Description:

Obstructive Sleep Apnea Syndrome (OSAS):
OSAS is a condition characterized by repetitive episodes of upper airway obstruction that occurs during sleep due to collapse of the upper airway. It is usually associated with a reduction in blood oxygen saturation. OSAS may also be referred to as obstructive sleep apnea (OSA).
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Description: (cont.)

Upper Airway Resistance Syndrome (UARS):
A variant of OSAS that is characterized by a partial collapse of the airway resulting in increased resistance to airflow. The increased respiratory effort is associated with multiple sleep fragmentations, as measured by very short alpha electroencephalographic (EEG) arousals (Respiratory Event Related Arousals or RERAs).

Medical Management of OSAS:
Proposed treatments for adults may include weight loss, avoidance of stimulants, body position adjustment, oral appliances and various types of positive pressure therapy (i.e., fixed continuous positive airway pressure [CPAP], bi-level positive airway pressure [BiPAP] or auto-adjusting continuous positive airway pressure [APAP, also referred to as auto-adjusting CPAP] or expiratory positive airway pressure [EPAP e.g., Provent® Therapy]) or negative pressure therapy known as oral pressure therapy (OPT e.g., Winx® System). Oral appliances can be categorized as mandibular advancing/positioning devices, tongue fixation devices, night guards, occlusal orthotic devices and occlusal guards/splints. Oral surgical splints are used postoperatively and are custom made by the surgeon. Appliances are custom made by a laboratory or similar provider.

For most children, surgery (adenotonsillectomy) is the first-line treatment for OSAS.

Apneic-Hypopneic Index (AHI):
The number of episodes of apnea and hypopnea per hour of sleep as recorded by a polysomnography. The polysomnography must be performed by a certified sleep laboratory, either in an overnight laboratory or home setting, and reviewed by a certified practitioner and BCBSAZ eligible provider. AHI may also be referred to as respiratory disturbance index (RDI).

Excessive Daytime Sleepiness:
A condition evidenced in adults by an Epworth Sleepiness Scale greater than 10, inappropriate daytime napping (e.g., during driving or eating), or sleepiness that interferes with daily activities and is not explained by other conditions. In a child, it may be expressed as learning difficulties or other daytime neurobehavioral problems.

Respiratory Disturbance Index (RDI):
The number of episodes of apnea and hypopnea per hour of sleep as recorded by a polysomnography. The polysomnography must be performed by a certified sleep laboratory, either in an overnight laboratory or home setting, and reviewed by a certified practitioner and BCBSAZ eligible provider. RDI may also be referred to as apneic-hypopneic index (AHI). RDI may be defined as the number of apneas, hypopneas and Respiratory Event Related Arousals (RERAs) per hour of sleep.
Description: (cont.)

Respiratory Event Related Arousals (RERAs):
Increased respiratory effort associated with multiple sleep fragmentations as measured by very short alpha electroencephalographic (EEG) arousals. The resistance to airflow is usually subtle and does not result in score-able apneic or hypopneic episodes. RERAs are scored if there is a sequence of breaths lasting at least 10 seconds characterized by increasing respiratory effort or flattening of the nasal pressure waveform leading to an arousal from sleep when the sequence of breaths does not meet criteria for apnea or hypopnea.

Polysomnography and Sleep Studies:
The simultaneous recording of physiological variables during sleep. Polysomnography (PSG) and sleep studies using portable sleep monitoring are established methods for diagnosing OSA. Other proposed methods of diagnosing OSA include limited channel home sleep monitors. The terms PSG and sleep studies are often used interchangeably.

There are 4 types of sleep monitoring procedures:

- **Type 1**: standard PSG performed in a healthcare facility with a technologist in attendance.
- **Type 2**: portable comprehensive PSG performed in the home and may be attended or unattended by a technologist. Uses a minimum of 7 channels.
- **Type 3**: modified portable sleep apnea testing (also referred to as cardiorespiratory sleep studies) performed in the home and unattended by a technologist. Uses a minimum of 4 channels.
- **Type 4**: portable continuous single or dual bioparameter recording performed in the home and unattended by a technologist. Limited channel home sleep monitor uses 1 or 2 channels. May be referred to as the Watch-PAT device.

Type 1 and type 2 PSG monitoring includes sleep staging to assess arousals from sleep. Monitoring components include EEG, submental electromyogram (EMG), electrooculogram (EOG), electrocardiography (ECG), respiratory airflow, respiratory effort at thorax and abdomen, airflow and pulse oximetry. Actigraphy, a technique to record and analyze body movement, may also be a component.

Sleep monitoring performed in the home using portable monitors include oxygen saturation, respiratory effort, respiratory airflow and heart rate. The majority of portable monitors use a minimum of 4 channels and do not record EEG. Home or portable monitoring implies unattended sleep studies, but may also be conducted with type 2 portable comprehensive PSG device which uses a minimum of 7 channels and may be attended or unattended.
Definitions:

Adult:
Individual 18 years of age or older.

Child:
Individual under 18 years of age.

Criteria:

For actigraphy performed as part of a home sleep study, see BCBSAZ Medical Coverage Guideline #O501, “Actigraphy”.

For implantable neurostimulator for the treatment of central sleep apnea, see BCBSAZ Medical Coverage Guideline #O968, “Implantable Neurostimulator for the Treatment of Central Sleep Apnea”.

For polysomnography for non-respiratory sleep disorders, see BCBSAZ Medical Coverage Guideline #O964, “Polysomnography for Non-Respiratory Sleep Disorders”.

For surgical treatment of snoring and obstructive sleep apnea syndrome, see BCBSAZ Medical Coverage Guideline #O781, “Surgical Treatment of Snoring and Obstructive Sleep Apnea Syndrome”.

Definitions, Clinically Significant:

Clinically Significant Upper Airway Resistance Syndrome (UARS):

- Upper airway resistance syndrome is considered clinically significant with documentation of greater than or equal to 10 episodes of electroencephalogram (EEG) arousal per hour of sleep in association with negative intrathoracic pressures.
Clinically Significant Obstructive Sleep Apnea Syndrome (OSAS):

- Obstructive sleep apnea syndrome is considered **clinically significant** with documentation of **ONE** of the following:

  1. Adult with documentation of **ONE** of the following:
     - Apneic-hypopneic index (AHI) or respiratory disturbance index (RDI) of 15 or more
     - AHI or RDI between 5 and 14 with documentation of **ANY** of the following associated symptoms:
       - Excessive daytime sleepiness
       - History of stroke
       - Hypertension
       - Impaired cognition
       - Insomnia
       - Ischemic heart disease
       - Mood disorders

  2. Child with documentation of **ONE** of the following:
     - Apneic-hypopneic index (AHI) respiratory disturbance index (RDI) of 5 or more
     - AHI or RDI between 1.5 and 4 with documentation of **ANY** of the following associated symptoms:
       - Behavioral problems
       - Excessive daytime sleepiness
       - Hyperactivity
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Criteria: (cont.)

Attended Sleep Studies:

- Attended (supervised) polysomnography sleep studies performed in a sleep laboratory is considered **medically necessary** in individuals with moderate/high pretest probability of OSA with documentation of **ONE** of the following: (cont.)
  - Habitual snoring, or gasping/choking episodes associated with awakenings
  - Observed apneas
  - Excessive daytime sleepiness evidenced by an Epworth Sleepiness Scale greater than 10, inappropriate daytime napping (e.g., during driving, conversation, or eating), or sleepiness that interferes with daily activities and is not explained by other conditions, (this may be expressed as learning difficulties or other daytime neurobehavioral problems in children)
  - Obesity, defined as a body mass index (BMI) greater than 35 kg/m² in adults or greater than the 90th percentile for the weight/height ratio in children
  - Unexplained hypertension
  - Craniofacial or upper airway soft tissue abnormalities, including adenotonsillar hypertrophy

AND documentation of **ANY** of the following:

- Age < 18
- Criteria for unattended home sleep study are not met
- A previous home study failed to establish the diagnosis of OSA in individual with a high pretest probability of OSA
- Previous home study was technically inadequate
- Failure of resolution of symptoms or recurrence of symptoms during treatment
- To re-evaluate diagnosis of OSAS and need for continued CPAP, e.g., if there is a significant change in weight or change in symptoms suggesting that CPAP should be retitrated or possibly discontinued
- When testing is done to rule out other sleep disorders such as central sleep apnea, parasomnias, or narcolepsy.
- Presence of a co-morbidity that might alter ventilation or decrease the accuracy of a home sleep study, including, but not limited to heart failure, neuromuscular disease, chronic pulmonary disease, or obesity hypoventilation syndrome.

- Attended (supervised) polysomnography performed in a sleep laboratory for all other indications not previously listed or if above criteria not met for individuals who are considered at low to moderate risk for OSAS or UARS are considered **not medically necessary** based upon insufficient evidence to support improvement of the net health outcome.
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Criteria: (cont.)

Unattended Sleep Studies:

- A single unattended (unsupervised) home sleep study with a minimum of 4 recording channels (including oxygen saturation, respiratory movements, airflow and EKG or heart rate) is considered **medically necessary** for adults with documentation of **ALL** of the following:

  1. At high risk for OSAS or UARS as documented by **ONE** of the following:
     - Body mass index greater than 35kg/m² in adults
     - Excessive daytime sleepiness evidenced by an Epworth Sleepiness Scale greater than 10, inappropriate daytime napping (e.g., during driving, conversation, or eating), or sleepiness that interferes with daily activities and is not explained by other conditions
     - Habitual snoring, or gasping/choking episodes associated with awakenings
     - Observed apneas

  2. No evidence by history and physical examination of a health condition that might alter ventilation or require alternative treatment to include, **but not limited to**, **ANY** of the following:
     - Central sleep apnea
     - Chronic pulmonary disease
     - Heart failure
     - Narcolepsy
     - Neuromuscular disorders with sleep–related symptoms
     - Obesity hypoventilation syndrome
     - Parasomnias

- Unattended sleep studies performed in the home setting for all other indications not previously listed or if above criteria not met for individuals who are considered at low to moderate risk for OSAS or UARS are considered **not medically necessary** based upon insufficient evidence to support improvement of the net health outcome.

- Unattended (unsupervised) sleep studies for children are considered **experimental or investigational** based upon insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Criteria: (cont.)

- A repeated attended (supervised) sleep study performed in a sleep laboratory is considered medically necessary with documentation of ONE of the following: mirrors MPRM
  1. To initiate and titrate continuous positive airway pressure (CPAP) in adults with clinically significant OSAS as documented by ONE of the following:
     - Apnea/hypopnea index (AHI) of at least 15 per hour
     - An AHI of at least 5 per hour in an individual with excessive daytime sleepiness or unexplained hypertension
     - To initiate and titrate CPAP in child with AHI greater than 1.5
     - Failure of resolution of symptoms or recurrence of symptoms during treatment
     - To assess efficacy of surgery (including adenotonsillectomy) or oral appliances/devices
     - To re-evaluate the diagnosis of OSAS or UARS and need to continue CPAP, e.g., if there is a significant change in weight or change in symptoms suggesting that CPAP should be retitrated or possibly discontinued.

- A repeated unattended (unsupervised) home sleep studies with a minimum of four recording channels (including oxygen saturation, respiratory movement, airflow and EKG/heart rate) is considered medically necessary for adults with documentation of ONE of the following:
  1. To assess efficacy of surgery or oral appliances/devices
  2. To re-evaluate the diagnosis of OSAS or UARS and need for continued CPAP, e.g., if there is a significant change in weight or change in symptoms suggesting that CPAP should be retitrated or possibly discontinued.

- Abbreviated daytime sleep study (PAP-NAP) as a supplement to standard sleep studies is considered experimental or investigational based upon:
  1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcomes, and
  2. Insufficient evidence to support improvement of the net health outcome, and
  3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Criteria: (cont.)

APAP:

➢ APAP for the treatment of **clinically significant** OSAS or **clinically significant** UARS in an individual who has failed a prior trial of CPAP or for whom APAP is found to be more effective in the sleep lab is considered **medically necessary**.

BiPAP:

➢ BiPAP for the treatment of **clinically significant** OSAS or **clinically significant** UARS in an individual who has failed a prior trial of CPAP or for whom BiPAP is found to be more effective in the sleep lab is considered **medically necessary**.

CPAP:

➢ CPAP for the treatment of **clinically significant** OSAS or **clinically significant** UARS in an adult is considered **medically necessary**.

➢ CPAP for the treatment of **clinically significant** OSAS or **clinically significant** UARS in a child is considered **medically necessary** with documentation of **ONE** of the following:

1. Child is not a surgical candidate for adenotonsillectomy
2. Child has had an inadequate response to adenotonsillectomy surgery

Multiple Sleep Latency Testing:

➢ Multiple sleep latency testing is considered **not medically necessary** in the diagnosis of OSAS or UARS except to exclude or confirm narcolepsy in the diagnostic workup of OSAS.
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME  (cont.)

Criteria: (cont.)

**Nasal Expiratory Positive Airway Pressure (EPAP) and Oral Pressure Therapy (OPT):**

- Nasal EPAP and OPT for the treatment of OSAS or snoring with the following devices is considered *experimental or investigational* based upon:
  1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcomes, and
  2. Insufficient evidence to support improvement of the net health outcome and
  3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.

These devices include, *but are not limited to*:

- Provent Therapy
- Winx System

- **Oral Appliances:**

  - Custom made oral appliance for the treatment of OSAS or UARS in an adult is considered *medically necessary* with documentation of ALL of the following:
    1. Polysomnography indicates five or more episodes of apnea per hour during sleep
    2. A trial with CPAP has failed or is contraindicated
    3. The device is prescribed by a treating physician, AND
    4. The device is custom-fitted by qualified dental personnel, AND
    5. There is absence of temporomandibular dysfunction or periodontal disease

  - Custom made oral appliance for the treatment of OSAS or UARS in a child is considered *experimental or investigational* based upon:
    1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcomes, and
    2. Insufficient evidence to support improvement of the net health outcome, and
    3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.

- Requests for more than ONE oral appliance within a 6 month period for the treatment of OSAS or UARS in an adult will be reviewed by the medical director(s) and/or dental coordinator.
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Criteria: (cont.)

- The following treatments for OSAS or UARS in an adult are considered *not medically necessary* based upon the procedure being inconsistent with the diagnosis submitted:
  1. More than one oral appliance within a 6 month period for the treatment of OSAS or UARS when polysomnography indicates less than five episodes of apnea per hour during sleep
  2. More than one oral appliance within a 6 month period for the treatment of OSAS or UARS that is of central nervous system origin
  3. Oral appliance for all other indications not previously listed

Oral Surgical Splints:

Requests for an oral surgical splint will be reviewed by the medical director(s) and/or dental coordinator.

- Oral surgical splint for the treatment of *clinically significant* OSAS or *clinically significant* UARS in an adult is considered *medically necessary* with documentation that the splint is fabricated by the surgeon and used in association with surgical treatment.

- Oral surgical splint for the treatment of OSAS or UARS in a child is considered *experimental or investigational* based upon:
  1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcomes, and
  2. Insufficient evidence to support improvement of the net health outcome, and
  3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.

- Oral surgical splints that are not custom made by a surgeon and not used postoperatively are considered *not medically necessary* based upon the procedure being inconsistent with the diagnosis submitted.

Palate and Mandible Expansion Devices:

- Palate and mandible expansion devices for the treatment of OSAS or UARS is considered *experimental or investigational* based upon:
  1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcomes, and
  2. Insufficient evidence to support improvement of the net health outcome, and
  3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Criteria: (cont.)

Treatment of Snoring:

- Treatment of snoring is considered *not medically necessary* (simple snoring in the absence of documented OSAS is not considered a medical condition). These treatments include, *but are not limited to*:
  
  1. APAP  
  2. CPAP  
  3. Nasal appliances  
  4. Oral appliances, i.e., mandibular advancing/positioning devices, palate or mandible expansion devices, tongue fixation devices, night guards, occlusal orthotic devices and occlusal guards/splints  
  5. Oral surgical splints

Resources:

Literature reviewed 08/01/17. We do not include marketing materials, poster boards and non-published literature in our review.

The BCBS Association Medical Policy Reference Manual (MPRM) policy is included in our guideline review. References cited in the MPRM policy are not duplicated on this guideline.

Resources prior to 06/19/13 may be requested from the BCBSAZ Medical Policy and Technology Research Department.


DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Non-Discrimination Statement:

Blue Cross Blue Shield of Arizona (BCBSAZ) complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability or sex. BCBSAZ provides appropriate free aids and services, such as qualified interpreters and written information in other formats, to people with disabilities to communicate effectively with us. BCBSAZ also provides free language services to people whose primary language is not English, such as qualified interpreters and information written in other languages. If you need these services, call (602) 864-4884 for Spanish and (877) 475-4799 for all other languages and other aids and services.

If you believe that BCBSAZ has failed to provide these services or discriminated in another way on the basis of race, color, national origin, age, disability or sex, you can file a grievance with: BCBSAZ's Civil Rights Coordinator, Attn: Civil Rights Coordinator, Blue Cross Blue Shield of Arizona, P.O. Box 13466, Phoenix, AZ 85002-3466, (602) 864-2288, TTY/TDD (602) 864-4823, crc@azblue.com. You can file a grievance in person or by mail or email. If you need help filing a grievance BCBSAZ's Civil Rights Coordinator is available to help you. You can also file a civil rights complaint with the U.S. Department of Health and Human Services, Office for Civil Rights electronically through the Office for Civil Rights Complaint Portal, available at https://ocrportal.hhs.gov/ocr/portal/lobby.jsf, or by mail or phone at: U.S. Department of Health and Human Services, 200 Independence Avenue SW., Room 509F, HHH Building, Washington, DC 20201, 1–800–368–1019, 800–537–7697 (TDD). Complaint forms are available at http://www.hhs.gov/ocr/office/file/index.html

Multi-Language Interpreter Services:

Spanish: Si usted, o alguien a quien usted está ayudando, tiene preguntas acerca de Blue Cross Blue Shield of Arizona, tiene derecho a obtener ayuda e información en su idioma sin costo alguno. Para hablar con un intérprete, llame al 602-864-4884.

Navajo: Díí kwe’é atah nilhiniígíí Blue Cross Blue Shield of Arizona haad ayt’éego bínah’dilhéído éí doodago Háída biiyal aniyeedilghí t’áadoo le’é yina’Idilhído béeheház’ánii hólgh díí t’áad hazaad’ehji háká a’doowolgo bée háráh doo báagh nilhí’dóó. Atá’ halné’iígil í’ojí bích’í’’ hodilíinií 877-475-4799.

Chinese: 如果您，或是您正在协助的对象，有关于插入项目的名称 Blue Cross Blue Shield of Arizona 方面的问题，您有权免费使用您的母语得到帮助和讯息。洽询一位翻译员，请拨电话，在此处插入数字 877-475-4799。

Vietnamese: Nếu quý vị, hay người mà quý vị đang giúp đỡ, có câu hỏi về Blue Cross Blue Shield of Arizona quý vị sẽ có quyền được giúp và có thể thông tin bằng ngôn ngữ của mình miễn phí. Để nói chuyện với một thợ ngạch viên, xin gọi 877-475-4799.

Arabic: إن كان لديك او أدى شخص تساعد اسئلة بخصوص Blue Cross Blue Shield of Arizona الضرورية بلغتك من دون اية تكلفة للتحدث مع مترجم اتصل ب 877-475-4799.
DIAGNOSIS AND MEDICAL MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME (cont.)

Multi-Language Interpreter Services: (cont.)

Tagalog: Kung ikal, o ang iyong tinutulungan, ay may mga katarungan tungkol sa Blue Cross Blue Shield of Arizona, may karapatan ka na makakuhang tulong at impormasyon sa iyong wika ng walang gastos. Upang makausap ang isang tagasalin, tumawag sa 877-475-4799.

Korean: 만약 귀하 또는 귀하가 도와 있는 어떤 사람이 Blue Cross Blue Shield of Arizona에 관해서 질문이 있다면 귀하는 그러한 도움과 정보를 귀하의 언어로 비용 부담없이 얻을 수 있는 권리가 있습니다. 그렇게 통역사와 얘기하기 위해서는 877-475-4799로 전화하십시오.

French: Si vous, ou quelqu’un que vous êtes en train d’aider, a des questions à propos de Blue Cross Blue Shield of Arizona, vous avez le droit d’obtenir de l’aide et l’information dans votre langue à aucun coût. Pour parler à un interprète, appelez 877-475-4799.

German: Falls Sie oder jemand, dem Sie helfen, Fragen zum Blue Cross Blue Shield of Arizona haben, haben Sie das Recht, kostenlose Hilfe und Informationen in Ihrer Sprache zu erhalten. Um mit einem Dolmetscher zu sprechen, rufen Sie bitte die Nummer 877-475-4799 an.

Russian: Если у вас или лица, которому вы помогаете, имеются вопросы по поводу Blue Cross Blue Shield of Arizona, то вы имеете право на бесплатное получение помощи и информации на вашем языке. Для разговора с переводчиком позвоните по телефону 877-475-4799.

Japanese: ご本人様、またはお客様の身の回りの方でも、Blue Cross Blue Shield of Arizonaについてご質問がございましたら、ご希望の言語でサポートを受けたり、情報を入手したりすることができます。料金はかかりません。通訳とお話される場合、877-475-4799までお電話ください。

Farsi:

آگر شما، یا کسی که شما به آن کمک می‌کنید، سوال در مورد اطلاعات به زبان خود را به طور رایگان دریافت نمایید. 877-475-4799 یک شماره حاضری است.

Assyrian:

ئەگر شوە لە دەکەیتەکە، یا شوە لە دەکەیتەکە سەبە بنگەچە بە ئەگر شوە لە دەکەیتەکە، 877-475-4799 کە لە زەمەنە بە شوە لە دەکەیتەکە، ئەگر شوە لە دەکەیتەکە.

Serbo-Croatian: Ukoiko Vi ili neko kome Vi pomažete ima pitanje o Blue Cross Blue Shield of Arizona, imate pravo da besplatno dobijete pomoć i informacije na Vašem jeziku. Da biste razgovarali sa prevodocem, nazovite 877-475-4799.

Thai: คุณสามารถขอความช่วยเหลือและข้อมูลภาษาไทยของคุณได้โดยไม่เสียเงิน ที่ 877-475-4799