Medical Xpress

New quality measures approved for childhood sleep apnea

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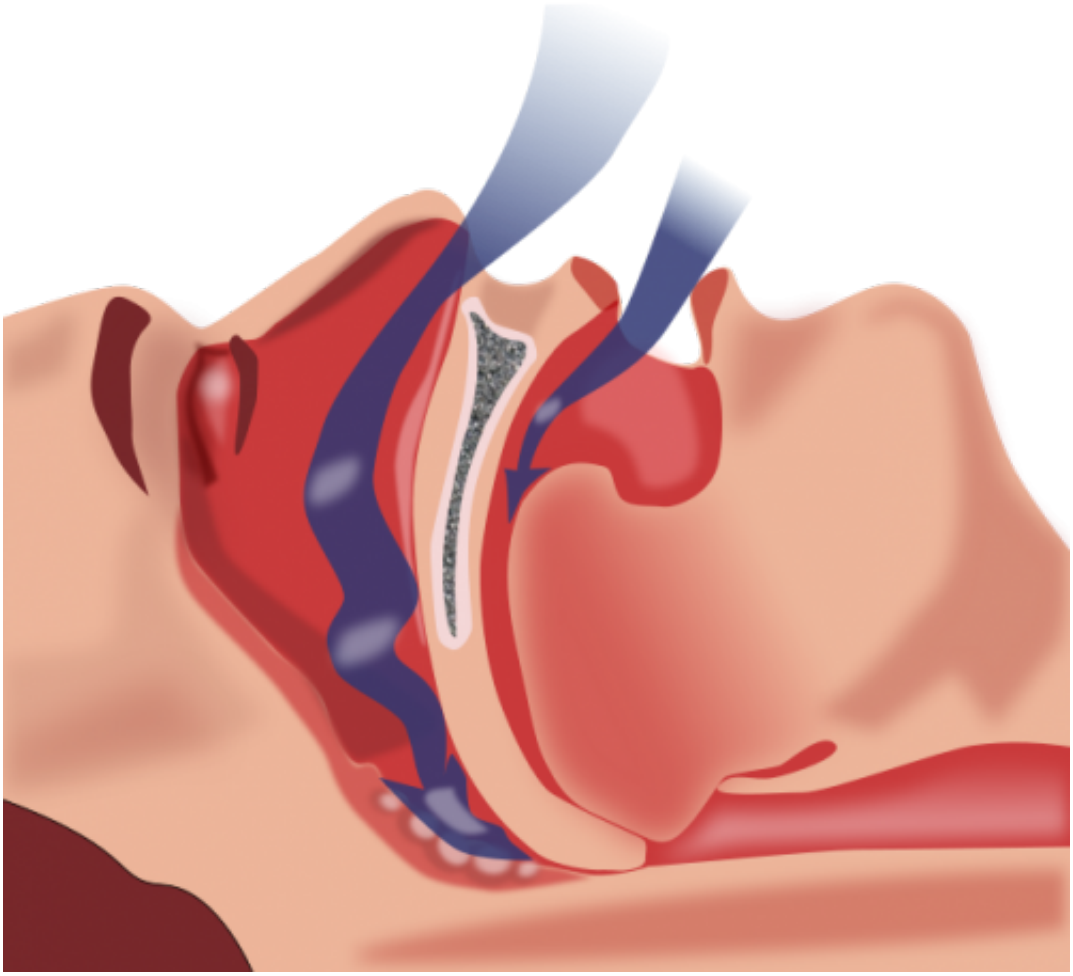

Illustration of obstruction of ventilation. Credit: Habib M'henni / public domain

A work group of physicians from leading academic medical centers

across the country, including NYU Langone Medical Center, has developed new quality measures for the detection and treatment of childhood obstructive sleep apnea (OSA), a potentially morbid, life-altering condition that affects hundreds of thousands of children and adolescents nationwide. The measures, commissioned and endorsed by the American Association of Sleep Medicine (AASM), are published on March 15 in a special section of *The Journal of Clinical Sleep Medicine*.

Several different practice guidelines already exist for diagnosing and treating childhood OSA. The newly proposed measures, however, differ from existing guidelines in that they measure and track the quality of services provided by clinicians. According to Pediatric OSA Workgroup lead author Sanjeev V. Kothare, MD, Director of the Pediatric Sleep Program at NYU Langone Medical Center, the new metrics will help to ensure that guidelines for assessing and treating childhood OSA are actually followed.

"Guidelines recommend a course of action, but quality metrics document what is actually done," says Dr. Kothare

The new quality measures have important implications for both providers and patients, according to Dr. Kothare. "Providers, especially those who don't regularly diagnose OSA as part of their clinical practices, will have greater guidance in utilizing optimal detection and treatment processes," he says. "Likewise, parents of OSA patients, as they become aware of the new metrics, will be more likely to confirm that the recommended steps are being taken by their child's physician. And payers will benefit, too. They will be able to better monitor providers' documented clinical processes. By observing the AASM-recommended quality metrics, providers also will avoid being penalized by insurers."

Currently, there is no standardization of methods for detection,

management and assessing outcomes for pediatric OSA across clinical disciplines. Children with OSA may be seen by a number of different physicians: general practitioners, pediatricians, otolaryngologists, and sleep specialists, all of whom may have different approaches to assessing symptoms, performing physical exams, and creating different action plans. A primary care physician, for instance, might refer the patient to a specialist, a sleep specialist might order a polysomnogram (PSG), and an otolaryngologist might perform surgery. Each of these actions is endorsed by the American Academy of Pediatrics' clinical practice guidelines.

Recognizing this variability, the Pediatric OSA Workgroup focused on offering choices and flexibility to clinicians while ensuring that certain minimal practice standards are maintained. To develop the new metrics, the workgroup examined a total of 960 peer-reviewed journal articles that addressed quality care or metrics in OSA, concentrating on the articles that provided either an empirical basis for selection of outcome measures, or which linked processes to outcomes. The papers were graded on the strength of association between processes and desired outcome.

Through this analysis, the workgroup was able to define five desirable processes for pediatric patients with suspected OSA: 1) assessment of symptoms and risk factors, 2) initiation of an action plan, 3) evaluation of high-risk children, 4) reassessment of OSA within 12 months, and 5) documentation of positive airway pressure (PAP) adherence.

Following these processes, the researchers conclude, should lead to two desirable outcomes: 1) improved detection, and 2) reduced signs and symptoms of childhood OSA. Justifications for exceptions to each process were noted and classified as having medical, patient, or system reasons.

Pediatric OSA is thought to affect up to 5 percent of children in the U.S., although experts think the actual prevalence may be greater because OSA symptoms often go unrecognized. In the disorder, the upper airway continually collapses during sleep, leading to oxygen deprivation and multiple partial awakenings. Because OSA interferes with the deep, restorative slow wave sleep that is vital for normal childhood growth and development, it can have lingering complications that can persist through adulthood. Children with OSA may become moody and irritable and have learning and behavioral problems, including difficulty paying attention and hyperactivity, mimicking ADHD. They can develop the symptoms of metabolic syndrome, including hypertension, abnormal blood lipid levels, and type 2 diabetes. Adults whose OSA went untreated as children are at increased risk of having earlier onset for heart attacks.

OSA also creates imbalances in the body's appetite-controlling hormones, ghrelin and leptin. In a vicious cycle, the hormonal imbalance increases appetite, leading to weight gain, which can exacerbate OSA.

The most common symptom of childhood OSA is frequent snoring, sometimes accompanied by gasping or choking. Other nighttime symptoms include tossing and turning in bed, labored breathing, night sweats, and need to urinate many times throughout the night. The main causes of pediatric OSA are large tonsils or adenoids, obesity, cranio-facial abnormalities, and genetic disorders, such as Down syndrome.

An example of how the new metrics could improve care is that existing guidelines recommend that children at high risk of OSA, such as those with Down syndrome, be evaluated by having a sleep study every year. That recommendation, however, is not always followed. With adoption of the new metrics that guideline is more likely to be heeded because clinicians will risk being penalized by payers if it is not.

"Quality measures are now in place in neurology and several other specialties," says Dr. Kothare. "Other medical disciplines will soon follow. Metrics are the mantra of the future, and will help ensure that patients are getting the best care possible."

Provided by New York University School of Medicine