# AASM & BRPT Updates

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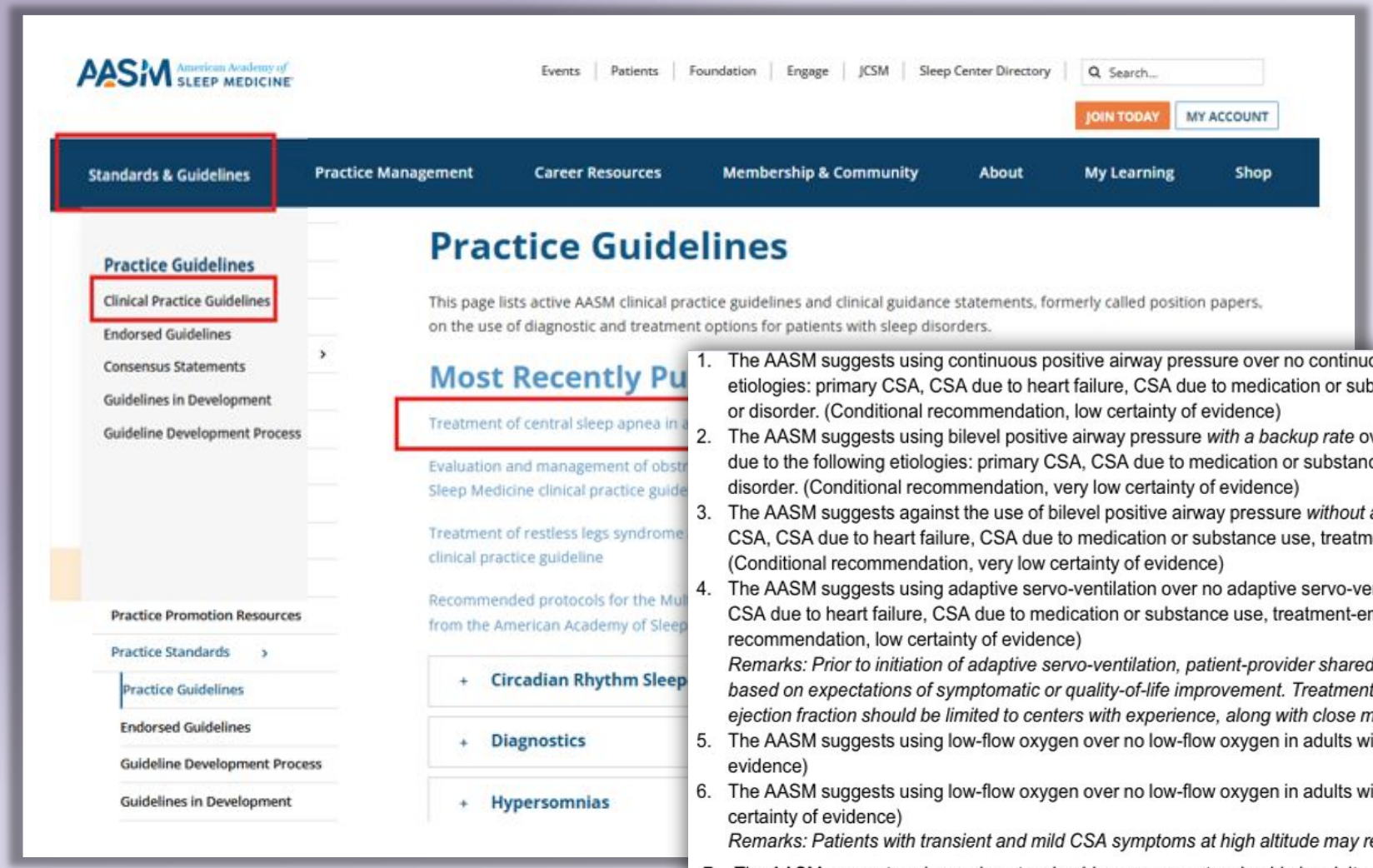
# AASM guidelines do more than define terms

- ✔ Provide clear pathways for decision making
- ✔ Standardize titration protocols and scoring criteria
- ✔ Consistency
- ✔ Help protect patients




1. The AASM suggests using continuous positive airway pressure over no continuous positive airway pressure in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, low certainty of evidence)
2. The AASM suggests using bilevel positive airway pressure *with a backup rate* over no bilevel positive airway pressure with a backup rate in adults with CSA due to the following etiologies: primary CSA, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, very low certainty of evidence)
3. The AASM suggests against the use of bilevel positive airway pressure *without a backup rate* in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, very low certainty of evidence)
4. The AASM suggests using adaptive servo-ventilation over no adaptive servo-ventilation in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, low certainty of evidence)
   *Remarks: Prior to initiation of adaptive servo-ventilation, patient-provider shared decision-making is recommended, and treatment decisions should be based on expectations of symptomatic or quality-of-life improvement. Treatment with adaptive servo-ventilation in patients with heart failure with reduced ejection fraction should be limited to centers with experience, along with close monitoring and follow-up.*
5. The AASM suggests using low-flow oxygen over no low-flow oxygen in adults with CSA due to heart failure. (Conditional recommendation, low certainty of evidence)
6. The AASM suggests using low-flow oxygen over no low-flow oxygen in adults with CSA due to high altitude. (Conditional recommendation, very low certainty of evidence)
   *Remarks: Patients with transient and mild CSA symptoms at high altitude may reasonably decline treatment with low-flow oxygen.*
7. The AASM suggests using oral acetazolamide over no acetazolamide in adults with CSA due to the following etiologies: primary CSA, CSA due to heart failure, CSA due to medication or substance use, treatment-emergent CSA, and CSA due to a medical condition or disorder. (Conditional recommendation, low certainty of evidence)
8. The AASM suggests using oral acetazolamide over no acetazolamide in adults with CSA due to high altitude. (Conditional recommendation, very low certainty of evidence)
9. The AASM suggests using transvenous phrenic nerve stimulation over no transvenous phrenic nerve stimulation in adults with CSA due to the following etiologies: primary CSA and CSA due to heart failure. (Conditional recommendation, very low certainty of evidence)
   *Remarks: Given that transvenous phrenic nerve stimulation requires an invasive procedure, is not universally accessible, and is associated with high costs, it may be more appropriate to consider other treatments first.*

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# AASM Updates

## Etiology & Classification

- Importance of distinguishing between primary and secondary CSA, high-altitude, etc.
- Emphasis on identifying underlying causes of CSA

## Modalities & Contraindications

- ASV over no ASV with specific etiologies conditional recommendations
- Look at the big picture, not momentary events
- BPAP without backup rate discouraged

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| Topic | Previous Guidance | 2025 Update |
|---|---|---|
| **ASV** | Broad caution after SERVE-HF; often avoided | Reintroduced across many etiologies. Remarks to incorporate shared decision-making and experienced centers with close monitoring (HF). |
| **CPAP** | Recommended | CPAP over no CPAP for primary CSA, CSA due to HF, medication or substance abuse, treatment-emergent, medical disorder or condition. |
| **Medication (Acetazolamide)** | Limited detail | Now recommended for multiple etiologies & high-altitude CSA. No recommendation for zolpidem and other hypnotics. |
| **Oxygen Therapy** | Used primarily for HF | Expanded to include high-altitude CSA. Low-flow over no flow in CSA due to HF |
| **BPAP** | Used broadly | BPAP *without* backup rate discouraged for most etiologies |
| **Outcome Metrics** | Focused on AHI | Emphasis on quality-of-life and functional improvement |
| **TPNS (transvenous phrenic nerve stimulation)** | - | Added as a new conditional therapy for CSA (primary & HF) |

# BRPT: Advanced Titration Certificate


- ✔ Growing need for complex titration knowledge
- ✔ Reduces titration variability
- ✔ Help keep practitioners current with industry standards
- ✔ Promote a higher level of clinical understanding
- ✔ Signify a deeper knowledge base for managing patients with complex care requirements.

# Advanced Titration Certificate

75 questions

Domain 1: Advanced Knowledge (20%)

Domain 2: Physiology and Clinical Presentation (30%)

Domain 3: Evaluation and Treatment (50%)

Advanced Titration Certificate Exam Blueprint

**Domain 1: Advanced Knowledge** **20%**

Task A: Respiration and ventilation
- I. Gas exchange
- II. Respiratory drive (i.e. neural control, ventilatory response)
- III. Breathing patterns (i.e. apneustic, ataxic)
- IV. Monitoring
  - a. End-tidal $CO_2$
  - b. Transcutaneous $CO_2$
  - c. Pulse oximetry
  - d. Arterial blood gas

**Domain 2: Pathophysiology and Clinical Presentation** **30%**

Task A: Sleep-related breathing disorders
- I. Obstructive Sleep Apnea Syndrome
  - a. Adult
  - b. Pediatric
  - c. Infant
- II. Central Sleep Apnea Syndrome
  - a. Primary central apnea
  - b. Cheyne Stokes breathing
  - c. High altitude periodic breathing
  - d. Treatment-emergent central sleep apnea
  - e. Medication or substance induced central sleep apnea
  - f. Apnea of prematurity
  - g. Central sleep apnea due to a medical condition or disorder (i.
    injury, neurodegenerative disorders)
- III. Hypoventilation Syndrome
  - a. Obesity Hypoventilation Syndrome
  - b. Congenital Central Hypoventilation Syndrome (CCHS)
  - c. Rapid-onset obesity with hypothalamic dysfunction, hypovent
    dysregulation (ROHHAD)
  - d. Medication or substance induced hypoventilation
  - e. Hypoventilation due to a medical condition or disorder (i.e. re
    neurological, neuromuscular disorders)

**Domain 3: Evaluation and Treatment**

Task A: PAP therapy
- I. CPAP/APAP
- II. Bilevel
- III. Adaptive servo-ventilation (ASV)
- IV. Volume-targeted ventilation

Advanced Titration Certificate Exam Blueprint

Task B: Oxygen therapy
- I. Supplemental oxygen delivery
- II. Indications and complications of oxygen administration
- III. Contraindications

Task C: Oral appliance therapy
- I. Oral appliance
- II. Combination PAP and dental therapy

Task D: Neurostimulator therapy
- I. Hypoglossal nerve stimulation
- II. Phrenic nerve stimulation
- III. Intraoral tongue stimulation

Task E: Other treatment options
- I. High-flow nasal cannula
- II. Surgical considerations (i.e. nasal procedures, pharyngeal procedur
- III. Behavioral therapy (i.e. cognitive behavioral therapy, positional)

## Approved References for the Advanced Titration Certificate Exam

| | Exam Developer Code Number | Title | Date | Author(s) |
|---|---|---|---|---|
| AASM & ERS | 012 | Clinical Guidelines for the Manual Titration of Positive Airway Pressure in Patients with Obstructive Sleep Apnea | 2008 | Kushida et al |
| | 040 | Best Clinical Practices for the Sleep Center Adjustment of Noninvasive Positive Pressure Ventilation (NPPV) in Stable Chronic Alveolar Hypoventilation Syndromes | 2010 | Berry et al |
| | 041 | Treatment of Central Sleep Apnea Syndromes in Adults-Practice Parameters with an Evidence-Based Literature Review and Meta-Analyses | 2012 | Aurora et al |
| | 043 | Definition, Discrimination, Diagnosis and Treatment of Central Breathing Disturbances During Sleep | 2017 | Randerathur et al |
| | 056 | ERS Statement on Obstructive Sleep Disordered Breathing in 1 to 23-month-old children | 2017 | Kaditis et al |
| TEXTS | 016 | Fundamentals of Sleep Technology, Third Edition | 2019 | Mattice et al |
| | 037 | Sleep Medicine Pearls, Third Edition | 2015 | Berry, Wagner |
| | 044 | Principles and Practice of Pediatric Sleep Medicine, Second Edition | 2014 | Sheldon et al |
| | 045 | Mask Interfaces for Noninvasive Mechanical Ventilation | 2022 | Esquinas, A.M. |
| | 046 | Upper Airway Stimulation in Obstructive Sleep Apnea | 2022 | Heiser and de Viries |
| ARTICLES | 050 | Central Sleep Apnea: Treatment | 2023 | Badr |
| | 052 | A Novel Intraoral Neuromuscular Stimulation Device for Treating Sleep-Disordered Breathing | 2020 | Kotecha et al |
| | 053 | Obesity Hypoventilation Syndrome | 2019 | Masa et al |
| | 054 | High-Flow Therapy: Physiological Effects & Clinical Applications | 2020 | Cruz et al |
| | 055 | High-flow Nasal Cannula Therapy for Pediatric Obstructive Sleep Apnea | 2022 | Du et al |
| | 059 | Central Hypoventilation Syndromes | 2014 | Ceilo, Marcus |

*Advanced Titration Certificate Exam*. Board of Registered Polysomnographic Technologists. (2025). https://www.brpt.org/advanced-titration-certificate-exam/

# Summary

1. The December 2025 AASM update modernizes CSA treatment by reintroducing ASV with safety precautions, expanding and clarifying therapeutic interventions. Furthermore, it emphasizes functional improvements, patient quality of life, and etiology-specific care rather than AHI-driven treatment.

2. The BRPT's Advanced Titration Certificate Exam stands as a meaningful way to recognize advanced competency and reinforce our commitment to inspire professional excellence and lifelong learning.