Providing diagnostic tools and therapies that are evidence-based is a key part of a successful sleep practice. This resource outlines the recommended process for evaluating and treating patients with obstructive sleep apnea.

**FIG. 1 EVALUATION**

1. **Routine Health Maintenance Exam (PCP)**
2. **Patient Complains of Symptoms (PCP/SS)**
3. **High Risk Screenings (PCP)**
4. **Sleep Study**
5. **Patient Education**
6. **Results Reviewed with Sleep Specialist**

- **Sleep Disorder Symptoms?**
  - Yes: **Sleep Evaluation (PCP/SS)**
  - No: Evaluate for other sleep disorders and co-morbidities

- **OSA Symptoms?**
  - Yes: **Sleep Study**
  - No: Evaluate for other disorders or co-morbidities

- **OSA?**
  - Yes: Patient Education
  - No: Discuss Treatment Options

- **CPAP Offered?**
  - Accept: CPAP (Fig. 2)
  - Decline: Alternative Therapies
    - Behavioral (Fig. 3)
    - Oral Appliances (Fig. 4)
    - Surgical (Fig. 5)
    - Adjunctive (Fig. 6)

**PCP** - primary care physician
**SS** - sleep specialist
FIG. 2 CPAP TREATMENT

Discuss Treatment Options

CPAP Offered?

Decline

Accept

Patient Education/Support
• Equipment and interface management
• Initiate compliance program

Initiate PAP Therapy
• Select PAP mode
• Determine pressure level
  - Split-night titration
  - Full night titration
  - APAP titration
• Set patient up on PAP

Follow-Up
• Schedule early support
• Access to disease management team:
  - educators, support groups, respiratory therapists, sleep technologists, nurses, sleep specialists, other specialists as needed to manage co-morbid conditions
• Monitor adherence

Evaluate Treatment Outcome

Symptoms Resolved?

Yes

Long-Term Follow-Up

No

Disease Management Team Evaluates Problem

Equipment/Interface
• Mask fit
• Humidification
• Ramp
• Repair
• Alternate PAP modality

Medical
• Nasal congestion

Persistent EDS
• Rule Out
  - Suboptimal objective adherence
  - Short sleep
  - Pressure leaks
  - Inadequate pressure
  - Other sleep disorder

PSG/MLST as Indicated

Intolerant/Unsuccessful

Problem Resolved?

Yes

No
FIG. 3 BEHAVIORAL TREATMENT

Patient Evaluation and Education

Candidate for Positional Therapy?
- Yes
  - Initiate Positional Therapy
- No
  - Initiate Behavioral Therapy

Evaluate Treatment Outcome

Symptoms Resolved?
- Yes
  - OSA Resolved on Sleep Study, if Indicated?
    - Yes
      - Long-Term Follow-Up
    - No
      - Back to Evaluate Treatment Outcome
- No
  - Back to Evaluate Treatment Outcome

PAP Therapy Discussed

Accept
- No
  - Declare

Alternative Therapies
- Oral Appliances (Fig. 4)
- Surgical (Fig. 5)
- Adjunctive (Fig. 6)

OSA Resolved on Sleep Study, if Indicated?

CPAP (Fig. 2)
**FIG. 4 ORAL APPLIANCE TREATMENT**

**Patient Education/Support**
- Equipment and interface management
- Allied dental health personnel
- Initiate compliance program

**Initiate OA Therapy**

**Follow-Up**
- Schedule early support
- Access to disease management team: educators, support groups, dental sleep specialist, sleep specialist, other specialists as needed to manage co-morbid conditions
- Monitor adherence

**Evaluate Treatment Outcome**

**Long-Term Follow-Up**

- Symptoms Resolved?
  - Yes: OSA Resolved on Sleep Study?
  - No: Evaluate Problems with OA

**Evaluate Problems with OA**

- Persistent EDS
- Equipment
- Oral Structure and Occlusion

**Problem Resolved?**
- Yes
- No: See Sleep Specialist

**PAP Therapy Discussed**
- Accept
- Decline

**CPAP (Fig. 2)**

**Alternative Therapies**
- Behavioral (Fig. 3)
- Surgical (Fig. 5)
- Adjunctive (Fig. 6)
FIG. 5 SURGICAL TREATMENT

Alternative Therapies
Behavioral (Fig. 3)
Oral Appliances (Fig. 4)
Adjunctive (Fig. 6)

Surgical Evaluation

Candidate for Surgery?

Select Appropriate Surgery*

Evaluate Treatment Outcome

Symptoms Resolved?

OSA Resolved on Sleep Study?

Long-Term Follow-Up

PAP Therapy Discussed

Accept

Decline

CPAP (Fig. 2)

OSA Resolved on Sleep Study?

Yes

No

Symptoms Resolved?

Yes

No

Select Appropriate Surgery*

Evaluate Treatment Outcome

PAP Therapy Discussed

Accept

Decline

CPAP (Fig. 2)
FIG. 6 ADJUNCTIVE TREATMENT

Patient Evaluation/Education

Select Appropriate Therapy

Oxygen
Medication
Bariatric Surgery

Evaluate Treatment Outcome

Symptoms Resolved?

No

OSA, Hypoxemia Resolved on Sleep Study, if Indicated?

Yes

Long-Term Follow-Up

No

Alternative Therapies
Behavioral (Fig. 3)
Oral Appliances (Fig. 4)
Surgical (Fig. 5)

END NOTES

1. Patient characteristics that indicate they are high risk for OSA include: obesity (BMI >35), congestive heart failure, atrial fibrillation, treatment refractory hypertension, type 2 diabetes, nocturnal dysrhythmias, stroke, pulmonary hypertension, member of a high-risk driving population, and preoperative for bariatric surgery.

2. Along with reviewing the patient’s past medical history and physical examinations, the following are questions about OSA that should be included in routine health maintenance: Is the patient obese? Is the patient retrognathic? Does the patient complain of daytime sleepiness? Does the patient snore? Does the patient have hypertension? The patient should also be assessed for OSA risk factors.

3. The following sleep disorder symptoms should be evaluated during a comprehensive sleep evaluation: witnessed apneas; snoring, gasping, or choking at night; excessive sleepiness not explained by other factors; nonrefreshing sleep; total sleep amount; sleep fragmentation/maintenance insomnia; nocturia; morning headaches; decreased concentration; memory loss; decreased libido; and irritability.

4. Sleep studies can include polysomnography (full night or split-night), home sleep apnea testing, and/or other sleep procedures.

5. Components of patient education programs for sleep medicine include: discussion of the patient’s sleep study and the severity of their disease; pathophysiology of OSA; explanation of the natural course of the disease and associated disorders; risk factor identification, explanation of exacerbating factors, and risk factor modification; genetic counseling when indicated; treatment options; what to expect from treatment; an outline of the patient’s role in treatment, addressing their concerns, and setting goals; consequences of untreated disease; drowsy driving/sleepiness counseling; and patient quality assessment and other feedback regarding evaluation.