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Practical Guidance for Targeting Insomnia in Primary Care Settings

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Insomnia is among the most prevalent conditions in primary care. Despite the development of well-established, evidence-based cognitive and behavioral interventions for insomnia, they are not typically applied in primary care environments. One method for improving primary care delivery of these interventions is to integrate behavioral health providers as a service delivery team member in this environment. The population health focus and time-limited appointments of primary care require that these well-established interventions are adapted for effective implementation in primary care. Using a case example, we describe practical methods of delivering these interventions in the primary care setting.

NE quarter of the U.S. population report dissatisfaction with their sleep with approximately 6 to 10% of the population reporting symptoms consistent with insomnia (Ancoli-Israel & Roth, 1999; Morin, LeBlanc, Daley, Gregoire, & Mérette, 2006; Ohayon & Reynolds, 2009). Insomnia often co-occurs with other behavioral health and medical diagnoses (e.g., depression, anxiety, substance use disorders, chronic pain, congestive heart failure; Morin & Benca, 2012; Taylor et al., 2007), and left untreated can make comorbid conditions more difficult to manage. Patients with untreated insomnia may experience significant negative consequences including more health concerns, less physical activity, less vitality, and more emotional problems (Mallon, Broman, & Hetta, 2002; Zammit, Weiner, Damato, Sillup, & McMillan, 1999).

Insomnia in Primary Care Settings

Insomnia is a prevalent but often underdiagnosed problem in primary care settings. Although 10 to 15% of primary care patients are estimated to have chronic insomnia, and approximately 49% have occasional insomnia, only 1.2% of patients are diagnosed with insomnia (Ram, Seirawan, Kumar, & Clark, 2010; Schochat, Umphress, Israel, & Ancoli-Israel, 1999). Primary care providers (PCPs) treating 20–30 patients a day may see as many as 3–5 patients a day who demonstrate chronic insomnia. Most of these individuals are prescribed medica-

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tions (Nowell et al., 1997) to treat their sleep problems, despite evidence that cognitive and behavioral treatments (e.g., sleep hygiene, stimulus control, and sleep restriction) are just as effective but longer lasting (Morin et al., 2006, Sivertsen et al., 2006). These interventions are effective for a broad range of patients, including those experiencing a variety of comorbid behavioral health and medical conditions (Vitiello, McCurry, & Rybarczyk, 2013). Recently, Bélanger, LeBlanc, and Morin (2012) described in Cognitive and Behavioral Practice the theoretical rationale and evidencebased interventions for insomnia, particularly within an older population. Unfortunately, most of these cognitive and behavioral interventions are delivered in specialty clinics and reach only a fraction of those who might benefit. To target insomnia on a larger scale, interventions need to be brought to the primary care setting where the majority of people with symptoms can receive the needed treatment. To be efficiently and effectively delivered, these interventions must be adapted to fit within the fast-paced, populationhealth prospective of the primary care environment.

Primary Care Behavioral Health (PCBH) Model

Integrating behavioral health providers as primary care team members can make it easier for PCPs to recommend and initiate behavioral treatments for insomnia as part of a team management approach. There are multiple models for integrating behavioral health care into primary care settings. One widely used model is the PCBH model, which uses integrated behavioral health consultants (BHCs), who are often clinical psychologists or social workers, to see patients in the primary care clinic. The BHC works as a consultative team member with the PCP and other team members to assist in the assessment and/or intervention for

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a range of health behavior, behavioral/mental health, and substance problems that individuals present with for treatment in this setting. Within this collaborative model the BHC adapts assessment and intervention practices to align with the standards of care within the primary care environment. For example, the BHC typically sees patients in an initial 20- to 30-minute appointment and may have several follow-up (e.g., one to four), 15- to 30-minute appointments, to initiate cognitive and behavioral interventions for presenting problems (Hunter, Goodie, Oordt, & Dobmeyer, 2009; Robinson & Reiter, 2007). The use of BHCs has been found to be cost-effective (Cummings, O'Donohue, & Cummings, 2009; Cummings, O'Donohue, & Ferguson, 2003) and useful for a variety of behavioral health conditions (Bryan et al., 2012; Bryan, Morrow, & Appolonio, 2009; Cigrang, Dobmeyer, Becknell, Roa-Navarrete, & Yerian, 2006; Cigrang et al., 2011).

Insomnia Treatments in Primary Care

Goodie, Isler, Hunter, and Peterson (2009) demonstrated that BHCs could improve sleep outcomes using brief interventions in primary care. Using a case-series design, patients identified by their PCP as having insomnia problems were referred to a BHC for further assessment of insomnia complaints and initiation of cognitive and behavioral insomnia treatment as indicated. Those in need of treatment engaged in three to four 20-minute follow-up appointments where the BHC initiated a range of cognitive and behavioral insomnia interventions tailored to the individual's insomnia presentation to include sleep hygiene, stimulus control, sleep restriction, brief relaxation, and education about sleep and insomnia through bibliotherapy. Self-report data from 29 participants demonstrated statistical and clinical improvements across a broad range of sleep-related outcome variables (e.g., sleep impairment index, sleep efficiency). However, there was no control group to compare whether the BHC-led interventions resulted in a significantly better outcome compared with a standard-of-care treatment. Additionally, it was unclear whether the sleep improvements were sustained beyond the active treatment. Other studies that have used brief interventions for insomnia in and out of primary care settings have found that these interventions were superior to control conditions (e.g., Bjorvatn, Fiske, & Pallesen, 2011; Buysse et al., 2011; Fernando, Arroll, & Falloon, 2013; Jernelov et al., 2012).

The evidence base for delivering cognitive and behavioral interventions for insomnia in primary care is building, but is not at the level seen for specialty clinics. Targeting insomnia using cognitive and behavioral methods in primary care is an important aspect of a larger stepped-care approach to insomnia treatment (Rybarczyk & Mack, 2011). Primary care-based cognitive

and behavioral interventions delivered by a BHC cannot be as intensive and time consuming as those in specialty care, but provide a level of direct contact and personalized intervention beyond bibliotherapy and web- or app-based care. We present a sample case with practical guidance and examples for assessing and treating insomnia using the PCBH model in primary care settings.

Primary Care Insomnia Case Presentation

Mark is a 48-year-old Caucasian male who has been married for 18 years. He has a 15-year-old son and a 13-year-old daughter. He has a strong marriage and enjoys running, cooking, and digital photography. He works as a construction supervisor for a national house builder. About 18 months ago, his company downsized, laying-off hundreds of individuals. Although Mark did not lose his job, he became concerned that he might lose his job in the near future, leading to increased stress and worry regarding how he would be able to support his family if he did lose his job. He has increasing difficulty falling asleep and staying asleep and usually does not feel rested when he gets up in the morning. At his appointment with his PCP he asked if he could be prescribed something that could help him relax.

Identifying Insomnia in Primary Care

Some individuals, like Mark in the example above, who would benefit from nonpharmacological sleep interventions are easy to identify if they are asked about their sleep. Some patients will come to their PCP with the primary complaint of not being able to fall asleep, stay asleep, and do not feel rested upon awaking to start their day. Other individuals may not present with "sleep" concerns, yet have significant sleep difficulties as part of a host of other problem presentations (e.g., anxiety disorders, depression, life stress, chronic pain). One way to enhance the identification of those in primary care who might benefit from treatment is to ask every patient at every appointment (verbally, or as part of standard clinic appointment paperwork): "Do you feel rested when you get up in the morning?" When patients answer "no," a brief standardized self-report measure appropriate for primary care like the Insomnia Severity Index (ISI; Bastien, Vallieres, & Morin, 2001) can be administered. The ISI uses seven items to measure sleep impairment. The ISI is excellent at distinguishing those with and without insomnia using a cutoff score of 14 (Smith & Trinder, 2001) and is considered a valid index of insomnia severity (Smith & Wegener, 2003). However, even individuals who score below 14 on the ISI may benefit from behavioral and cognitive interventions for maladaptive sleep habits and behaviors.

Assessment of Insomnia in Primary Care

As a general rule, assessment questions should focus on eliciting information about what is maintaining or increasing the severity of the insomnia and how the individual is being functionally impaired. The information gathered will help determine the evidence-based/informed interventions that are best suited for the individual's presentation. Assessment questions to develop a functional analysis can be broken into the following categories:

History of Sleep Problem

- 1. When did the problem start and is there an identifiable trigger that initiated the problem?
- 2. Frequency of sleep difficulties
- 3. Activities associated with the sleep problem getting better or worse

Presleep Behaviors

- Frequency and dose of any substance used to help initiate sleep (e.g., sleep medication, over-the-counter sleep aids)
- 2. Frequency, amount, and proximity to bedtime of alcohol consumption
- 3. Frequency, dose, and proximity of use to typical bedtime for tobacco (e.g., smoking, chewing tobacco) and caffeine products (e.g., coffee, caffeinated tea, energy drinks)
- 4. Exercising, working, and engagement in stimulating or stressful activities less than 30 minutes prior to getting into bed to go to sleep

Sleep Environment

- 1. Bed comfort and room noise
- 2. Sources of light in or outside the bedroom
- 3. Room temperature
- 4. Activities of others that disturb the individual's sleep
- 5. Sharing the bed or bedroom with pets or small children

In-Bed Behaviors

Distinguish between workday and nonworkday (e.g., week and weekend, respectively) sleep behaviors.

- 1. The time the individual gets into bed to go to sleep and duration of time to fall asleep
- 2. Sleepiness of individual when getting into bed to go to sleep
- 3. Reading, watching television, and use of other electronic devices (e.g., tablet) incompatible with sleep
- 4. Frequency and duration of nighttime awakenings after initially falling asleep

- Activities engaged in upon waking after initially falling asleep
- 6. Thoughts when trying to initially fall asleep or fall back asleep
- 7. Wake prior to or after alarm

Impact of Insomnia

- Feeling tired, not rested, or sleepy throughout the day
- 2. Napping frequency and duration
- 3. Increased frequency/intensity of emotional responses (e.g., anger/irritability)
- 4. Falling asleep outside of the bedroom (e.g., desk, stoplight, couch)
- 5. Difficulty concentrating
- 6. Not as effective or efficient in daily activities

Ruling Out Other Sleep Problems

Sleep Apnea

- 1. Snoring
- 2. Gasping for air while sleeping
- 3. Waking with a headache or tight chest

Narcolepsy

- 1. Unwanted/unplanned sleep episodes lasting several seconds to hours that help the patient feel refreshed
- 2. Episodes of cataplexy (i.e., abrupt decrease/loss of muscle tone) in response to an emotional response
- 3. Sleep paralysis (i.e., unable to move or speak) when falling asleep or waking
- 4. Hallucinations (e.g., visual, auditory) during sleep onset
- 5. Sleep disruption during nocturnal sleep

Periodic Limb Movements

- 1. Sudden movement of legs that wakes the individual
- 2. Bed partner reporting the individual kicks during his or her sleep

Restless Leg Syndrome

- 1. Uncomfortable feelings in legs such as burning, itching, or crawling sensations
- 2. Physical sensations stop for a period of time when individual moves his or her legs

Bruxism

- 1. Grinding teeth at night
- 2. Waking with a headache

In situations when a patient demonstrates a sleep problem beyond the scope of care in the primary care clinic, a referral to a sleep clinic or sleep specialist should be considered if those services are available.

Beyond these assessment questions, it is also important to consider whether a patient's medical conditions or Goodie & Hunter

medications are contributing to sleep disturbances. In the PCBH model, the BHC can review the medical record for medical conditions and/or add additional assessment questions to screen for medical conditions such as breathing problems (e.g., chronic obstructive pulmonary disease), bladder/urinary problems, cardiovascular disease, chronic pain, and menopausal symptoms. Likewise, it can be helpful to screen for other behavioral health concerns, particularly anxiety and depression given the high rates of comorbidity with insomnia (Taylor, Lichstein, Durrence, Reidel, & Bush, 2005). It is important to use primary care appropriate measures, such as the Generalized Anxiety Disorder-7 scale (GAD-7; Kroenke, Spitzer, Williams, Monahan, & Löwe, 2007; Spitzer, Kroenke, Williams, & Löwe, 2006) and the Patient Health Questionnaire-2 (PHQ-2; Lowe, Kroenke, & Grafe, 2005), when employing standardized measures. In many cases, even when there are comorbid conditions, targeting insomnia-related symptoms can be effective for improving sleep and may improve the comorbid condition (e.g., Manber et al., 2008).

Insomnia Case ("Mark") Assessment Information

In the first 15 minutes of the initial appointment with Mark, we learn that his sleep problems started 12 months ago as he became increasingly worried about losing his job. He usually drinks about 32 ounces of coffee: 16 ounces in the morning and another 16 ounces at 3:00 p.m. Every night he spends about an hour watching television in the living room with his spouse. He gets into bed around 10:00 p.m. even if he is not sleepy, because that is when he has always gone to bed. It usually takes him about an hour to fall asleep, although it can be longer if he has had a more stressful day at work. Two or three times a month he will take Benadryl when he believes that he must fall asleep. While in bed, he typically thinks about what occurred during the day and considers what would happen with different job layoff scenarios. He watches television in bed or reads a magazine until he falls asleep. He wakes up two or three times a night and it takes 20-30 minutes to fall back asleep. His alarm is set to go off at 6:00 a.m., but he is usually awake at 5:30 a.m. On the weekend he sleeps in until 10:00 a.m., but still has difficulty falling asleep and wakes three to four times for 20-30 minutes. He drinks a "couple" of beers on the weekend with dinner or if he is watching a sports game. Most of the time his mood is "stressed" and "grumpy." He occasionally naps for 1-2 hours, usually on the weekends, but one time every other week during the work week. He used to run 3 miles a day, 6 days a week, but now only runs 1-2 days a week. When he does run, he believes that his sleep and his mood are better. Mark denies snoring, waking up with a headache, grinding his teeth, kicking in his sleep, and does not have any difficulty with crawling sensations in his legs when he lies down. Although Mark demonstrated anxiety/depression/stress symptoms, screenings using the PHQ-2 and GAD-7 were negative for depression and anxiety.

Evidence-Based/Informed Treatment

Based on Mark's presentation there are a variety of interventions that could be effective. However, before detailing the specifics of his plan, we briefly review the evidence-based interventions a BHC might consider using in the primary care environment, the data supporting these interventions, and the rationale behind their effectiveness. The two most effective interventions are stimulus control and sleep restriction; however, there is a continued need for dismantling studies to establish these as the principle interventions for insomnia (Vitiello et al., 2013). Other interventions (e.g., relaxation, cognitive therapy) can also be helpful, but are usually not sufficient for significantly improving sleep. There is growing evidence that increasing physical activity improves sleep outcomes (Passos et al., 2010, 2011; Reid et al., 2010).

Stimulus Control

The purpose of stimulus control is to improve the association between falling sleep and the bed and bedroom (Morin, 2013). Often those who experience insomnia demonstrate increased anxiety symptoms and presleep behaviors that perpetuate sleep problems. Patients are instructed to use the bed for "sleep and sex only"; therefore, they should avoid all other activities (e.g., eating, watching television, talking on the phone, reading, studying), as well as lying awake, in bed and the bedroom. Stimulus control also involves getting into bed only when the patient feels "sleepy." Fatigue is distinguished from sleepiness by asking patients to focus on when they feel like their eyes or head feels heavy, or they feel like they will fall asleep immediately. Once patients are in bed, if they do not fall asleep with 20 minutes, they are instructed to get out of bed and to do something until they feel sleepy again and to repeat getting out of bed after 20 minutes if they do not fall asleep. Stimulus control procedures also involve getting out of bed at the same time every morning, regardless of how much sleep they achieved the night before and to avoid daytime napping.

Sleep Restriction

The purpose of sleep restriction is to strengthen the homeostatic sleep drive and reduce sleep anticipatory anxiety (Morin, 2013). Those experiencing insomnia often spend a significant amount of time in bed trying to fall asleep. Sleep restriction involves limiting time in bed to a sleep window based on the amount time the individual actually sleeps (Morin, 2013; Spielman, Saskin,

& Thorpy, 1987). Typically the patient is asked to agree to wake up at a consistent time each morning, including nonworkdays, and to only be in bed during the prescribed sleep window. A minimum of 5 hours of in-bed time should be prescribed (Morin, 2013). Once the individual achieves more than 85% sleep efficiency, 15–20 minutes is added to the sleep window each week until the target time in bed is achieved without sleep problems.

Sleep Hygiene

Educating patients about sleep hygiene is intended to help them change behaviors and environmental stimuli that may interfere with sleep. Common sleep hygiene recommendations include:

- 1. Avoid caffeine six to eight hours before bedtime
- 2. Avoid nicotine before bed and throughout the night
- 3. Avoid alcohol before bed. Although alcohol may help patients fall asleep, it disrupts the sleep cycle and contributes to less restful sleep. Alcohol with dinner, even if not used as a sleep aid, may negatively impact sleep maintenance.
- 4. Engage in regular exercise/physical activity. Avoid exercise/physical activity 30 minutes before going to bed if such activity makes it more difficult to fall asleep.
- 5. Keep the bedroom environment at a comfortable temperature, quiet, and dark.
- 6. Allow an hour to unwind before bed.
- 7. Maintain a regular sleep schedule.

Relaxation Strategies

Strategies to reduce physiological and cognitive arousal at bedtime can be helpful (e.g., deep breathing, progressive muscle relaxation, guided imagery, mindfulness). Although there is no consistent evidence that one relaxation strategy is superior to another for promoting sleep, in the primary care setting it is important to focus on those strategies that can be taught in a brief amount of time, such as deep breathing or progressive muscle relaxation.

Overall considerations. To help patients understand the role of the interventions for insomnia it is helpful to use Spielman's 3P model (predisposing, precipitating, and perpetuating factors; Spielman, Caruso & Glovinsky, 1987) as a guide to distinguish among factors that may have made them more likely to develop insomnia (e.g., predisposing factors), those factors that contributed the initial onset of insomnia (e.g., precipitating factors), and those factors that are maintaining the insomnia (e.g., perpetuating factors).

When starting sleep interventions, particularly sleep restriction, some individuals will experience significant fatigue during the day. Patients should be cautioned about driving, operating equipment, and engaging in activities requiring high levels of concentration during the first few days of the insomnia intervention. If they experience serious daytime sleepiness, patients should be encouraged to contact the provider. It may be necessary to modify the sleep plan to balance daytime functioning changes in sleep behaviors.

Mark's Treatment

Before starting to describe exactly how we would ask Mark to change his sleep behaviors, we would summarize what Mark had told us about his sleep and then describe the options for treatment. Those options could include (a) making no changes and continuing his current behaviors; (b) choosing to use medication to manage his sleep and reevaluate his situation in one to two months; (c) referral to a specialty mental health clinic; and (d) working with us, the BHC, to help him change his sleep-related behaviors, which has been shown to have the best, longest-lasting impact on sleep. Most patients choose the fourth option.

At times, we use methods drawn from motivational interviewing for medical settings (Rollnick, Miller, & Butler, 2008) to manage ambivalence expressed by patients. Given that in the short term sleep is likely to get worse before it improves, and that some interventions for sleep may seem counterintuitive to patients (e.g., getting out of bed if not asleep, limiting the time spent sleeping even when they are tired), patients are often ambivalent about making changes; they want their sleep to improve and they don't want to experience worse sleep in the short term. Using motivational interviewing skills (e.g., reflecting change talk, using rulers, offering choices) to help guide patients toward making choices consistent with their long-term goals of improved sleep can help increase their commitment to making changes.

Once Mark agrees to target his behaviors, we describe the rationale for cognitive and behavioral interventions for insomnia. We would distinguish between those thoughts, behaviors, and possibly biological predispositions that may have made him more at risk of developing insomnia and may have started his trouble sleeping. We would then focus on the impact his current behaviors are having on maintaining sleep problems that developed a year ago. So we would say:

This has been a stressful year for you. It is likely that your stress response and worrying about your job contributed to the beginning of your sleep problems, and may contribute to continuing your sleep difficulties. You've also started engaging in some behaviors that are likely making it more difficult for your sleep to return to a more normal pattern. There are sleep behavior changes and methods to change stressful/anxious thinking patterns that help the majority of individuals return to a sleeping pattern where they feel more rested when waking in the morning and are able to function the way they would like throughout the day.

We explain, as is often the case, that Mark's sleep will likely get worse before it gets better. However, if he adheres Goodie & Hunter

to the recommendations, his ability to fall asleep, stay asleep, and feel rested in the morning are very likely to improve within a couple of weeks.

One of the first questions regarding the intervention for Mark is whether or not it is necessary to have him complete a baseline sleep diary. In primary care practice, it is uncommon to wait the additional one or two weeks for a patient to return with a sleep diary before developing a treatment intervention. When patients attend primary care appointments there is an expectation that they will receive a "treatment" before they leave. In research protocols it would not be possible to evaluate the effectiveness of an intervention without first obtaining baseline data, so it would be rare to see a study published without such data. Given that Mark is able to provide a good history of his sleep with clear details about when he typically goes to bed and wakes up, we would most likely rely on Mark's self-report or have him start keeping a sleep diary in conjunction with treatment initiation as a relative baseline. If we were running short on time and/or we were concerned that we did not have an accurate picture of the patient's sleeping habits, we would be more inclined to initiate a sleep diary prior to treatment.

Using the information Mark provided we would develop a treatment plan that first relied on education, sleep restriction, stimulus control, and sleep hygiene. He reports an estimated total sleep time of 5.5 hours during the week and 9 hours on the weekend. We would focus on the shorter total sleep time during the week as our starting point for setting his sleep window. Mark wants to wake up at 6:00 a.m., so we would subtract 5.5 hours from that time and set his new bedtime at 12:30 a.m. After explaining how we calculated his sleep window we would explain sleep restriction and stimulus control instructions:

So your new bedtime should be no earlier that 12:30 a.m., even if you feel sleepy before 12:30 a.m., it will be important to stay up until 12:30 a.m. and to then wake up at 6:00 a.m., even if you are still sleepy. It is important for you to stick to this schedule during the week and throughout the weekend. You need to avoid naps and sleeping at other times. Following these guidelines will retrain your body to fall asleep and stay asleep when you are in bed. Once you are in bed, you should not engage in any other activities except sleep and sex, so no reading, watching TV, or talking on the phone while you are in bed. If you do not fall asleep in 20 minutes, then you will need to get out of bed and go somewhere and do something else, such as reading, until you feel sleepy. It is not a time to start cleaning the kitchen or watching a movie that you will want to stay up and watch. Once you feel sleepy, get back in bed. If you don't fall asleep in 20 minutes, then get up again and wait until you feel sleepy before getting back in bed again. At 6:00 a.m. you will need to get out of bed, regardless of the amount of sleep you were able to achieve the night before; this can be tough.

At first you may feel sleepier during the day, and you may feel like your sleep is getting worse. However, if you stick with this for a month, your sleep will very likely be improved. If you are falling asleep and staying asleep, and at least 85% of your time in bed is spent asleep, we can increase the amount of time you're in bed by 15 minutes, so your new bedtime, if you're sleepy, would be 12:15 a.m.

After establishing the plan for stimulus control and sleep restriction, we would discuss the list of sleep hygiene changes that were appropriate for Mark's situation. For example, we would say:

Given your current caffeine use, it may help your sleep to avoid any caffeine after 1:00 p.m. Also, it would be helpful for you to incorporate some wind-down time before you get to bed. Could you give yourself an hour to avoid doing any work and to spend time relaxing before you get into bed? It would also be helpful for you to return to running more frequently. Running, or engaging in at least a moderate-intensity aerobic exercise, 5 days a week for 30 minutes, would improve your health, your mood, and likely improve your sleep. What do you think it would be possible for you to do?

We would ask Mark to monitor his sleeping with a sleep diary or other monitoring method (e.g., phone app, Fitbit, ActiGraph).

Appointment 2

After discussing this plan with Mark and addressing any questions, concerns, and potential barriers, we would ask him to return to the clinic in one to two weeks to evaluate his progress. The second appointment would be spent evaluating what had and had not worked with the treatment plan and discussing methods for improving his adherence to the plan. Per his report, we would determine whether he was achieving 85% sleep efficiency and if so, add 15 minutes to his sleep window. We would encourage Mark to continue to add 15 minutes to his sleep window each week as long as his sleep efficiency was at least 85%.

Besides making any needed adjustments to the plan, we would also consider teaching brief relaxation strategies and methods for managing worried and stressful thinking.

Deep Breathing

To target physical activation associated with Mark's stress we would likely teach deep breathing. We would discuss the relaxation response, the importance of appropriate body support (e.g., sitting upright in a chair or lying down), and allowing relaxation to gradually happen as opposed to forcing it to occur. We would then demonstrate deep breathing, placing one hand on our chest and one on our abdomen. As we breathe in and out we keep the hand on our chest still, while allowing the hand on our abdomen to rise as we take a breath in and fall as we slowly let the breath out. After demonstrating deep breathing we would then take Mark through a two- to three-minute deep-breathing exercise and set a plan to practice the deep breathing for at least five minutes two times a day to improve the skill and to

use deep breathing when in bed as a way to increase physiological relaxation and give him something to focus on instead of the events of the day.

Cognitive Strategies

To reduce worrying and stressful thinking at bedtime it is helpful to encourage the use of a worry log as a way of "having thoughts," rather than working not to have thoughts. We would say to Mark:

Before you go to bed take 20 minutes to write your thoughts. You do not need to plan or solve any problems. Just writing down your thoughts before bed can help to reduce the intensity and frequency of your stressful thoughts.

Mark would be encouraged to attend another follow-up appointment in one to two weeks to evaluate his progress. If his sleep was not improving, we would work with him to evaluate whether we believed that there was more that could be done in the primary care environment. If we believed that additional appointments could help, we would schedule additional follow-up appointments; however, if we determined that more intensive treatment would be beneficial, and such treatment was locally available, we would make a recommendation and referral for him to move to the next level of care.

Summary

Primary insomnia is prevalent, significantly disrupts functioning and quality of life, and for most individuals can be efficiently and effectively treated in primary care. Working with the primary care team to better identify those with primary insomnia and learn that nonpharmacological interventions can be effectively deployed in primary care by a variety of team members is important. As a behavioral health provider in primary care, screening for sleep problems among those who are referred to you for non-sleep-related problems (e.g., obesity) will help to ensure that all those who might benefit from a sleep intervention are recognized. The assessment and intervention strategies we have described can be easily done in primary care in 15- and 30-minute appointments and can have a dramatic impact on sleep in a relatively short time. These interventions using the PCBH model have not been rigorously tested, so it is best to view this as evidenceinformed care. In our experience, patients and PCPs value having nonpharmacological treatment options available. PCPs and other team members are often amenable to learning more about the delivery of cognitive and behavioral sleep interventions, which can improve the ability of the team to assess and intervene with insomnia in a manner that is not solely dependent on BHC involvement, thus increasing the population impact of the entire primary care team.

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