PRESCRIPTION SLEEP AID USE IN YOUNG ADULTS

October 2008

HIGHLIGHTS

- Sleep aid use nearly tripled from 1998 to 2006 among young adults ages 18 to 24 years old.
- Non-benzodiazepine hypnotics—such as Ambien CR® and Lunesta® were the most commonly used sleep aids by young adults.
- The duration of sleep aid use by young adults increased by more than 40 percent for non-benzodiazepine hypnotics, especially among new users.
- One in four young sleep aid users had an associated mental health diagnosis, but less than 10 percent visited a mental health provider before initiating sleep medications.

INTRODUCTION

According to the National Institutes of Health (NIH), approximately one-third of the general population complains of occasional sleep disruption, and approximately 10 percent report symptoms consistent with a diagnosis of chronic insomnia.[1] Although very little is known about the etiology, incidence, and duration of insomnia, the use of prescription sleep aids is rising, especially among young adults. Previous findings by researchers at the Healthcare business of Thomson Reuters indicate that there was a 50 percent overall increase in the use of prescription sleep medications from 1998 to 2006, with young adults more likely than older adults to use insomnia medications.[2]

The research brief expands on the previous findings and examines the use of prescription sleep medications by adults younger than the age of 45. This report describes trends in the use of sleep aids during an eight-year period from 1998 to 2006, including changes in the use of sleep aids by various groups of young adults, in the utilization of different classes of medications, and in the length of time young adults take prescription sleep medications. In addition, a cohort of new users of insomnia medications is evaluated to determine likely prescribers of these medications and associated diagnoses.

DATA AND METHODS

Data for this study come from the MarketScan® Research Databases from Thomson Reuters, specifically the Commercial Claims and Encounters database for people under age 65. The MarketScan databases include eligibility, medical, and drug claims for a defined population of beneficiaries. The number of covered lives varies from year to year. The results reported below were weighted to reflect the population of the United States with employer-sponsored health insurance as measured by the Agency for Healthcare Research and Quality's Medical Expenditure Panel Survey.

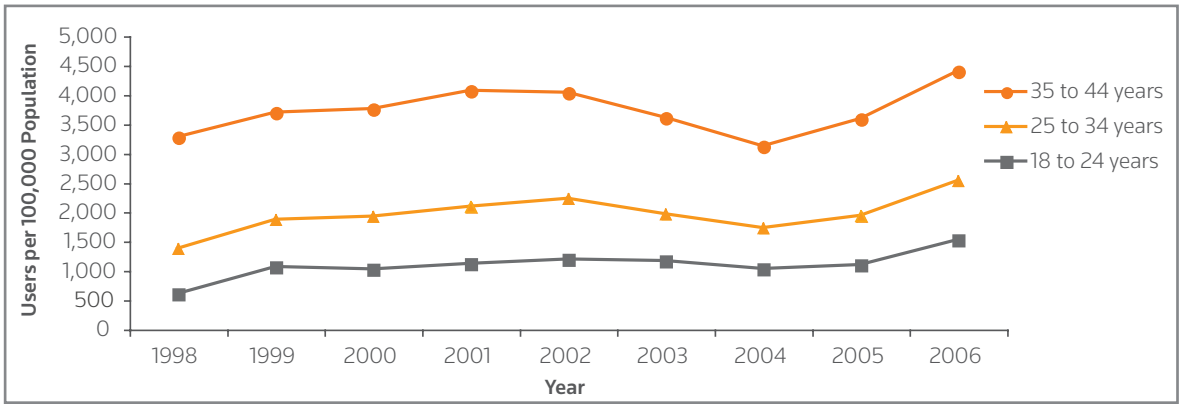
[1]National Institutes of Health (NIH) State of the Science Conference Statement on Manifestations and Management of Chronic Insomnia in Adults, June 13-15, 2005. Sleep, 28 (2005):1049-57.
[2]Sleep Aids: Study finds sharp increase in use of prescription insomnia medications by young adults. Thomson Reuters Research Brief (2008). (http://research.thomsonhealthcare.com/uploadedFiles/Research%20Brief%20--%20Sleep%20Med%20Trends%20--%20final[1].pdf).

OBSERVATIONS

Sleep aid use nearly tripled among those ages 18 to 24 years old

Between 1998 and 2006 there was a 50 percent increase in the use of prescription sleep aids by adults younger than 45 years old. While the rate of sleep aid use was highest in adults ages 35 to 44 years, the most dramatic spikes in use occurred in the youngest adults (ages 18 to 24 years), whose prevalence nearly tripled from 599 users per 100,000 in 1998 to 1,524 users per 100,000 in 2006. Use nearly doubled among adults 25 to 34 years old—from 1,372 to 2,528 users per 100,000. Comparatively, increases in the prevalence of sleep aid use among adults aged 35 to 44 were modest during this eight-year period—rising 30 percent from 3,278 to 4,399 users per 100,000.

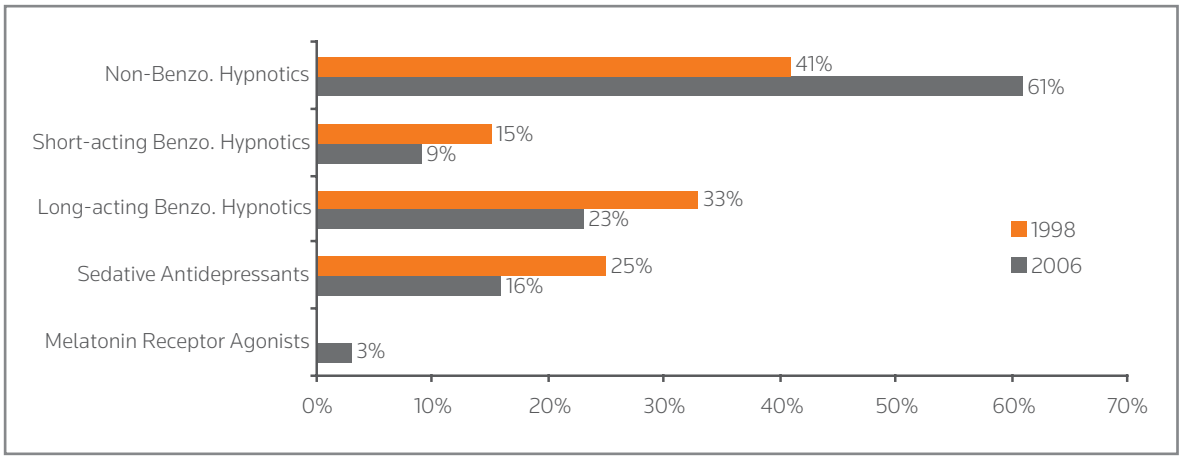
FIGURE 1 Prevalence of Sleep Aid Use by Age Group, 1998-2006



Non-benzodiazepine hypnotics were the most commonly used sleep aids by young adults

The classes of sleep aids included in this analysis were benzodiazepine hypnotics, non-benzodiazepine hypnotics, sedating antidepressants, and melatonin receptor agonists. In 2006, non-benzodiazepine hypnotics accounted for nearly two-thirds of all prescription sleep aids used by young adults—up from 41 percent in 1998. This class of medications includes brand name drugs such as Ambien CR (zolpidem tartrate extended-release) and Lunesta (eszopiclone). Melatonin receptor agonists, a new class of medications approved by the Federal Drug Administration in 2005, were prescribed to 3 percent of young adult sleep aid users in 2006. Both non-benzodiazepine hypnotics and melatonin receptor agonists are associated with fewer adverse effects and lower abuse liability than other categories of sleep medications.[1]

FIGURE 2 Among Sleep Aid Users Younger than 45 Years Old, Percentage Using Different Categories of Sleep Aids, 1998 and 2006



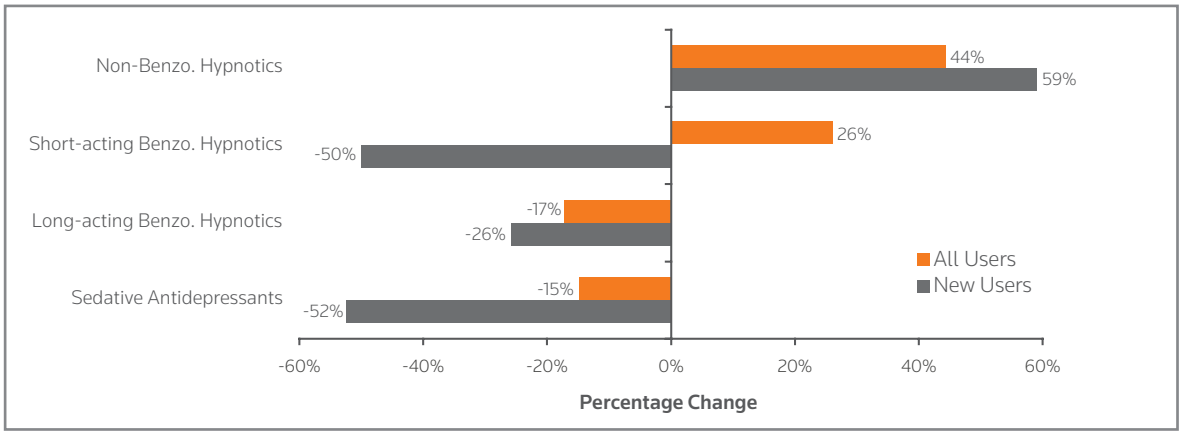
Note: Individuals may have used more than one drug type during the evaluation period; thus, the percentages shown above sum to more than 100%.

The average length of time young adults used non-benzodiazepine hypnotics increased, especially among new users

Until recently, non-benzodiazepine hypnotics were approved only for the short-term treatment of insomnia. However, recent studies have confirmed the long-term efficacy and safety profile of some drugs in this class for up to 12 months, and recently approved hypnotics in this category (e.g., brand-name drugs Ambien CR and Lunesta) no longer have an implied "short-term" indication.[3] As a result, the average length of time young adults used non-benzodiazepine hypnotics over the course of a year increased by more than 40 percent from 64 days in 1998 to 93 days in 2006. Though the usage time was significantly shorter for new users of this class of insomnia medications, the average duration of use grew by nearly 60 percent from 17 days in 1998 to 27 days in 2006 among patients with no prior sleep aid prescription in the previous three months.

In contrast, the average length of time young adults used benzodiazepine hypnotics and sedative antidepressants over the course of a year decreased during the eight-year time period.

FIGURE 3 Percent Change in Duration of Sleep Aid Use by Young Adults, by Drug Category, from 1998 to 2006

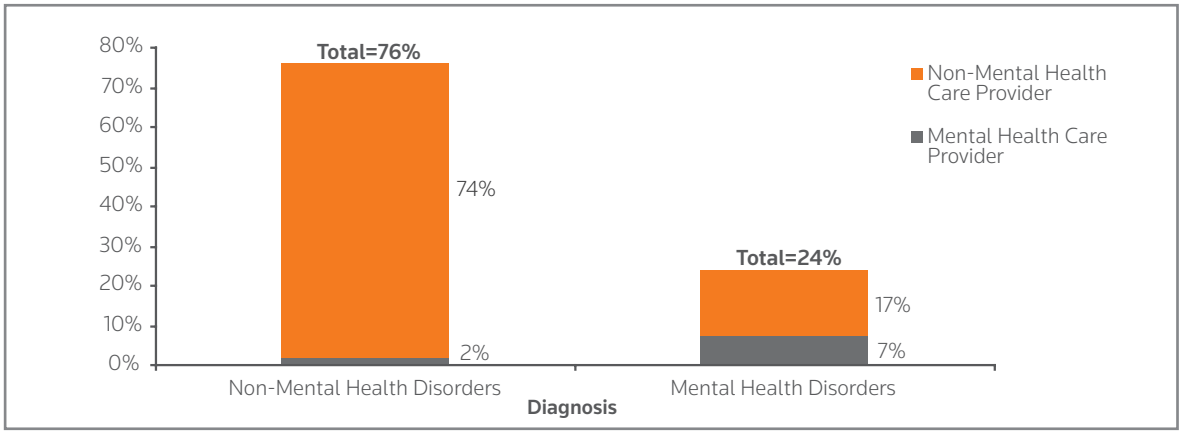


One in four young adult sleep aid users had an associated mental health diagnosis, but fewer than 10 percent visited a mental health provider before initiating sleep medications

Insomnia has long been associated with several psychiatric disorders, and recent research suggests that insomnia may be a risk factor for depression.[4,5] An evaluation of a cohort of sleep aid users younger than 45, with no previous history of sleep aid use, indicated that nearly 25 percent had a mental health diagnosis noted as the principal reason for a healthcare encounter in the month prior to sleep aid use. Yet, fewer than 10 percent of new users visited a mental health professional before initiating sleep medications, suggesting that sleep aids are most often prescribed by non-mental healthcare providers, regardless of coexisting psychiatric conditions. In fact, an analysis of preceding health encounters showed that prescriptions for insomnia medications likely originated from providers seen in the month prior to first-time sleep aid use, such as family-practice providers (41 percent), acute-care hospitals (27 percent), and doctors specializing in internal medicine (13 percent) and obstetrics/gynecology (11 percent). Moreover, in the month before first-time sleep aid use, general medical examinations/evaluations (12 percent), high blood pressure (11 percent), depression (11 percent), anxiety disorders (6 percent), back problems (6 percent), and menstrual disorders (6 percent) were most often noted as the principal reason for a health encounter by young adult users.

[3]Neubauer DN. The evolution and development of insomnia pharmacotherapies. *Journal of Clinical Sleep Medicine*, 3, no. 5 (2007): S11-15.
[4]Breslau N, Roth T, Rosenthal L, et al. Sleep disturbance and psychiatric disorders: A longitudinal epidemiologic study of young adults. *Biological Psychiatry*, 39(1996):411-418.
[5]Riemann D, Voderholzer U. Primary insomnia: A risk factor to develop depression. *Journal of Affective Disorders*, 76 (2003): 255-259.

FIGURE 4 Prevalence of Mental Health Diagnoses Made in the Month Prior to First Sleep Aid Use Among Adults Younger than 45 Years Old, by Provider Type



CONCLUSIONS

Insomnia, a condition traditionally associated with older adults, appears to be causing larger numbers of young adults to seek drug therapy, as indicated by the substantial increases in sleep aid use by individuals 18 to 34. While non-benzodiazepine hypnotics are clearly the sleep aid of choice for young adults, the increasing length of use of these drugs, particularly among new users, suggests that insomniacs are relying more heavily on new pharmacotherapies designed to address a condition that is often chronic, persistent, and complex. A number of psychiatric, cognitive, and conditioning factors are known to perpetuate this disorder. Yet, our findings suggest that many young adults turn to prescription sleep aids without first seeking care from health professionals trained in cognitive behavior therapies that often result in sustained, long-term improvement. More research is needed to determine the cost implications of the increasing prevalence of sleep aid use by the young. Moreover, the cost-benefits of pharmacotherapies, non-drug cognitive behavior therapies, and combination therapies in the long-term treatment of a complex condition impacting greater numbers of young adults should be evaluated.

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