ADVERTISEMENT

CONVERSATIONS WITH THE EXPERTS

Treatment of Insomnia in Older Patients Requires Clinical and Pharmacologic Considerations

APRIL 2021

Insomnia is characterized by patients experiencing difficulty falling asleep, staying asleep, or both, despite having adequate opportunity to sleep.[1] Approximately 30% of adults experience insomnia symptoms, and that prevalence is higher in older adults, at about 50%. Insomnia disorder, the formal diagnosis, affects about 6% to 10% of adults.[2,3]

Insomnia is associated with several medical comorbidities (e.g., chronic pain, restless leg syndrome, gastroesophageal reflux disease, respiratory issues) and psychiatric disorders (e.g., anxiety, depression),[2,4,5] and adults with insomnia also report greater incidence of motor vehicle-related accidents and falls.[6,7]

Health care resource utilization

A study of Medicare beneficiaries observed that those with insomnia have increased health care utilization compared with individuals without a sleep disorder. For the study, researchers used a 5% sample of Medicare administrative data from 2006 to 2013. They identified 151,668 beneficiaries with insomnia who were compared with a control cohort of 333,038 individuals without insomnia. Patients with untreated insomnia had higher 11-month rates of health care utilization across all point of service locations, with the highest rates seen for inpatient care (rate ratio, 1.61; 95% confidence interval, 1.59-1.64). Patients with insomnia had $63,607 higher all-cause costs related to their condition compared with controls, primarily driven by inpatient care ($60,900).[8]

A retrospective, observational study used data from a large Midwestern health plan to identify 7,647 adults with an insomnia diagnosis between 2003 and 2006. These patients were compared with a matched cohort of members without insomnia. The researchers found that an insomnia diagnosis was associated with higher costs in all health care categories at baseline and follow-up (see **FIGURE**).[9]

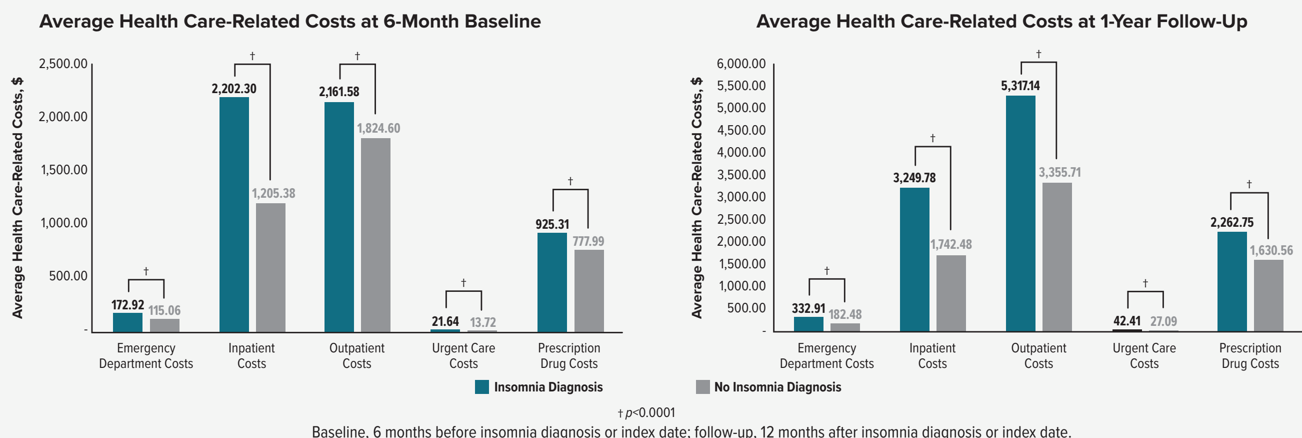
Treatment considerations and unmet needs

The most common treatment for insomnia is pharmacotherapy, with 2.5% of Americans taking prescription drugs to treat insomnia each year and about one in four continuing treatment for four months or longer.[9]

However, approximately 80% of patients taking medication for insomnia report experiencing negative effects the next day, including headache, grogginess, difficulty remembering, and difficulty concentrating.[10] Insomnia medications are also associated with adverse events that can include worsening of depression, dizziness, memory impairment, physical dependence, drowsiness, and more.[11] The American Geriatrics Society Beers Criteria recommend against the use of certain drug classes, including benzodiazepines, non-benzodiazepines, and benzodiazepine receptor agonist hypnotics (i.e., "Z-drugs"), for the treatment of older adults with insomnia due to the increased risk of side effects such as delirium, falls, fracture, increased hospitalizations, and more.[12]

Thus, insomnia treatment for patients aged older than 65 years may require additional clinical considerations such as comorbidities.

FIGURE. Health Care Costs Are Higher in Adults With Insomnia Compared to Adults Without Insomnia[9]



† p<0.0001
Baseline, 6 months before insomnia diagnosis or index date; follow-up, 12 months after insomnia diagnosis or index date.

This article was sponsored by Eisai Inc.

Insights from the field

Mansoor Ahmed, MD, founder and medical director of the Cleveland Sleep and Research Center in Ohio, and **Michael Abdo, DPh, MBA,** director of pharmacy at CommunityCare in Tulsa, Oklahoma, discussed unmet treatment needs for insomnia, patient and payer considerations for disease management, and more.

Disclaimer: The views of the speakers are expert opinions and not necessarily those of Eisai.

How do you perceive the disease burden and unmet needs in older patients with insomnia?

Dr. Ahmed: Insomnia is ubiquitous, with symptoms affecting approximately one-third of the general population, with incidence and severity increasing across age groups. Insomnia symptoms remain one of the most common sleep complaints in the elderly population. As many as 50% of older adults complain about insomnia symptoms, describing them as having difficulty falling asleep or staying sleep, as well as early morning awakening.

Insomnia in the elderly is a multifactorial in nature, including changes in lifestyle, such as reduced physical activity and physiological changes in circadian sleep-wake mechanisms, resulting in diminished deep sleep and increased arousability.

The impact of poor sleep related to insomnia goes far beyond feeling tired. Insomnia has been associated with negative effects on cognitive function, mood, and mortality risk. If left untreated, insomnia is associated with significant morbidity. Several studies have documented an increased risk of depression in older patients. Long-term insomnia symptoms are also associated with a greater risk of developing depression, cognitive impairment, and memory problems, including Alzheimer's disease.

In addition to mood and cognitive disturbances, loss of sleep is also associated with an increased risk of hypertension, myocardial infarction, and perhaps stroke. Insomnia in the older population is also associated with an increased risk of falls for those using non-prescription and prescription medications for insomnia.

Insomnia and related problems also impose a financial burden on health care economics related to an increase in direct and indirect health care cost, including an increased utilization of health care services.

Despite the significant negative consequences of insomnia on health and health economics, the majority of sufferers often remain undiagnosed and untreated. Poor reimbursement for insomnia services is partly to blame, but a lack of adequate awareness among physicians regarding importance of sleep and sleep disorders is also a substantial contributing factor. Patients are also hesitant to discuss sleep problems with their physicians, assuming that "another pill" will be the only option for their sleep problem. A large majority of the patients with insomnia who are referred to a sleep specialist have already tried some sleep medications without success.

Finally, the burden of insomnia is exacerbated by the unavailability of new treatments through the tiered system of reimbursement by insurance companies, such that patients must fail on older, less expensive, and often generic compounds before reimbursement is available for newer treatments.

In summary, despite the fact that chronic insomnia is prevalent and has significant negative consequences on physical and mental health, the majority of the insomnia sufferers remains undiagnosed and undertreated.

Dr. Abdo: Insomnia is a common medical complaint in the older population. Difficulty falling asleep and achieving adequate time asleep increase with age. The elderly population often has comorbidities that can contribute to treatment difficulties due to drug-drug and disease state interactions. I think understanding the etiology of insomnia should be a priority. Patients may benefit from cognitive behavioral therapy (CBT), counseling, or identification of a medical condition, such as depression or psychiatric disorders, which may be contributing to the insomnia. Medication should not be the first line of treatment when treating insomnia patients.

Can you describe the treatment approach for older patients with insomnia? What are the clinical considerations you take into account when choosing a sleep therapy for an older patient?

Dr. Ahmed: Chronic insomnia is not a homogenous disorder, and it is often an accompanying symptom of a variety of comorbid conditions that are increasingly prevalent in the elderly, including depression, anxiety, and pain conditions. Such chronic insomnia should not be treated with a one-size-fits-all approach. Further, little attention is paid to differences in medications such as half-life, mechanism of action, or long-term management plans for optimal focus on unique aspects of each patient's underlying complaint. Furthermore, given the documented history of adverse effects of commonly used hypnotics on neurocognitive functions and increased risk of falls in the elderly, hypnotics should be used judiciously and on a short-term basis. Better understanding of sleep-wake abnormalities in insomnia and recent discovery of new insomnia compounds that work through the wake mechanism (versus sleep mechanism) now offer additional treatment options for chronic insomnia treatment in the elderly. Lastly, lifestyle changes such as regular physical activity and neurocognitive behavior therapy should remain the cornerstone of long-term management of chronic insomnia in the elderly.

What are some of the most common comorbidities you see in older patients with insomnia? Do these comorbidities impact or complicate treatment choices or management?

Dr. Ahmed: Comorbid conditions are observed with increasing frequency in elderly patients with chronic insomnia. The presence of these conditions increases the risk for poor sleep interruptions and chronic insomnia. Some of these conditions include depression, sleep apnea, chronic obstructive pulmonary disease (COPD), cardiovascular diseases, and pain conditions. Furthermore, many of these patients are also on multiple medications that are known

to have undesirable side effects on sleep. A complete understanding of these medications and underlying comorbid conditions should be established before choosing the right insomnia therapeutic intervention. Given this background, one should avoid using hypnotic agents that are known to have depressant effects on respiratory drive to treat patients with insomnia who have underlying comorbid COPD and sleep apnea. Lastly, many commonly used hypnotics are also associated with a higher risk of falls in elderly patients with chronic insomnia. The discovery of orexin as part of the waking system and the efficacy of dual orexin receptor blocking agents in promoting sleep is possibly a treatment option for the elderly with sleep difficulty.

How are clinical guidelines leveraged for decision-making?

Dr. Ahmed: The American Academy of Sleep Medicine (AASM) has established clinical guidelines based on well conducted clinical trials to diagnose and treat patients with a wide range of sleep and wake disorders. The recommendations provide the best practices in identifying and managing each sleep or wakefulness disorder. Guidelines provide clarity so that insomnia is not treated with a one-size-fits-all approach but is rather more symptom specific than simply trial and error. As stated by the AASM, "The purpose of the clinical guideline is to provide clinicians with a practical framework for the assessment and disease management of chronic adult insomnia, using existing evidence-based insomnia practice parameters where available, and consensus-based recommendations to bridge areas where such parameters do not exist." However, patients with insomnia may also have their own unique set of problems, including comorbid medical conditions associated with insomnia, socioenvironmental factors, and varying levels of physical activity.

Dr. Abdo: The AASM guidelines and Beers Criteria should be used when evaluating treatment options in the elderly. The AASM guidelines are based on literature on individual drugs commonly used to treat insomnia and were last updated in 2017. These guidelines focus on improving sleep quality, sleep quantity, and insomnia related to daytime impairment. These guidelines should be utilized when optimizing insomnia treatments in the patient.

The Beers Criteria, last updated in 2019, publishes drugs that should be avoided in the elderly population for treating insomnia, such as benzodiazepines, cannabinoids, and antipsychotics. These drugs interact with many medications and can exacerbate many medical conditions commonly seen in the elderly population. Certain hypnotic classes, including benzodiazepines and "Z-drugs," indicated for insomnia should be avoided, per the Beers Criteria. The Beers Criteria should be used when evaluating insomnia treatment options in the elderly.

The pharmacy and therapeutics committee should evaluate options and review clinical studies and literature to determine if newer agents are appropriate additions to the formulary.

What additional resources do you consult for clinical treatment guidance?

Dr. Ahmed: Published clinical randomized, controlled trials serve as the basis for the use of any pharmacologic agent in managing clinical symptoms or conditions. Polysomnography, though not required for diagnosis or management of insomnia, can provide insight into patients' sleep difficulty beyond a simple history. Objective evidence can be simply obtained in a sleep laboratory or at home with the patient sleeping in their own bed. Findings such as non-restorative or alpha-delta sleep require objective support to provide clearer treatment direction than a simple history alone. Querying the patient's bed partner can provide additional information regarding specific sleep symptoms. Subjective reports from patients in well controlled clinical trials provide important evidence regarding sleep efficacy and side effects.

Dr. Abdo: UpToDate is one that I like to use. It's an excellent resource that can be used when evaluating insomnia treatment options. It offers clinical information on diagnoses and information on treating specific groups such as elderly patients, individuals with anxiety disorders, and patients receiving palliative care. I think UpToDate is a great resource for accessing the latest clinical information on treating insomnia.

How do patient-reported outcomes influence treatment selection?

Dr. Ahmed: Whereas the objective data from a clinical trial may demonstrate improvement in sleep induction or wakefulness, subjective data provides experiential results along with side effects necessary for patients and clinicians to utilize in selecting best practices for managing sleep difficulties; reported outcomes can include potential side effects, subjective improvement in quality of sleep, and improvement in daytime functionality.

From a payer perspective, what are the benefits and challenges associated with treatment options for insomnia?

Dr. Abdo: I think the benefits of successfully treating insomnia in the elderly include a better quality of life, less potential for falls, and improved cognitive ability. The immune system functions much better with increased sleep, so we have fewer sick days. One of the contributors to falls is daytime dysfunction, which can be caused by a lack of proper sleep. Daytime dysfunction can lead to daytime sleepiness, fatigue, and a lack of energy. Cognitive ability often diminishes without proper sleep.

One of the challenges of treating insomnia is encouraging patients to seek and try non-drug forms of treatment as a first line. Individuals often begin by self-treating with over-the-counter medications such as melatonin or antihistamines, and these can interact with any prescription that a patient is on. Medication should be reserved for patients that have failed counseling or CBT.

How do you consider member/patient preferences when reviewing optimal treatment options?

Dr. Abdo: Optimal treatment options for patients should be safe. They should be effective and affordable. The safety profile of the medication that's being considered should be weighed against the patient's medical history and current drug regimen. The efficacy of the insomnia agent being considered should be evaluated for appropriateness in the patient. Many low-cost generic options are available that may or may not be appropriate for patient populations.

How do adverse events or side effects of insomnia agents in older patients influence decision-making?

Dr. Ahmed: Given the increased risk of falls in the elderly, associated complications, and increased health care costs, identifying agents that minimize or do not add to that risk is important. The use of wake-blocking agents may provide an ability to improve sleep maintenance. Once a complete understanding of all underlying and comorbid conditions is established, relief may be provided with the use of an orexin-blocking agent.

When reviewing agents for treating the older population, what are the safety considerations taken?

Dr. Abdo: The drug's safety, efficacy, and adverse effect profile should be taken into consideration. I think the elderly are often on many medications and have different comorbidities. These should all be weighed in the decision.

Is affordability a factor when selecting a prescription treatment for the older population?

Dr. Ahmed: Affordability is a great concern for patients and physicians. Insurance companies provide greater support for using older compounds with generic alternatives. To date, none of the orexin antagonists have generic alternatives commercially available. Often, patients must fail on generic alternatives before permission is provided to use a newer compound. Because of this, patients may feel obligated to not utilize the latest treatment alternatives available. A strong appreciation of the clinical data by the prescribing physician is critical for physicians in advocating for their patients with third-party payers. Equally important is the need to educate insurance companies about the availability, safety, and efficacy of new insomnia compounds.

Is patient affordability a factor when selecting a prescription treatment in the Medicare population?

Dr. Abdo: It's definitely a factor. Medicare members are faced with higher copays and premiums and higher out-of-pocket costs, particularly as the Medicare coverage gap is reached. I think these are the consequences of the rising health care costs that Americans face each year. Identifying appropriate insomnia agents and making them affordable in this population is very important and imperative.

What are the costs associated with patient management and the treatment options for insomnia?

Dr. Abdo: From the payer point of view, the cost of not treating patients appropriately for insomnia leads to higher health care costs. The data clearly demonstrate that not treating insomnia contributes to increased falls, impaired driving, and a reduced quality of life. A periodic review of the literature that is available for insomnia should take place to ensure the most appropriate agents are available for patients.

Are cost offsets or the total cost of insomnia treatment considered when selecting treatment options?

Dr. Abdo: Appropriate treatment options may lead to a decrease in overall health care costs through improvements to insomnia and less daytime sleepiness.

What is the long-term goal in the management of insomnia for the older population?

Dr. Ahmed: Chronic insomnia requires long-term management. The goals of insomnia management plans are to prevent relapse of insomnia symptoms, maintain quality of sleep, and improve daytime functioning on a long-term basis. This should be achieved through a combination of behavior therapies and judicious use of hypnotics after evaluating the efficacy and safety.

Dr. Abdo: The long-term goals in managing insomnia according to the AASM guidelines are to improve sleep quality and daytime-related impairments. If you review the literature to minimize adverse effects and maximize the benefits, proper sleep is more likely to be achieved. Availability of the best options at an affordable price is the right thing to do for the patients.

Would you consider ensuring that all options are available, especially to the older population?

Dr. Abdo: Definitely. This is something that the pharmacy and therapeutics committee should review. A variety of agents should be available to make sure we're treating the patient properly based on comorbidities and drug-drug interactions. Having a wider array of medication available to them so that the proper agent can be selected is certainly important.

Some health plans offer CBT, and members should consult with their health care plans to determine if that might be an option.

Dr. Ahmed is the founder and medical director of the Cleveland Sleep and Research Center in Ohio. He previously served on the faculty of medicine and international health at Case Western Reserve University in Cleveland, Ohio. He is also the founding director of the Cleveland Ibn Sina Free Clinic, which is among the first subspecialty programs that also offers much needed services in areas of sleep medicine and mental health.

Dr. Abdo is the director of pharmacy at CommunityCare in Tulsa, Oklahoma. CommunityCare is a regional-based health insurance company that has commercial, Medicare, and prescription drug plan lines of business. Dr. Abdo has been practicing pharmacy for more than 25 years. In addition to managed care, he has retail, hospital, and long-term care pharmacy experience.

The speakers received compensation for their contribution to this initiative.

REFERENCES

1. Institute of Medicine. Sleep disorders and sleep deprivation: an unmet public health problem. Washington, DC: National Academies Press; 2006.
2. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Washington, DC: American Psychiatric Association; 2013.
3. Crowley K. Sleep and sleep disorders in older adults. *Neuropsychol Rev*. 2011;21(1):41-53.
4. Kaur H, Bollu PC. Chronic insomnia. [Updated 2019 Feb 19].
5. Ohayon MM. Epidemiology of insomnia: what we know and what we still need to learn. *Sleep Med Rev*. 2002;6(2):97-111.
6. Erickson EA, Stahlman S, McNellis MG. Insomnia and motor vehicle accident-related injuries, active component, U.S. Armed Forces, 2007-2016. *MSMR*. 2017;24(12):2-11.
7. Chen TY, Lee S, Buxton OM. A greater extent of insomnia symptoms and physician-recommended sleep medication use predict fall risk in community-dwelling older adults. *Sleep*. 2017;40(11).
8. Wickwire EM, Tom SE, Scharf SM, et al. Untreated insomnia increases all-cause health care utilization and costs among Medicare beneficiaries. *Sleep*. 2019;42(4):zsz007.
9. Anderson LH, Whitebird RR, Schultz J, et al. Healthcare utilization and costs in persons with insomnia in a managed care population. *Am J Manag Care*. 2014;20(5):e157-165.
10. Fitzgerald T, Vietri J. Residual effects of sleep medications are commonly reported and associated with impaired patient-reported outcomes among insomnia patients in the United States. *Sleep Disord*. 2015;2015:607148.
11. Equihua AC, De la herrán-Arita AK, Drucker-colin R. Orexin receptor antagonists as therapeutic agents for insomnia. *Front Pharmacol*. 2013;4:163.
12. 2019 American Geriatrics Society Beers Criteria® Update Expert Panel. *J Am Geriatr Soc*. 2019;67(4):674-694.

AMC MEDIAGROUP

Published by AMC Media Group, 630 Madison Ave, 2nd Floor, Manalapan, NJ 07726

©2021 Eisai Inc. All rights reserved. US3283 01/21.

Distributed and marketed by Eisai Inc. Woodcliff Lake, NJ 07677