Sufficient Sleep in Homeless Environments

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Waiting area on a cold day at the Downtown Clinic in Nashville, Tennessee.

Sufficient Sleep: A Necessity, Not A Luxury

Whether they are sleeping in a shelter or on the streets, it is difficult for those experiencing homelessness to get uninterrupted, restful, and sufficient sleep (Hartman, 2011). **Kevin Barbieux** (2013), a homeless man living in San Diego, writes on his blog: "What looks like laziness to the casual bypasser is actually sleep deprivation. Suffering from a lack of sleep, just how is a homeless person supposed to do all the things necessary for overcoming their homelessness?"

Sleep is essential. Without sufficient sleep, the human body cannot function well, resulting in fatigue, confusion, depression, concentration problems, hallucinations, illness, and injury. Chronic sleep deficit hastens the onset and increases the severity and allowing the brain to cleanse itself of toxins that accumulate during waking hours (Centers for Disease Control and Prevention [CDC], 2013; Narcolepsy Network, 2013; National Institutes of Health, 2013; Troxell & Simonich, 2011).

An Unrecognized Problem

"Sleep deprivation is often an unrecognized problem among our homeless patients," says **Eowyn Rieke, MD, MPH**, a physician with Outside In in Portland, Oregon. "They often lack a safe place to sleep, which can start a pattern of taking drugs methamphetamine, for example—to stay awake at night and then

using alcohol, marijuana, or heroin to sleep."

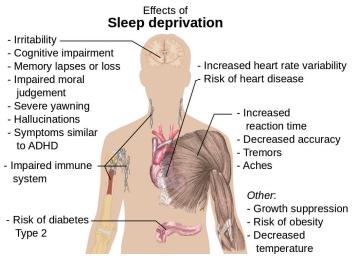
of age-related ailments, including diabetes, hypertension, obesity, and memory loss. "It's hard to sleep in a shelter. You never know if you're going to be robbed or if the person beside you will be robbed."

Homeless pard individuals may not recognize

Critical for basic survival, good sleep helps to balance hormones and other vital brain and body chemicals and is critical in converting the day's experiences into usable permanent memory

Larry Adams, Boston HCH Consumer Advisory Board individuals may

the importance of sleep to their well-being. Just two days of sleep deprivation—getting six or fewer hours a night—make a measurable difference in functioning at a high level, including the ability to focus or to learn new tasks that require motor coordination and



Source: Wikimedia Commons (2009)

performance. "Low-quality sleep negatively affects one's ability to think clearly or engage with others, making it harder to get a job or housing," says Rieke.

Health care for the homeless (HCH) clinicians can help educate patients about how sleep and the lack of sleep affect the human body. "We don't talk enough about these concerns with our patients," Rieke says. "Perhaps we assume that the only solution to the problem is permanent housing, which is difficult to provide." Rieke asks clients where they sleep at night, opening the door to a discussion of sleep quantity and quality. "I ask patients to keep a sleep journal for five to seven days, which helps us explore ways to improve sleep and overall health," she says. Keeping a sleep log is simple, taking only a few minutes each day.

"Environmental issues are the biggest contributors to sleep deprivation in those experiencing homelessness," explains **Aaron Kalinowski, MD, MPH**, associate medical director at Horizon House and Midtown Medical in Indianapolis, Indiana. Given the

Using a Sleep Diary to Track Sleep Patterns and Habits

A sleep journal is an easy way to monitor activities that may affect sleep, daytime sleepiness, and fatigue. The diary is typically a chart with spaces for:

- » The time you went to bed and woke up
- » How long and well you slept
- » When you were awake during the night
- » How much caffeine or alcohol you consumed and when
- » What and when you ate and drank
- » What emotions or stress you had
- » What drugs or medications you took

Source: How to use a sleep diary, WebMD (2012)

prevalence of sleep deprivation, questions about sleep are part of a thorough medical history. Clues that someone may have a sleep disorder include memory trouble, obesity, pulmonary hypertension, shortness of breath, or breathing problems without other explanation. "Or I may walk into the exam room and find the patient curled up on the exam table, napping," Kalinowski adds.

Sleep Disorders

In addition to environmental factors, sleep disorders are relevant to the overall presentation of sleep problems and homelessness. *Sleep disorders* are problems with sleeping, including falling or staying asleep, falling asleep at the wrong times, too much sleep, or abnormal behaviors during sleep (Blaivas, 2012). Since people often overlook or ignore sleep problems and clinicians fail to diagnose and treat the majority of people with sleep disorders (National Sleep Foundation [NSF], 2013d), it is important for clinicians to have a high index of suspicion. Those interested in learning more may refer to the article titled "Management of Common Sleep Disorders" (Ramar & Olson, 2013).

To test for sleep disorders, Kalinowski often employs a formal screening questionnaire, such as the Epworth Sleepiness Scale (ESS), the STOP-Bang sleep test questionnaire, or the Berlin questionnaire. The ESS measures average daytime sleepiness and differentiates between average sleepiness and excessive sleepiness requiring intervention. The STOP-Bang and Berlin are questionnaires used to screen patients for obstructive sleep apnea (difficulty breathing during sleep).

"If I suspect sleep apnea, it's difficult to get a sleep study done for uninsured patients since testing at a sleep lab is expensive," says Kalinowski. Primary care providers may refer patients with Medicaid, Medicare, or other insurance coverage to a sleep specialist, and some HCH projects have arrangements with an accredited sleep disorder center or sleep doctor who will see uninsured patients without charge. Even if the patient cannot afford treatment, a sleep study provides useful information since a diagnosis may help support a disability application, says Kalinowski. "My goal is to get the person into housing," he adds.

A problem unique to homeless persons is that many have trouble sleeping after they are housed. The new setting may seem too quiet, or the person may be unable to sleep on a bed until learning how to relax and feel safe. In these cases, Kalinowski may prescribe a sleep medication to help the person adjust. "Prescription medications for sleep problems are best used in short duration because of the potential risk for dependency," he says.

Treatment Approaches

Approaches to treating sleep difficulties include behavioral therapies, relaxation techniques, and sleep medications called *hypnotics*, which can induce sleep and help maintain sleep. Clinicians should prescribe medication only when the

sleep problems are causing difficulties with the person's daily activities, and after evaluating the cause of insomnia and trying a combination of behavioral approaches. Possible side effects of taking hypnotics include morning sedation, memory problems, headaches, sleepwalking, and a night or two of poor sleep after stopping the medication (NSF, 2013a).

When deciding if, when, and which sleep aid to prescribe, patient safety is the provider's top priority. Kalinowski says, "Medications to help people fall asleep and stay asleep can be risky in patients with untreated medical causes of sleep disorders, for example, obstructive sleep apnea." Comorbidities, such as chronic disease and mental health and substance abuse disorders, must also be taken into consideration.

Taking sleep medications may also increase a homeless individual's risk of being unable to respond to dangerous situations, adds Rieke. "I will offer sleep medications, and we can discuss the pros and cons of taking them," she says. Providers may wish to refer to the clinical guideline for evaluating and managing insomnia, including pharmaceutical therapy options, published in the *Journal of Clinical Sleep Medicine* (Schutte-Rodin, Broch, Buysse, Dorsey, & Sateia, 2008).

The dietary supplement melatonin is relatively benign and can be taken one hour before bedtime, says **Rachel Rodriguez-Marzec**,

"Low-quality sleep negatively affects one's ability to think clearly or engage with others, making it harder to get a job or housing."

Eowyn Reike, MD, MPH

FNP-C, PMHNP-C, with the University of New Mexico in Albuquerque. Studies suggest that melatonin may help induce sleep, increase the number of sleeping hours, and boost daytime alertness. It is particularly helpful for those with low levels of melatonin, such as some people with schizophrenia (Simon, 2013).

Mental Health Disorders & Insomnia

For the many homeless individuals already struggling with mental health problems, lack of sleep and the resulting disorientation compound those problems (CBC News, 2006). Insomnia difficulty falling or staying asleep—often has an emotional or psychological basis. Furthermore, it is bidirectional: insomnia can precede depression and doubles the risk of later becoming depressed (Carey, 2013). Mental health disorders often causing sleep problems include anxiety, depression, bipolar disorder, attention-deficit hyperactivity disorder, and posttraumatic stress (Simon, 2013). Given that sleep problems are intertwined with mood disorders, a psychiatric evaluation may be helpful in identifying the cause of sleep problems.

Major Sleep Disorders

- » Insomnia
- » Snoring and sleep apnea
- » Daytime and extreme sleepiness
- » Narcolepsy
- » Shift work disorder
- » Restless legs syndrome (RLS)
- » Periodic limb movements in sleep
- » Circadian rhythm disorders

Source: Sleep disorders, National Sleep Foundation (2013)

Sleep & Posttraumatic Stress

Homelessness relates to posttraumatic stress in at least three ways (National Alliance to End Homelessness, 2012): many veterans suffer from posttraumatic stress as a result of their combat situations, which can lead to homelessness following their military service; traumatic events (i.e., witnessing or being victim of an attack) experienced during homelessness can cause posttraumatic stress; and homelessness itself is a traumatic event given the reality of homelessness being a stress-filled, dehumanizing, and dangerous circumstance.

People with posttraumatic stress have sleep problems for a variety of reasons, such as (US Department of Veterans Affairs, 2007):

- » Being on alert to protect themselves from danger
- » Worrying about general problems, being in danger, or anxiety about not being able to fall asleep
- » Using drugs or alcohol that interfere with sleep to help cope with posttraumatic stress symptoms
- » Having bad dreams or nightmares, which are particularly common with posttraumatic stress
- Having medical problems commonly found in individuals with posttraumatic stress (e.g., chronic pain, stomach problems, and pelvic-area problems in women)

Substance Abuse & Insomnia

Substance abuse may increase the risk for sleep disturbances and cause chronic insomnia. This is especially true for alcohol, cocaine, and sedatives (Simon, 2013). Studies suggest that cigarette smoking is related to sleep disturbance, perhaps because of the effects of nicotine and nicotine withdrawal on sleep (Phillips & Danner, 1995). Researchers estimate that about three-quarters of homeless adults are cigarette smokers, and while addressing tobacco use in this population is challenging (Baggett, Tobey, & Rigotti, 2013), pharmacotherapy and behavioral

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A man fashions a bed under a bridge.

strategies to reduce cigarette consumption could help improve sleep in the short run while reducing smoking-related deaths in the long term.

Not only can substance use interfere with restful sleep, it can be problematic for those who have stopped using. For example, alcoholics often suffer insomnia during withdrawal and, in some cases, for several years during recovery (Simon, 2013).

A Good Night's Sleep & Alcohol Don't Mix

"Homeless people may use alcohol to reduce stress and induce sleep," says Rodriguez-Marzec, "but alcohol is not a sleep aid. Although the short-term effect is to reduce the time it takes to fall asleep, overall, alcohol disrupts sleep, especially later in the night."

As alcohol wears off, it disrupts sleep by causing the person to wake up, feel anxious, or start sweating. The more a person drinks before sleep, the stronger these sleep disruptions may be. REM (rapid eye movement) sleep is the stage of sleep often characterized by vivid dreams, occurring about 90 minutes after falling asleep. Alcohol reduces REM sleep, which is vital for memory, concentration, and mental restoration. Furthermore, alcohol suppresses breathing, which can precipitate sleep apnea (*Alcoholism: Clinical & Experimental Research*, 2013; CDC, 2013; Ross, 2013).

Studies of Sleep & Homelessness

Although homelessness poses obvious problems for sleeping, more research is needed into the interrelationships of sleep quality and sufficiency, health conditions, and homelessness. Here are highlights of recent studies illustrating the prevalence of sleep deprivation among the homeless population and documenting factors associated with insufficient sleep.

- In 2011, House the Homeless in Austin, Texas, conducted a health/sleep study (Troxell & Simonich, 2011) of 204 individuals who had experienced shelter stays. Findings include:
 - Only about one-third felt rested upon waking in the morning; 70 percent reported that they occasionally felt so tired that they could not function normally during the day.
 - Eighty-eight percent took 15 minutes or longer to fall asleep; 77 percent reported needing 15 minutes or longer to return to sleep once awakened.
 - When asked what keeps them from sleeping, 64 percent reported that others' snoring woke them up; more than 51 percent reported that their mind keeps racing; more than 27 percent responded that they fear being hurt; and 10 percent said that they hear voices inside their heads.
- A study examining the sleep patterns and lifestyle factors of homeless women residing in downtown Los Angeles found that compared to the general population, these women experienced atypical sleep patterns, particularly a day/night sleep pattern (i.e., sleeping during the day and being awake at night) and sleeping six or fewer hours a day. Researchers attributed these sleep disturbances to a number of causes, including inadequate sleeping arrangements, substance abuse, mental disorders, loneliness, and concerns about safety and money (Davis & Shuler, 2000).
- » A study investigating sleep disturbance among Boston's homeless population found similar results. Study participants reported an average of 6.3 hours of sleep per night, with some individuals reporting as few as 3.5 hours per night (Corning, 2010), substantially fewer than the seven-to-nine hours recommended for adults (NSF, 2013b).
- » In Toronto, researchers found that nearly half of the homeless people surveyed had fewer than six hours of sleep on most nights. Reasons for the lack of sleep included noisy shelters, fear of getting hurt or having possessions stolen, and having nightmares, along with chronic worry about finding a safe place to sleep every night (CBC News, 2006).
- » In an informal survey of homeless people in San Diego, Schanes (2010) collected their thoughts and feelings about sleep. In addition to many of the factors already described, survey participants reported these causes of sleeplessness:
 - Medical and physical conditions or being on certain medications (e.g., bronchodilators, decongestants)
 - Noise from traffic, businesses, fire stations, sirens or teenage skateboarders
 - Too much light
 - Hard, cold, or hot ground or debris on the ground
 - Vermin: bugs, rats, birds
 - Weather conditions, especially if the person lacks protection from extreme conditions
 - Harassment by pedestrians, people driving by, other homeless people, and the police
 - Being roused by people asking for blankets or cigarettes, looking for criminals or friends, asking for directions, giving away food or other things

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The Worst Part of Being Homeless

When a bed is unavailable, homeless people may sleep sitting in chairs, on hard benches or pews, or in cars. When asked what it is like sleeping in a chair, one homeless man in San Francisco reported that his arms and legs go numb, and that although homelessness is hard, "the worst part of it is sleeping in these chairs" (Day, 2013).

In addition to causing aches and pains, persistently sleeping on inappropriate surfaces may lead to peripheral edema or lower extremity edema, ulcers, blood clots, and peripheral vascular disease, which causes substantial disability as affected limbs are at higher risk of amputation and infection (World Health Organization, 2014).

Hardly ideal, sleeping in a chair may be an acceptable alternative for those who need a safe location to rest or if the chair is out of the elements. Having a chair to sleep in may help the individual avoid bed bugs and be preferable to sleeping on filthy floors.

Sleeping with One Eye Open

"When I first became homeless, I tried sleeping in a shelter, but it didn't work," says **Larry Adams**, founding member of the Boston Health Care for the Homeless Program's Consumer Advisory Board. Currently a regional representative on the National Consumer Advisory Board, Adams was homeless for more than

four years. "It's hard to sleep in a shelter," he says. "You never know if you're going to be robbed or if the person beside you will be robbed. If that happens, when you wake up everyone is looking at you and you're the suspect."

Adams left the homeless shelter and began sleeping on the streets. "There are a lot of interruptions



Improvised shelter in a church building in Nashville, Tennessee.

when you're trying to sleep: being told that you can't sleep there or flashing lights in your face," he says. "There's a constant fear of violence; you must be vigilant." Adams felt safe when he was with trusted friends who would watch out for one another and respect others' right to sleep. Noise was not a problem for Adams. "You get used to it," he explains. "You develop a sixth sense and become able to distinguish between good and bad noises."

Establishing & Maintaining Healthy Sleep Habits

Regardless of what is causing sleep problems, it is important to establish and maintain healthy sleep habits. The promotion of quality nighttime sleep and full daytime alertness is known as *sleep hygiene*. Improved sleep hygiene is the safest approach to addressing trouble falling and staying asleep before starting prescription sleep medication, says Kalinowski.

Tips for improving sleep include maintaining a regular sleep/ wake routine; making sure the sleep environment is quiet, dark, relaxing, and neither too hot nor too cold; and avoiding alcohol, cigarettes, and heavy meals in the evening (Thorpy, 2003).

Since napping can have a negative effect on the length and quality of nighttime sleep, it is not for everyone. A short nap of 20 to 30 minutes, however, can help to improve mood, restore alertness, enhance performance, and reduce mistakes and accidents (NSF, 2013c).

Clinicians may hesitate to bring up sleep hygiene because they assume that poor sleep habits are uncontrollable for persons experiencing homelessness. If they have a regular sleeping place, however, such as a camp or emergency shelter, homeless individuals can work to establish a nighttime routine. "We adapt sleep hygiene practices to make them viable for the homeless situation," says **Michelle Nance**, **MS**, **NP**, **RN**, with the San Francisco Medical Respite and Sobering Center in California. For example, she asks clients what physical activity might help them relax before sleep, such as simple stretching or rubbing their temples.

Dawn Cogliser, FNP, MSN, RN-BC, with Options of Southern Oregon encourages clients to establish sleep rituals, such as

practicing meditation or listening to calming music. Cogliser facilitates wellness groups where she teaches a simple mindfulness practice, the 20 Breaths Exercise, which she finds effective in improving homeless clients' quality of sleep. "Your breath is free and always with you, no matter where you are," Cogliser says.

"I encourage clients to find one thing—such as a rock or a leaf, something easy to carry

about—that brings them peace," continues Cogliser. "The next step is to form a clear mental image of the object, which can be visualized before drifting off to sleep or for night waking." Using this visualization technique, one of Cogliser's clients was able to sleep uninterrupted for three hours for the first time in months.

Creating Space for Better Rest & Uninterrupted Sleep

"Shelters are by nature institutional, so they impose their schedule on guests," says **Rev. Rick Reynolds,** executive director of Seattle's Operation Nightwatch, an interdenominational Christian ministry serving impoverished and homeless individuals and providing emergency shelter placement for homeless men, women, and children. "If shelters were open 24 hours a day, perhaps clients would be able to get better rest and uninterrupted sleep, but if one person is snoring or if others are acting out, when does the person have a chance to catch up on sleep?"

Nightwatch works with congregation groups that take eight to 10 homeless individuals for the evening. These programs allow clients to sleep in a common space, for example, a fellowship hall or church library. "We screen clients going to a church setting for behavioral health issues," Reynolds says, "which helps keep the project manageable for its volunteer supervisors. The setting is more relaxed than a shelter, clients get to know the routine, and there isn't much turnover among sleepers. It's quieter with fewer people, and there is more distance between sleepers than in a shelter." These factors improve the sleep quality of the program's participants.

Recommendations for Improving Sleep Quality at Homeless Shelters

In the Austin health/sleep study, more than 93 percent of the homeless participants reported needing more sleep than they got. Loud talking alone was a significant factor involved in waking up 64 percent of shelter consumers. Other controllable noise factors included ringing telephones, alarm clocks, doors slamming, computer activity, traffic noise, and trash removal. Based on these findings, researchers made recommendations for steps that shelters should take immediately to reduce or eliminate controllable noise factors (Troxell & Simonich, 2011):

- » Replace ringing telephones with flashing light telephones
- » Silence all alarms
- » Mute slamming doors
- » Isolate or end all computer activity
- » Install sound deadening materials in the ceiling and walls
- » Delay trash removal until waking hours
- » Stop all unnecessary loud talking
- » Investigate the possibility of shelter-wide white noise remediation to mask ambient shelter sounds

Additional recommendations for shelters and other homeless service providers include:

- » Encourage smokers to enter a smoking cessation program since smoking is a major contributor to snoring (Hitti, 2004)
- » Coordinate with health care providers to ensure that individuals' health needs are being addressed
- » Coordinate nutritionists, dietitians, and shelter food providers to create healthful, nutritious meals since good nutrition may help promote sleep (Simon, 2013)
- » Involve people experiencing homelessness in designing and running non-contact exercise and sports programs
- » Collect noise-blocking earplugs and light-blocking sleep masks, which are easy for homeless people to carry and reuse

Getting enough sleep may be difficult for many of us, but it is next to impossible in a noisy shelter or curled up on a sidewalk. The cost of insufficient sleep is much higher than most people realize, and no one should underestimate the importance of sleep to one's health. Improving the sleep quality for those experiencing homelessness has great potential to improve their well-being and potential to emerge from homelessness.



Rev. Rick Reynolds

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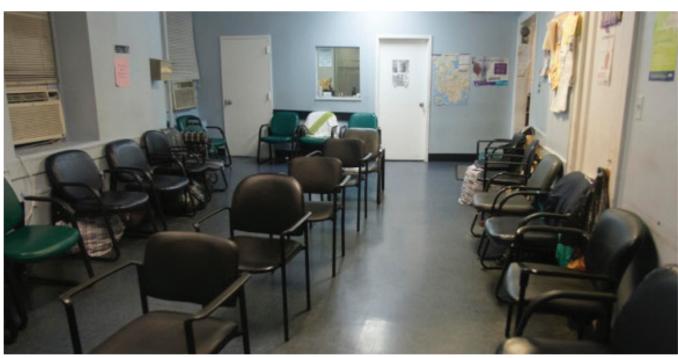
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Waiting area in a homeless shelter. When the shelter is crowded, people often sleep in these hard plastic chairs.