

Obstructive sleep apnoea

Introduction

Sleep disorders have attracted increasing attention in recent years due to their various and important clinical and public health impacts. Although there are several different sleep disorders, Obstructive Sleep Apnoea (OSA) is easily the most common. Studies examining the prevalence and severity of OSA have shown that it can affect up to 4% of adult males and 2% of adult females depending on severity.

What is sleep apnoea?

Apnoea is the cessation of breathing and in OSA this happens intermittently during sleep when the back of the throat narrows or closes completely. This can occur hundreds of times in one night and there may be an associated drop in oxygen which leads to brain arousals from sleep that are necessary to restart breathing. The overall pattern of sleep can be severely disrupted although the individual is not usually aware. Risk factors for sleep apnoea in adults include being overweight and in children, enlarged tonsils. When the individual also experiences daytime sleepiness it is known as obstructive sleep apnoea syndrome or OSAS. Daytime sleepiness can reduce performance and concentration. Studies have shown that adults with untreated OSA are up to six times more likely to be involved in road traffic accidents compared to normal subjects. In cross-sectional studies OSA is also associated with cardiovascular and cerebrovascular disease.

Treatment

OSA is recognisable and various treatment options can be offered. Individuals suspected of having OSA are usually referred to specialist clinics where these are available locally, and undergo a variety of investigations. Some clinics perform all investigations on an outpatient basis, including some in the individual's home, whilst other

clinics admit to hospital for investigation and treatment. The most effective treatment is continuous positive airway pressure (CPAP) therapy. Other treatment options include dental devices, weight loss where appropriate, conservative measures and surgery.

What routine data are available?

The majority of people with sleep apnoea are seen as outpatients and may have their subsequent investigations at home. Currently, information on outpatient attendances is not routinely collected. In some areas of the country a small number of patients may be admitted to hospital for further investigations, although in other areas it is rare to be admitted to hospital. Information on hospital admissions for sleep apnoea is available through the Hospital Episode System (HES). However it must be remembered that these data will underestimate the extent of the disorder and the number of investigation and treatment episodes. There are no routine data currently available on the prescribing or selling of CPAP machines.

Hospital admissions for sleep apnoea

Sleep disorders are coded as G47 under the International Classification of Diseases revision 10 (ICD-10) and sleep apnoea has its own code of G47.3. The hospital admission data presented here by LAIA are for admissions by calendar year, based on our own re-analysis of 100% HES data going back to 1996.

HES data in England are publicly available for the financial years 1998/99 to 2004/05 from the HES website www.hesonline.org.uk. Numbers by age and sex are only published for finished consultant episodes, rather than for admissions. However, our examination of the data show that 98% of all episodes for sleep disorders are the admitting episode.

Patterns by age and sex

In 2004 there were 14,263 admissions for sleep disorders in England, accounting for approximately 0.13% of all admissions in 2004. Of these, 13,589 (95%) were for sleep apnoea. Table 1 shows the admission rates by sex and age. Prevalence studies have shown that sleep apnoea is more common in men than women, and this is reflected in the hospital data: there were 10,097 sleep apnoea admissions in men (74%) and 3,492 in women. Nearly half the admissions were among those aged 45-64: 6,120 (45%).

Figure 1 shows the trends in admission rates by age for sleep apnoea since 1996. Rates increased in both children and adults. The reasons for this increase in admissions may be complex but it is likely to be due in part to increasing provision in the availability of investigation beds for sleep problems. Other reasons may include changes in:

- prevalence;
- disease severity or chronicity;
- information systems used for collecting the data;
- diagnosis and coding of the condition.

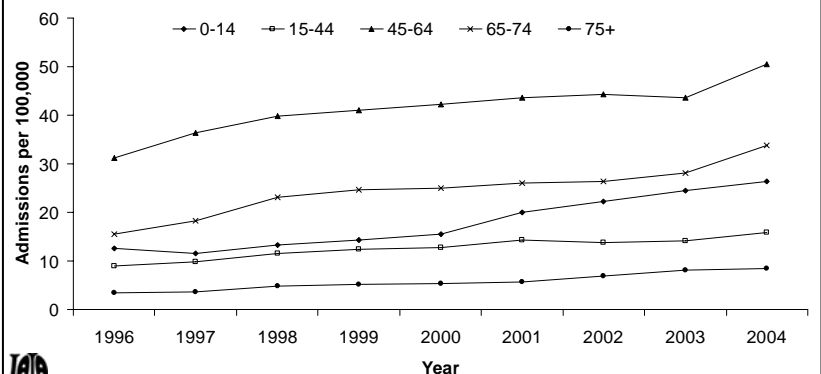
Table 1: Hospital admissions for sleep apnoea by age and sex, England 2004.

| | Number | Rate per 100,000 |
|-----------------------------------|--------|------------------|
| Total admissions for sleep apnoea | 13,589 | 27 |
| Males | 10,097 | 41 |
| Females | 3,492 | 14 |
| Age group | | |
| 0-14 | 2,406 | 26 |
| 15-44 | 3,329 | 16 |
| 45-64 | 6,120 | 51 |
| 65-74 | 1,413 | 34 |
| 75+ | 321 | 8 |



Source: Hospital Episode Statistics, DH

Figure 1: Trends in hospital admission rates for sleep apnoea, England 1996-2004.



Source: Hospital Episode Statistics, DH

Summary

- Obstructive sleep apnoea is a common and treatable sleep disorder.
- Most people are treated through outpatient clinics, including investigations at home.
- Routine data is limited to hospital admissions.
- Men are more commonly affected than women.