

- For hearing assessment, a referral to an audiologist or sedated auditory brainstem response testing may be needed.
- For visual assessment, a referral to a pediatric ophthalmologist may be appropriate for children unable to cooperate with standard charts.

**Chronic Health Conditions:** Conditions such as lead exposure, thyroid issues, recurrent infections, and seizure disorders may mimic or worsen behavioral issue. For example, epilepsy, particularly partial seizures, can resemble autism or unusual behaviors, and an EEG may be needed to rule out seizures in children with behavioral concerns.

**Medications:** Both prescription and over-the-counter medications can impact behavior or interact negatively. Common medications that impact behavior include Albuterol, prednisone, antihistamines, levetiracetam, and CBD. Primary care providers can use medication interaction checkers or consult pharmacists regularly.

## RED FLAGS FOR FURTHER EVALUATION

Some developmental or behavioral signs warrant urgent follow-up:

- Loss of milestones
- Rapid regression or symptom escalation
- Poor response to interventions
- Abnormal head size or growth patterns
- Severe fatigue or recurrent infections

## PUTTING IT ALL TOGETHER

Addressing behavioral health in the context of medical issues requires a thoughtful, whole-child approach. In the case study, a 2nd grader presented with focus issues and disruptive behavior. Following assessment with ADHD rating scales, medication review, nutritional evaluation, and sleep evaluation, key steps included eliminating synthetic food dyes, continuing prescribed asthma medications, starting vitamin D supplementation for the winter, and scheduling a follow-up in three months. Coordinated care and regular reassessment will ensure a care plan remains responsive and supportive.