

Market Segment

- Sleep Medicine

Medical Practice

- Clarksville Sleep Disorder Center; Clarksville, TN

ICD-9-cm & CPT Codes

ICD-9-cm Codes

- 327.23 Central Sleep Apnea
- 278.0 Obesity
- 401.1 Hypertension
- 780.5 Obstructive Sleep Apnea

CPT Codes

- 94690: Expired air analysis *
- 99211-99214: E/M

*Measurement can be billed separately or in conjunction with a patient office visit. Reimbursement cannot be guaranteed and is determined on an individual basis; most insurance carriers will cover the procedure if medical necessity is shown.

MedGem System

- MedGem (510k) indirect calorimeter
- MedGem Analyzer software
- Patient Education Materials

References

1. Young T, et al. *N Engl J Med* 1993;328:1230-1235.
2. Resta O, et al. *Int J Obes Relat Metab Disord* 2001;25:669-75.
3. Valencia-Flores M, et al. *Obes Res* 2000;8:262-9.
4. Diagnosis and treatment of obstructive sleep apnea. (ICSI); 2006.
5. Rauscher H, et al. *Thorax* 1993;48:529-33.
6. Redenius R, et al. *J Clin Sleep Med* 2008;4:205-9.

Company & Physician Overview

Clarksville Sleep Disorder Center (CSDC) is the only accredited (i.e., American Academy of Sleep Medicine) sleep center in Clarksville, TN. CSDC is a full-service comprehensive sleep medical center providing both diagnostic assessment and management of sleep disorder breathing, insomnia, narcolepsy, and restless leg syndrome. CSDC has 6 beds and performs approximately 100-120 polysomnographic studies per month. Jatin Kadakia, M.D., F.C.C.P. is the medical director and owner of CSDC.

Why Integrate MedGem at Clarksville Sleep Disorder Center?

Overweight individuals are at significant risk of obstructive sleep apnea syndrome (OSAS). Previous research suggest higher body mass index (BMI) scores increase the odds of obtaining OSAS (i.e. odds ratio: 4.17)¹. It is projected that 70% of OSAS patients are obese² and nearly all severely obese adults (BMI ≥ 35 kg/m2) have OSAS³. Due to these statistics, the national guidelines for diagnosis and treatment of obstructive sleep apnea indicate strong support for lifestyle modification, such as weight loss⁵.

CSDC was not treating obesity but was recommending overweight OSAS patients would benefit from weight loss in their interpretative reports. Although these patients were being advised to lose weight most were not successful in achieving weight loss. MedGem was able to provide an evidence-based, cost-effective, turn-key program for CSDC's overweight OSAS patients.

The MedGem program includes the MedGem hand-held indirect calorimeter that measures resting oxygen consumption to determine resting metabolic rate; MedGem Analyzer software program to develop a patient-centered treatment program; clinic algorithms, patient educational materials, and patient self-assessment questionnaires and provider interpretation guide.

Implementation Strategy

CSDC was provided a 2-hour live WebEx training program on the fundamentals of integrating MedGem in their center. In addition, the Medical Assistants (MA) reviewed the asynchronous online MedGem and MedGem Analyzer training program to learn how to successfully perform a MedGem measurement and develop an individualized treatment program.

New prospective patients were screened at the initial consult with Dr. Kadakia. Specifically, the patient's BMI was recorded, assessed if the patient had abnormal weight gain, and if the patient was experiencing daytime sleepiness. Patients that would benefit from weight reduction were referred to the MedGem program.

On the day of the MedGem procedure the patient completes a patient-history questionnaire and rests in the patient lobby for 10-15 minutes. The MA obtains the patient's physical measurements and conducts the MedGem diagnostic procedure. Following the 10 minute procedure, the MA enters the patient's history and vital signs into the MedGem Analyzer software program. The MA counsels the patient using the MedGem patient education materials on core topics related to energy balance, portion sizes, and understanding food labels. The patient then follows-up with Dr. Kadakia in 1-month to assess how the patient is progressing.

Patient & Financial Outcomes

CSDC is enrolling approximately 50 patients per month into the MedGem program and most patients are experiencing weight loss. In addition, the MedGem program is cost-effective. The MedGem procedure is remunerated by Medicare (est. \$45.00) and private payers. Moreover, all payers reimburse a level I office visit (99211: est. \$19.00) for the MA's time for performing the MedGem assessment and counseling the patient. The 1-month follow-up is billed accordingly with the appropriate E/M office visit code. CSDC views MedGem as a clinically beneficial and cost-effective program for their overweight OSAS patients.