

# Improving Sleep Quality in Behavioral Health Patients Through Evidence-Based Screening and Treatment

R. Paul Thomlinson, Ph.D., and  
Cynthia Hollis-Keene, DNP\*

Compass Health Network

Currently with Emo-Logic Clinic\*

## Background and QI Question

Many community behavioral health patients are inadequately screened for sleep disturbances, which can affect their physical and psychological health, quality of life and behavioral treatment plans (Bdar, Belenky, & Watson, 2015). Providers often pay too little attention to the prevalence, etiology, and treatment of sleep disorders (Ahmed et al., 2017), even though it is well established that problems with sleep among those with mental health challenges can negatively impact their symptoms of depression, anxiety and even risks of suicidality (Gehrman, 2015). Additionally, this state of affairs can result in patients receiving potentially unnecessary pharmacological sleep aids, which can lead to polypharmacy, dependency and tolerance (Tannenbaum, 2015). This project aimed to improve the quality of care for behavioral health patients experiencing sleep disturbances through implementation of an evidence-based screening and treatment process for sleep problems. Specifically, the protocol implemented was the most recent American Academy of Sleep Medicine Practice Guidelines, which recommend routine screening of patients for sleep problems followed by sleep hygiene education and/or cognitive-behavioral therapy (CBT) as first-line treatments, instead of pharmacological treatments. The quality improvement evaluation question was: What is the effect of implementation these guidelines on the quality of sleep and sleep pattern problems as measured by the Pittsburgh Sleep Quality Index over a period of eight weeks?



We demonstrated the feasibility and acceptability of screening for sleep problems in community behavioral health patients, as well as excellent outcomes for patients receiving sleep hygiene education and/or CBT for insomnia as an alternative to a pharmacological sleep aid.



## Method

During an eight-week evaluation window, approximately 140 patients presenting to a Compass Health Network clinic for initial or follow up care, completed an intake, during which licensed nurses assessed patients about their mental health history as well as their overall quality of sleep. Those patients who indicated problems with sleep, were given the Pittsburgh Sleep Quality Index (PSQI). Of the 35 patients screening positive for sleep problems, 43% identified as male and 57% identified as female. The average age was 39.3 (SD = 13.4) years old with a range of 19 to 71. The most common reasons for insomnia were racing thoughts (17%), stress (14.%) and pain (11%). The design included a pretest-posttest PSQI for all those indicating problems with sleep, with no control group. All participants screening positive for sleep problems received completed sleep hygiene handouts and education. Most participants (66%) completed eight weekly sessions of CBT targeting insomnia, and the remainder did not. The PSQI, a well-established reliable and valid instrument often used in clinical and non-clinical settings for the screening of sleep dysfunction was used for outcome evaluation in addition to screening. Cronbach's alpha coefficient of 0.83 for its seven components indicates excellent internal consistency (Mollayeva et al., 2016). Lower scores on the PSQI indicate better sleep.

## Results and Discussion

The Wilcoxon sign-rank test was run on the pre- and posttest PSQI scores for all participants, and there was a statistically significant difference between the global pretest median PSQI score (26.60) and posttest median (19.50),  $Z = -2.328$ ,  $p = 0.020$ . This indicates significant improvements in the quality of sleep for the patients evaluated in this quality improvement project. Although there are many uncontrolled threats to internal validity, this QI study demonstrated the feasibility and acceptability of screening for sleep problems in behavioral health patients, and excellent outcomes for patients receiving sleep hygiene education and/or CBT for insomnia as an alternative to a pharmacological sleep aid.