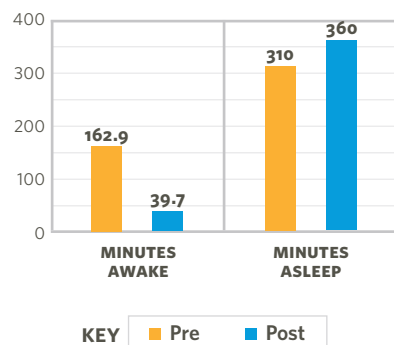


## Case study

Diane\* had been retired for three years and was generally healthy when a HealthPartners sleep medicine specialist referred her to the HealthPartners Sleep Health Center to treat her chronic insomnia. She had been a light sleeper her entire life, but she began having chronic insomnia about four years earlier after injuring her shoulder. She was able to fall asleep, but tests revealed that she was waking more than eight times a night. Altogether, these episodes kept her awake for more than two and a half hours on many nights.

She had tried numerous over-the-counter medications, and then a common prescription sleep medication, but none of them helped. The insomnia specialist developed a personalized treatment plan which Diane faithfully followed. Within eight weeks, her sleep efficiency (the percent of time she was asleep while in bed) had increased from 66 percent to more than 90 percent, and she was waking less than four times a night and was sleeping 50 minutes longer. During the day she was much more productive, had less anxiety, depression, and fatigue and decreased her use of medications.

\*Not her real name



## Using cognitive behavioral therapy to treat chronic insomnia

### The challenge

Providers and patients alike often misunderstand the differences between insomnia the symptom, and chronic insomnia as a serious and prevalent medical disorder. It is normal to occasionally experience trouble falling and/or staying asleep. However, 10 to 15 percent of the population is affected by chronic insomnia<sup>1</sup>. Chronic insomnia is defined as losing at least 30 minutes of sleep for three or more nights per week for at least one month. In addition, this loss of sleep must interfere with their health, productivity, and/or quality of life. By the time most patients are referred to the HealthPartners Sleep Health Center, it has been a significant problem for years, even decades.

While over-the-counter and prescription sleep medications may provide temporary relief, they do not cure chronic insomnia, and frequently lead to increased reliance and overuse. Untreated insomnia is associated with increased risk for numerous medical problems including diabetes, hypertension, heart disease, Major Depressive Disorder, increased risk of accident/injury, decreased work attendance and productivity, and decreased over-all quality of life<sup>2</sup>.

In addition, a 2014 study<sup>3</sup> found that insomnia is associated with an additional \$2,000 in health care costs per person annually as a result of increased emergency department visits, physician appointments, laboratory tests, and prescription medication use. Finally, recent and growing research has linked chronic prescription sleep medication use with adverse medical events, shortened length of life, and increased risk for cancer<sup>4</sup>.

## The solution

HealthPartners Sleep Health Center, a department of Regions Hospital, established a full-time clinic in 2011 providing Cognitive Behavioral Treatment for Insomnia (CBT-I). The Center is tracking treatment outcomes to develop a base of research to contribute to the scientific understanding of chronic insomnia and to improve care.

CBT-I is a technique for treating insomnia without or alongside medications. Treatment begins with use of a sleep diary to establish baseline sleep data and to develop an individualized treatment plan. Key aspects of treatment include helping patients:

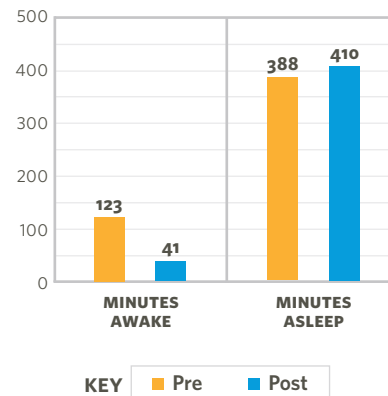
- Make changes in their sleep schedule to increase the natural ability to sleep
- Learn techniques to associate the bed with sleeping and limit its association with stimulating behavior
- Establish healthy habits to improve sleep such as having a dark bedroom and removing all electronic gadgets from the room
- Learn relaxation skills
- Reduce anxiety regarding sleep

## Results

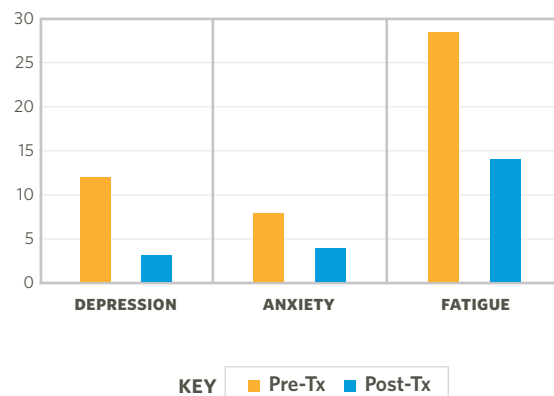
HealthPartners assessed 167 adult patients who completed treatment between August 2011 and July 2014.

Before beginning treatment, patients were spending more than two hours (123 minutes) awake per night while sleeping about six and a half hours (388 minutes). By the end of treatment, the time spent awake decreased approximately 67 percent to an average of 41 minutes per night, and sleep time increased approximately six percent

to nearly seven hours (410 minutes) per night. In addition, the average number of times patients woke up per night dropped from 3 to 1.9.



In addition to changes in how much and how efficiently patients slept, they also showed significant improvement in measures of depression, anxiety and fatigue.



Sources:

1. The Epidemiology and Diagnosis of Insomnia; American Journal of Managed Care; May 15, 2006; 12:S214-S220
2. Chronic insomnia; The Lancet; Jan. 20, 2012
3. Impact of Brief Cognitive Behavioral Treatment for Insomnia on Health Care Utilization and Costs; Feb. 14, 2014; The Journal of Clinical Sleep Medicine; Vol. 10, No.2
4. Hypnotics' association with mortality or cancer: a matched cohort study; British Medical Journal Open Feb. 27, 2012, Vol 2, Issue 1

### About HealthPartners

Founded in 1957, HealthPartners ([healthpartners.com](http://healthpartners.com)) family of health care companies serves more than 1.4 million medical and dental health plan members nationwide. It includes a multispecialty group practice of more than 1,700 physicians; five hospitals; 50 primary care clinics; 21 urgent care locations; 21 dental clinics; and numerous specialty practices in Minnesota and Western Wisconsin. HealthPartners is the largest consumer-governed, nonprofit health care organization in the nation providing care, coverage, research and education to improve the health of members, patients and the community. HealthPartners is the top-ranked commercial health plan in Minnesota and is also ranked among the top 30 plans in the nation according to National Committee for Quality Assurance's (NCQA) Health Insurance Plan Rankings 2014-15.