Introduction

The treatment of choice for patients with obstructive sleep apnea–hypopnea syndrome (OSAS) is continuous positive airway pressure (CPAP). Use of CPAP treatment lowers mortality in these patients to the rate

OBJECTIVE: The aim of this study was to analyze the frequency of initiation of continuous positive airway pressure (CPAP) in patients with obstructive sleep apnea syndrome (OSAS) in a referral hospital in Mexico City serving mainly patients without public health insurance coverage and to assess their level of adherence.

PATIENTS AND METHODS: Patients with OSAS diagnosed by polysomnography or by simplified respiratory polygraphy for whom nasal CPAP was prescribed were enrolled in the study. Titration of CPAP was performed during polysomnography or with an automatic CPAP device. Compliance with treatment was assessed during a medical visit or by telephone interview.

RESULTS: A total of 304 patients were enrolled upon prescription of nasal CPAP; 169 (55.5%) either purchased a device or were provided with one by the social security system. The patients most seriously ill and who had public health insurance coverage were the ones who most often acquired a device. These patients took 1.5 months to obtain the equipment and had a compliance rate of 80% at a mean 34 months of follow-up. The respiratory events index was correlated with compliance, whereas excessive daytime sleepiness (Epworth scale score) and body mass index were predictors of therapeutic CPAP pressure.

CONCLUSIONS: Nearly half the patients who were prescribed CPAP did not acquire the device. Most of those who acquired a device adhered to the treatment. In Mexico access to procedures for diagnosing OSAS is limited and access to treatment is also restricted for patients who do not have public health insurance coverage.

Key words: Obstructive sleep apnea syndrome (OSAS). Apnea. Therapeutics. Sleep. Continuous positive airway pressure (CPAP). Compliance.

Uso de CPAP en adultos con síndrome de apneas obstructivas durante el sueño después de prescripción en un hospital público de referencia de la ciudad de México

OBJETIVO: El propósito del estudio ha sido analizar la frecuencia de inicio de tratamiento con presión positiva continua de la vía aérea (CPAP), y su cumplimiento en pacientes con síndrome de apneas obstructivas durante el sueño (SAOS), en un hospital de referencia de la Ciudad de México que atiende predominantemente a pacientes sin seguridad social.

PACIENTES y MÉTODOS: Se incluyó a pacientes con SAOS diagnosticados por polisomnografía o poligrafía respiratoria simplificada, a quienes se prescribió CPAP nasal. La titulación de ésta se realizó durante la polisomnografía o con un equipo automático de CPAP. El cumplimiento del tratamiento se evaluó en consulta o por entrevista telefónica.

RESULTADOS: Se incluyó a un total de 304 pacientes con prescripción de CPAP nasal. De ellos, 169 (55.5%) adquirieron el equipo (ya fuera por compra o gratuitamente a través de la seguridad social). La titulación de ésta se realizó durante la polisomnografía o con un equipo automático de CPAP. El cumplimiento del tratamiento se evaluó en consulta o por entrevista telefónica.

CONCLUSIONES: Se incluyó a un total de 304 pacientes con prescripción de CPAP nasal. De ellos, 169 (55.5%) adquirieron el equipo (ya fuera por compra o gratuitamente a través de la seguridad social). La titulación de ésta se realizó durante la polisomnografía o con un equipo automático de CPAP. El cumplimiento del tratamiento se evaluó en consulta o por entrevista telefónica.

Palabras clave: SAOS. Apnea. Tratamiento. Sueño. CPAP. Cumplimiento.
prevailing in the general population and improves quality of life. However, the main problem is poor long-term compliance. Reported compliance ranges from 40% to 90% in different studies, a variation that is partly attributable to the criteria used to define the concept. A point of discussion has been the uneven availability of health care services for OSAS patients, even in developed countries and those with public health care systems. Restricted access is largely due to the scarcity of sleep clinics and medical specialists and in a general way to the high level and cost of technology used to study sleep disorders.

Around 45% of the Mexican population does not have public health insurance coverage. These patients therefore seek treatment in designated public hospitals where it is not possible to provide a CPAP device after OSAS is diagnosed. Patients must then purchase their equipment or seek out a charity that will donate one. One Mexican study showed that the cost of health care for a patient with OSAS is around US$1300, including diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.

The aim of this study was to ascertain the percentage of patients with OSAS who undergo appropriate diagnostic and therapeutic procedures for sleep apnea after diagnosis by polysomnography and the purchase of equipment to deliver CPAP. This situation can mean that patients do not acquire a CPAP device and therefore do not obtain the benefits of treatment. If the inability to purchase a device is added to lack of compliance, there can develop a situation in which few patients receive the effective treatment that is available. It is important to note that patients with Mexican public health insurance coverage still have limited access to diagnostic and therapeutic procedures for sleep apnea. Some patients are charged for care. To date, most private insurance companies will not pay for CPAP treatment.
and July 2004. All were considered candidates for CPAP treatment because of excessive daytime sleepiness (Epworth score >10) or cardiovascular risk. Table 1 shows the characteristics of the population according to whether they did or did not acquire a CPAP device. Patients who acquired the equipment generally had a higher REI and a lower mean SaO<sub>2</sub> during sleep. Logistic regression analysis with device acquisition as the dependent variable showed that the factors that were significantly associated were REI (odds ratio, 1.01; 95% confidence interval, 1.005-1.020) and having public health insurance coverage (odds ratio, 1.01; 95% confidence interval, 1.005-1.020) as predictors of higher CPAP device acquisition. Although that association explained only 0.9% of the variance, the REI was the only factor that was significantly correlated with treatment compliance, although that correlation was not statistically significant.

The REI was the only factor that was significantly associated with CPAP device acquisition. Logistic regression analysis with device acquisition as the dependent variable showed that the factors that were significantly associated were REI (odds ratio, 1.01; 95% confidence interval, 1.005-1.020) and having public health insurance coverage (odds ratio, 1.01; 95% confidence interval, 1.005-1.020) as predictors of higher CPAP device acquisition. Although that association explained only 0.9% of the variance, the REI was the only factor that was significantly correlated with treatment compliance, although that correlation was not statistically significant.

The figure depicts time of CPAP equipment use from the moment of prescription according to severity of disease (Kaplan-Meier curve). The abrupt initial drop in the curve represents patients who never started treatment. After that drop, acceptable compliance can be observed throughout the follow-up period of 34 months. The shape of the compliance curve drawn for the REI cutoff of 50 as the definition of severe OSAS was similar to that of the curve for the REI cutoff of 30. Six months after prescription the equipment was still being used by 51%; after 12 months the rate of compliance was 47%; after 24 months it was 43%, and after 34 months 34%. Among the patients still using their device, 14 men (14.4%) and 11 women (25.5%) (P<.01) used it fewer than 4 hours each night and 5 nights each week. The REI was the only factor that was significantly correlated with treatment compliance, although that association explained only 0.9% of the variance. The variables that were significant predictors of therapeutic CPAP pressure (Table 2) in the multiple linear regression model were BMI for men and women, and those who had to pay for it (P=.49).

Of the 304 patients prescribed CPAP, 169 (55%) acquired the device either with or without payment. Given the right skewing of the data distribution, we calculated the median lag time until a CPAP device was acquired. The median delay was 1.5 months (interquartile range, 0.7-4 months).

In the group of 135 patients who did not acquire a device, 47 (34.8%) had severe OSAS (REI >30, Epworth score >10). We also observed that 38 patients had to pay for a CPAP device in spite of being covered by public health insurance (43% of the 65 who purchased a device). Thirty-two of the devices acquired (20.1%) were supplied by the public health insurance system (Instituto Mexicano del Seguro Social); 94 (59.12%) were purchased by the patient or family; 3 (1.89%) were supplied by the government employees’ health insurance plan (Seguridad Social al Servicio de los Trabajadores del Estado); 1 (0.63%) was supplied by a family-oriented social welfare group (Desarrollo Integral de la Familia); 8 (5.03%) came from public charities; and 21 (13.21%) were rented.

Table 1

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Obtained a Device (n=169)</th>
<th>Did Not Obtain a Device (n=135)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>69.4%</td>
<td>65.1%</td>
<td>.42</td>
</tr>
<tr>
<td>Age, y</td>
<td>51.2 (13.1)</td>
<td>50.6 (11.4)</td>
<td>.64</td>
</tr>
<tr>
<td>Body mass index, kg/m&lt;sup&gt;2&lt;/sup&gt;</td>
<td>36.7 (7.4)</td>
<td>35.8 (6.2)</td>
<td>.29</td>
</tr>
<tr>
<td>Neck circumference, cm</td>
<td>43.2 (4.1)</td>
<td>43.1 (3.6)</td>
<td>.98</td>
</tr>
<tr>
<td>Epworth Sleepiness Scale score</td>
<td>12.7 (6.8)</td>
<td>11.6 (6.2)</td>
<td>.15</td>
</tr>
<tr>
<td>Obese patients</td>
<td>83.1%</td>
<td>82.4%</td>
<td>1</td>
</tr>
<tr>
<td>Patients with public health insurance</td>
<td>41.4%</td>
<td>33.3%</td>
<td>.10</td>
</tr>
<tr>
<td>Years of schooling</td>
<td>9.2 (5.6)</td>
<td>8.3 (5.7)</td>
<td>.25</td>
</tr>
<tr>
<td>Respiratory events index</td>
<td>61.0 (35.5)</td>
<td>47.4 (32.1)</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Mean SaO&lt;sub&gt;2&lt;/sub&gt; at night</td>
<td>81.6 (10.2)</td>
<td>84.5 (8.8)</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>CPAP level titrated, cm H&lt;sub&gt;2&lt;/sub&gt;O</td>
<td>10.6 (2.5)</td>
<td>10.3 (2.3)</td>
<td>.44</td>
</tr>
<tr>
<td>Patients with severe OSAS</td>
<td>49.1%</td>
<td>34.8%</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

*Data are means (SD) unless otherwise indicated as percentages. SaO<sub>2</sub> indicates arterial oxygen saturation; OSAS, obstructive sleep apnea syndrome; Severe OSAS was defined by a respiratory events index >30 and an Epworth Sleepiness Scale score >10.
and Epworth daytime sleepiness score for women. Table 2 also shows the multiple linear regression models that incorporated mean REI and SaO2 data derived from the sleep studies.

Discussion

CPAP is currently the standard treatment for patients with moderate or severe OSAS.1 Use of this treatment has been shown to improve morbidity, mortality, and quality of life for OSAS patients as well as to reduce the excessive daytime sleepiness that is closely related to quality of life for OSAS patients as well as to reduce the excessive daytime sleepiness that is closely related to quality of life for OSAS patients as well as to reduce expenditure attributable to the disease.15,16 However, for those who did not obtain equipment. That is to say, excessive daytime sleepiness does not seem to motivate these patients to make the effort to obtain a device. There are undoubtedly unknown factors that are significantly related, as suggested by the observation that the coefficient of determination in the equation predicting CPAP therapy was 0.25 in the best of cases. Furthermore, obtaining a device does not assure long-term compliance. REI remained independently related to compliance in the Cox regression analysis, as reported by other authors,17 although the association was weak.

Wild et al18 described a predictive model for compliance in which clinical, polysomnographic, and psychological variables were considered. The model was only able to explain 24% of the variance in compliance, however. Those results confirm that our understanding of and control over compliance is limited in the setting of chronic treatments. Of concern is evidence from one study that 35% of patients who never acquired a CPAP device had severe OSAS and were at high risk of complications.19 It is precisely such patients who benefit most from treatment, as they tend to suffer excessive somnolence and have additional cardiovascular risk factors, such as smoking addiction, hypertension, or dyslipidemia.18,19,20 It is important for us to be able to offer consistently affordable treatment alternatives to this group of patients; therefore, after this study we began to call in all patients who were not in treatment.

Health is a constitutional right in Mexico, even though access to health care services is incomplete and highly restricted in the case of the sophisticated techniques required to treat OSAS. We have shown that there were patients who did not use the prescribed treatment even though they were privileged to gain access to the diagnostic procedure. Their reasons are worth considering. Behind the refusal of many to purchase a CPAP device is probably their wish that health care be a public benefit that the state should provide, or their conviction that it should

Table 2 shows the multiple linear regression models that incorporated mean REI and SaO2 data derived from the sleep studies.

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Intercept</th>
<th>BMI Coefficient</th>
<th>Epworth Score Coefficient</th>
<th>REI Coefficient</th>
<th>Nighttime SaO2 Coefficient</th>
<th>R²</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>Model 1†</td>
<td>6.39</td>
<td>0.12</td>
<td>0.01</td>
<td>-0.06</td>
<td>0.09</td>
<td>2.46</td>
</tr>
<tr>
<td></td>
<td>Model 2‡</td>
<td>11.9</td>
<td>0.09</td>
<td>0.1</td>
<td>-0.20</td>
<td>0.20</td>
<td>2.33</td>
</tr>
<tr>
<td>Women</td>
<td>Model 1†</td>
<td>5.7</td>
<td>0.09</td>
<td>0.1</td>
<td>0.16</td>
<td>0.25</td>
<td>2.05</td>
</tr>
<tr>
<td></td>
<td>Model 2‡</td>
<td>5.33</td>
<td>0.07</td>
<td>0.02</td>
<td>0.25</td>
<td>0.19</td>
<td>1.95</td>
</tr>
</tbody>
</table>

†Model including clinical variables. ‡Model including sleep study variables.

REI indicates respiratory events index; R², coefficient of determination; SaO2, nighttime arterial oxygen saturation.
be so. Furthermore, even under the Mexican public health care system, access to diagnosis and treatment of sleep apnea is limited, just as it is in developed countries, including those with public health services.22,23 This situation reflects the complexity of the present diagnostic and therapeutic method for sleep apnea and that is what should certainly change. Most patients in this study were diagnosed by polysomnography, a noteworthy observation that sharply contrasts with the economic difficulties many patients face in obtaining a CPAP device. It would therefore be sensible to wonder why resources spent carrying out polysomnography are not directed instead to the purchase of CPAP devices and the simplification of diagnosis through use of portable monitors. The situation is attributable at least partly to the fact that the sleep clinic that undertook the study is a national research and teaching facility engaged in studying sleep disorders. This clinic nevertheless has increasingly shifted its case load to simplified sleep studies.

Finally, it is clear that although CPAP is effective and safe, it is cumbersome, irritating and rather unnatural, and these attributes elicit rejection when first considered by any sensible person. It is also clear that compliance by our patients who managed to obtain a CPAP device was similar to that reported in developed countries: almost 80% of those patients were using the device 34 months after prescription.5 In an earlier study of 50 patients with severe OSAS, initial compliance with therapy was high immediately after diagnosis when the patients were provided with a CPAP device.21 Such initial compliance is a predictor of long-term use according to other authors.22,23 We therefore conclude that providing patients with a CPAP device would be useful for many of them, although it is also undoubtedly necessary to have alternative treatments available. This is particularly so in our practice setting, in the interest of patients and to prevent the wasting of scarce resources that happens when patients undergo a costly diagnostic process and are then left untreated.

As in diseases like asthma, long-term compliance is vitally important and a patient must feel supported by fast, easy access to someone specifically dedicated to solving problems and checking on CPAP use. This prevents and resolves certain problems that can culminate in abandonment of treatment. Thus, a CPAP clinic that work together with other medical and technical staff is needed so that patients will always be able to make contact with the sleep study facility. Resolving doubts and checking on patients, even if only by telephone, helps encourage adherence to treatment. In this way the health injury this disease can cause can be reduced considerably. Our CPAP clinic works well enough for patients who comply with CPAP treatment, but it can be said that the system fails to assure that diagnosed patients receive appropriate treatment.

BMI and REI were identified as predictors of the therapeutic level of CPAP. For women, the Epworth scale score was also a predictor. It may be that men are underestimating their somnolence or that women have a more accurate perception of disability with respect to this symptom. These findings contrast with a report by Baldwin et al24 that the Epworth scale score had greater sensitivity in identifying daytime somnolence in men than in women.

In the broadest sense, our findings from the practice setting of a Mexican national health facility should lead us to reflect on the use of orthodox methods for diagnosis and treating sleep apnea: even though these methods are effective for controlling apneas,25 they are costly and inconvenient and access to them is still scarce. Indeed, we need a more appropriate approach to reaching the majority of patients who do not yet have a diagnosis or treatment. Likewise, a major effort is required of the public health system if the impact of obesity and other risk factors for OSAS are to be reduced—to circumvent the need to treat serious and costly complications.

In summary, nearly half the patients without public health insurance coverage who were prescribed CPAP at a referral clinic never started therapy. On the other hand, most patients who obtained a device showed good compliance 3 years later. Patients with public health insurance coverage and those with severe disease were the ones who most often obtained a device, although there was a mean delay of 1.5 months before acquisition. Effective and affordable diagnostic and therapeutic methods—or preventive ones—are needed urgently for OSAS patients in developed countries but even more so in developing ones without universal health care coverage.

Acknowledgments

For their technical help, we thank Rocío Bahías Flores, Lourdes Galicia Polo, Julio Flores Piña, and Sandra Anaya Ramírez of the Respiratory and Sleep Disorders Clinic, a section of the Mexican national respiratory disease institute (Instituto Nacional de Enfermedades Respiratorias).

REFERENCES


