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Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

CBT-I SUPPORTED TAPERING OFF SLEEP AIDS

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SPEAKER DISCLOSURES

- No conflicts of interest
- Note that the opinions expressed in this presentation are my own and do not reflect those of the United States government

PLANNER DISCLOSURES

The following series planners have no relevant conflicts of interest to disclose; other disclosures have been mitigated.

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OBJECTIVES

1. Describe the epidemiology, diagnosis, and treatment of insomnia, as well as the prevalence of sleep medication prescriptions
2. Provide an overview of the dangers of sedative/hypnotic use and how to effectively taper these medications
3. Review the basic components of CBT for insomnia and strategies for how to incorporate these into medication tapers and general psychiatry visits

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EPIDEMIOLOGY OF INSOMNIA

- 1/3 of adults report at least one nighttime symptom of insomnia
- 40% who present to primary care report insomnia
- Prevalence of 5-10% when adhering to diagnostic criteria
- More common: women, increasing age, shift work, psychiatric/medical comorbidities
- Many negative consequences: economic, occupational, social, medical/psychiatric

(Morin & Jarrin, 2022)

COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA

- Considered gold-standard treatment for insomnia (Schutte-Rodin et al. 2008, Edinger et al. 2021)
- Effective in treating insomnia across many different settings and patient populations
  - Similar efficacy to medications within 6-8 weeks, better outcomes at 6-24 months, less side effects (original JAMA study; Morin et al. 1999)
  - Multiple newer studies in support (Brasure et al. 2015, Johnson et al. 2016)
  - Included in guidelines for insomnia such as AASM (Edinger et al. 2021) and DOD (Management of Chronic Insomnia and Obstructive Sleep Apnea Workgroup 2025)
- Effective for individuals with comorbid psychiatric disorders (Hertenstein et al. 2022)
- May also serve as prevention/early intervention for other mental health disorders such as depression (Palagini et al. 2024)

EVIDENCE BASE FOR CBT-I

- However, dissemination of CBT-I has been slow (Muench et al. 2022)
  - Current research: Variations to make this more accessible
  - Groups, video, digital/asynchronous, brief format, stepped care
- Medications are commonly used as short term treatment despite guidelines

COMMON MEDICATIONS/SUBSTANCES USED FOR INSOMNIA

- Sedative-hypnotics (e.g., benzodiazepines, Z-drugs)
- Antidepressants
- Antipsychotics
- OTC sleep aids
- Alcohol
- Cannabis
- Melatonin (*I think of this more to regulate circadian rhythm)
- Herbal supplements

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SLEEP DISORDER (SEDATIVE-HYPNOTIC) DRUGS

- **Z-drugs**
  - zaleplon
  - zolpidem
  - eszopiclone
- **Benzodiazepines**
  - estazolam
  - flurazepam
  - quazepam
  - triazolam
  - temazepam
- **Melatonin agonists**
  - ramelteon
  - tasimelteon
- **Orexin antagonists**
  - daridorexant
  - lemborexant
  - suvorexant
- **Other**
  - butabarbital
  - secobarbital
  - doxepin
- **Over the counter**
  - diphenhydramine
  - doxylamine

(FDA 2023)

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ANTIDEPRESSANTS

- trazodone
- nefazodone
- mirtazapine
- nortriptyline
- amitriptyline

- Evidence = mixed though many are sedating

(Klugherz, Mansukhani, & Kolla 2025)

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EPIDEMIOLOGY OF SLEEP MEDICATION PRESCRIBING

- Prescription of sleep medications is common, though estimates can vary!
- Children/young adults in commercial claims database (Bushnell et al. 2025)
  - 20.2% of children and 37.4% of older youth with sleep medication prescription
  - More common in individuals with psychiatric comorbidities
- Adults in Mayo Clinic Biobank (Kolla et al. 2024)
  - 33% prescribed at least 1 hypnotic, 10% $\geq$ 2
  - More likely to be young, F, more diagnostic codes
  - For multiple hypnotics: higher prevalence of mood, anxiety, SI, RLS, chronic pain
- Adults in NHANES study (Zuo et al. 2022)
  - Prevalence for medications commonly used for insomnia increased: 13.3% (women), 8.9% (men) (2005-2006); 15.2% (men) and 17.0% (women) (2013-2014)

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EPIDEMIOLOGY OF SLEEP MEDICATION PRESCRIBING

- JAMA article: Patterns in outpatient benzodiazepine prescribing (Agarwal & Landon 2019)
  - Data from the National Ambulatory medical care survey (2003-2015)
  - 386,457 ambulatory care visits
  - Use of benzodiazepines increase (3.8% to 7.4%)
  - Stable amongst psychiatrists, but increased by other physicians- driven by primary care
  - More common for indications other than anxiety and insomnia

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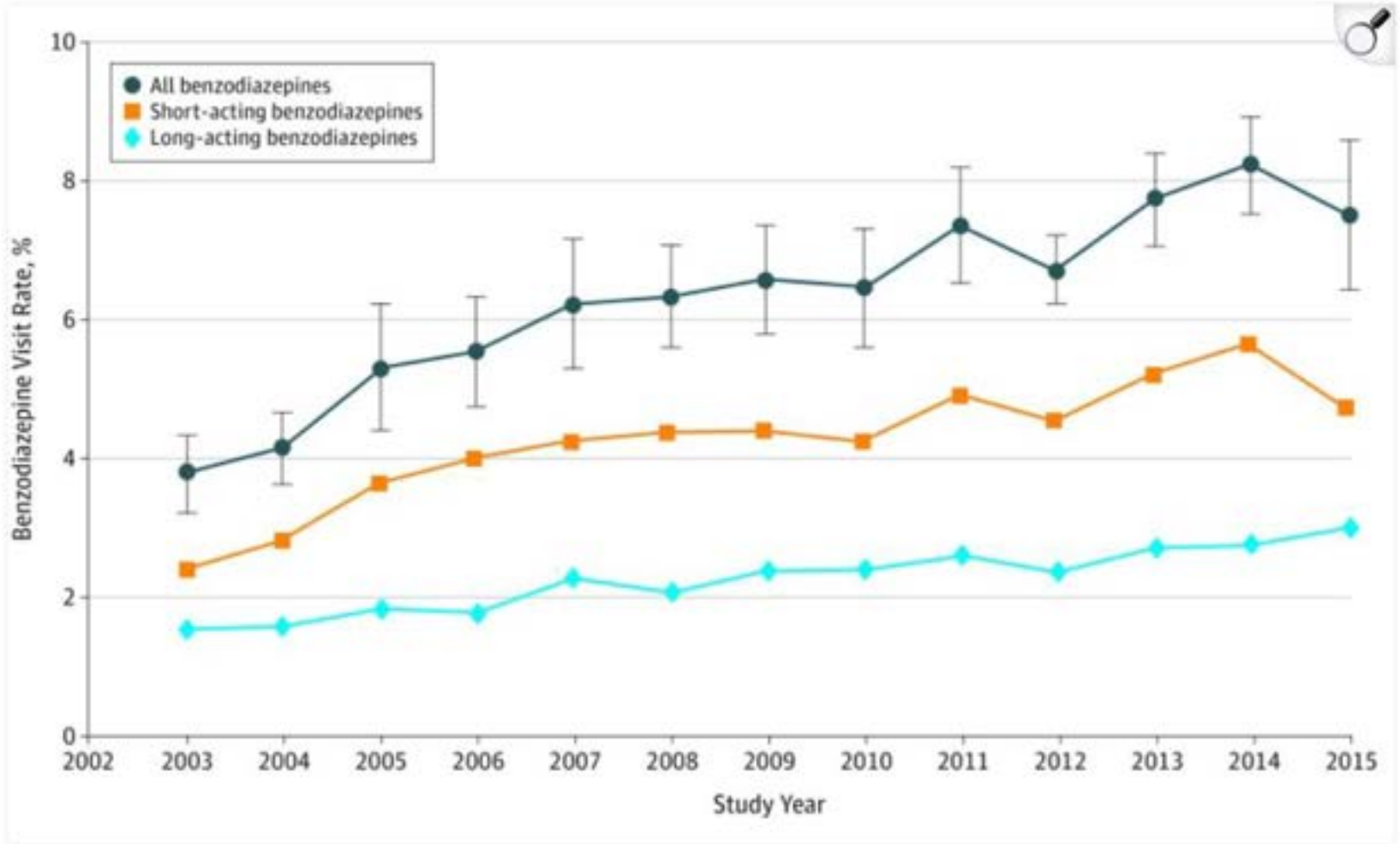
Figure 1. Benzodiazepine Visit Rate in the United States.



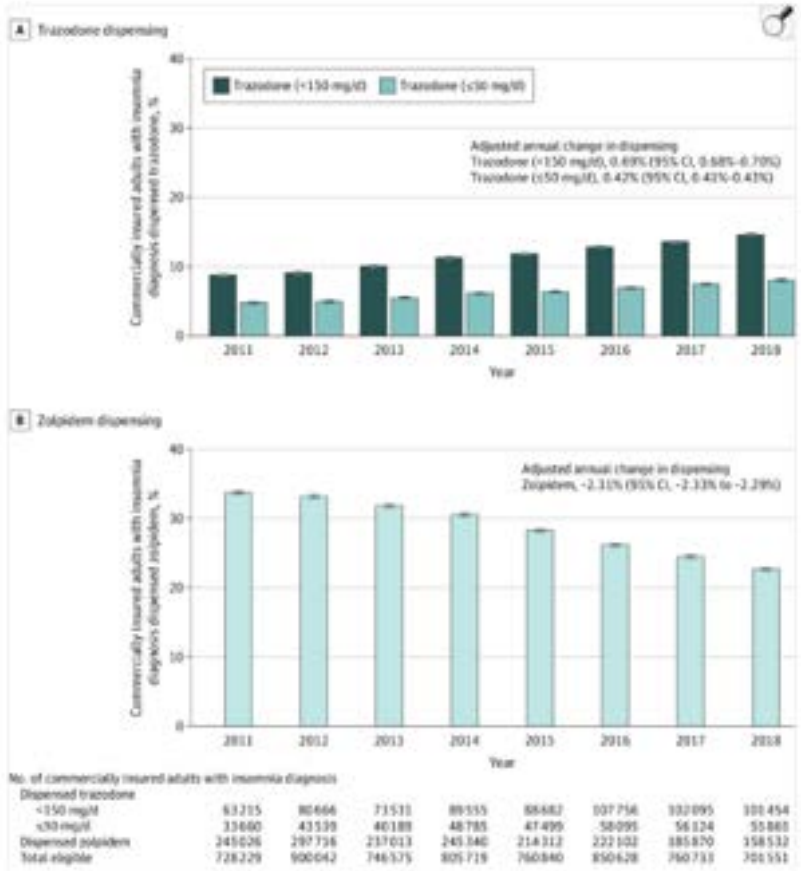
Error bars indicate 95% CI.

(Agarwal & Landon 2019)

EPIDEMIOLOGY OF SLEEP MEDICATION PRESCRIBING

- JAMA article reviewing trends in zolpidem and low-dose trazodone prescribing (Wong et al. 2020)
  - Population: commercially insured adults (2011-2018)
  - Low dose trazodone prescription increased during period before/2 years after 2017 guideline suggesting NOT using this for insomnia
  - Zolpidem prescription had been decreasing prior to 2013 safety announcements and 2019 black box warning
  - In 2018: zolpidem prescriptions more common than low dose trazodone, but difference getting smaller

Figure 2. Percentage of Commercially Insured Adults With an Insomnia Diagnosis Dispensed Zolpidem or Low-Dose Trazodone, 2011-2018.



No. of commercially insured adults with insomnia diagnosis

Dispensed trazodone								
<150 mg/d	63215	80666	71531	89555	88682	107756	102095	101454
≤50 mg/d	33660	43539	40188	48785	47499	58095	56124	55883
Dispensed zolpidem	245026	297716	257013	245340	214312	222102	185870	158532
Total eligible	728229	900042	746575	805719	760840	850628	760733	701551

The 2011 to 2018 IBM MarketScan Research Databases were used to measure trends in the dispensing of zolpidem and low-dose trazodone among US adults (aged ≥18 years) with employer-sponsored insurance or Medicare supplemental plans who had a diagnosis code for insomnia. For each year, the percentage of adults who received at least 1 dispensing of low-dose trazodone (<150 mg/d or ≤50 mg/d) or any dosage of zolpidem was calculated among all adults who contacted the health care system in the year, had at least 12 months of prior continuous medical and drug insurance, and had a diagnosis code for insomnia recorded in the past year (mean of 781 790 adults per year in the MarketScan databases). Individuals who had trazodone dispensed multiple times in a given year were counted only if all prescriptions dispensed were below the dose threshold to avoid counting individuals tapering up to or down from higher dosages (more likely indicated for depression). Multivariable binomial regression models were used to estimate the annual percentage change in the dispensing of each drug in 2011 to 2018, adjusted for age, sex, and depression diagnosis, in which depression diagnosis was defined as having at least 2 outpatient codes or 1 inpatient code for depression in the past year. The short black dashes above the vertical bars indicate the 95% CIs around the annual percentages.

(Wong et al. 2020)

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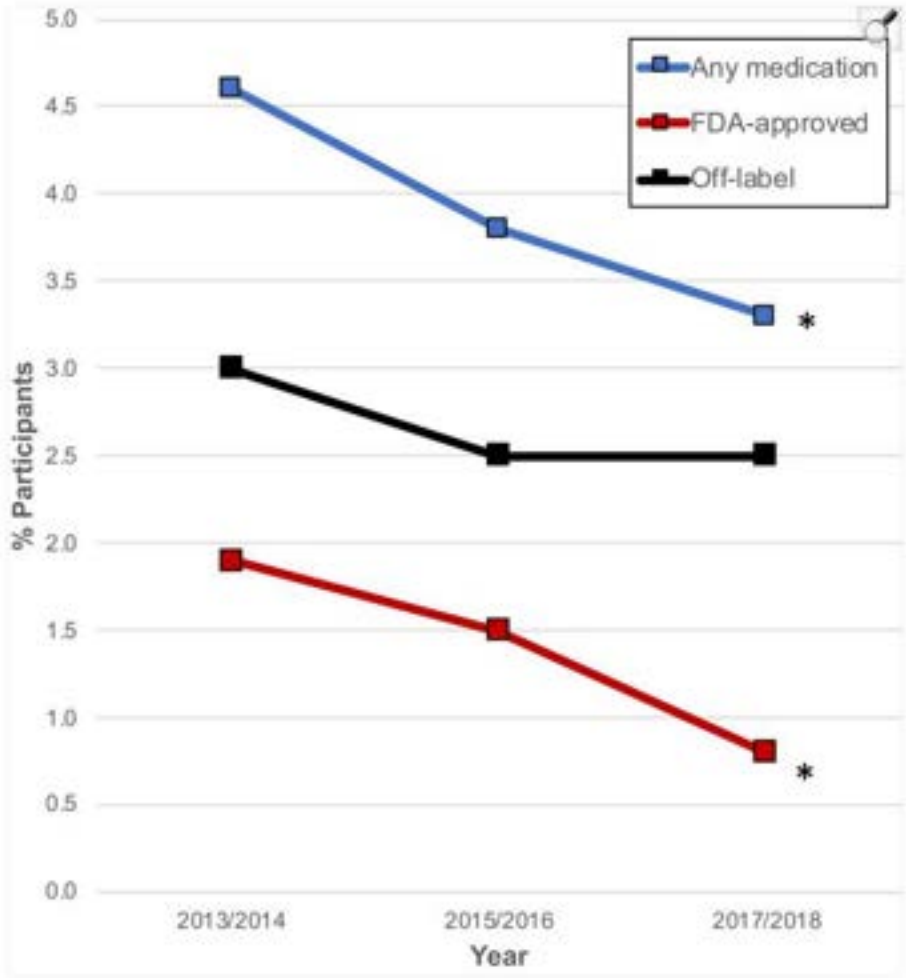
Figure 1. Trends in use of medications for sleep disturbance, National Health and Nutrition Examination Survey, 2013–2018.



*$P < .05$. Food and Drug Administration (FDA)–approved medications include zolpidem, suvorexant, butabarbital, quazepam, estazolam, flurazepam, triazolam, tasimelteon, eszopiclone, temazepam, ramelteon, secobarbital, doxepin, and zaleplon. Off-label medications include all other medications reported to be used for sleep disturbance.

Use of prescribed medication for sleep disturbances is declining in the US per NHANES study data (Kaufmann et al. 2022):

* Odds of using medications for poor sleep decreased 31% between 2013-2018
* In those ≥ 80 years old- 86% decline

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WHY TAPER? EFFECTS OF BENZODIAZEPINES

- Many negative side effects (Peng, Morford, & Levander 2021):
  - High risk for misuse and dependence, with physiologic dependence occurring after a few weeks of regular use
  - Withdrawal symptoms- insomnia, anxiety, even seizures
  - Risk of overdose, death (including from withdrawal)
  - Respiratory depression
  - Falls, MVAs
- Risks magnified in older adults, per Beers criteria- **AVOID** (2019 American Geriatrics Society Beers Criteria Update Expert Panel):
    - Increased sensitivity + decreased metabolism (long-acting meds)
    - Falls, cognitive impairment, delirium, fractures, and motor vehicle crashes (all)
- Associated with worse outcomes than zolpidem IR and low dose trazodone in a recent study (Wickwire et al. 2023)
- Insomnia treated cohort (zolpidem, trazodone, benzodiazepines)- higher rates/risk of falls, higher rates of health care utilization and costs (Amari et al. 2022)
  - Interestingly, trazodone was the highest across all outcome measures!!!

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WHY TAPER? EFFECTS OF Z-DRUGS

- Can impair cognitive function (Stranks & Crowe 2014)
- Added to boxed warning for zolpidem, eszopiclone, and zaleplon (2019 [FDA 2023]):
  - Serious injuries can be caused by sleepwalking
- Lowered recommended doses of zolpidem for women (FDA 2023)
  - High levels in blood in AM impair alertness
  - Extended release is worse
  - Also recommend considering lower levels in men
  - Recommended dosing: 5 mg, 6.25 mg (SA)
- Recent systematic review and network meta-analysis recommends DORAs over z-drugs given improvement in sleep and minimal impairment in cognition (Zhou, Liu, Tang & Tang 2023)

EFFECTS OF COMMON ANTIDEPRESSANTS ON SLEEP

Class/Medication	Pharmacology	Effects on Sleep
TCA	Serotonin and norepinephrine reuptake inhibition, histamine H_1 antagonism	Decreased sleep latency, REM suppression, increased REM latency
SSRI	Serotonin reuptake inhibition	REM suppression, increased REM latency
Selective SNRI	Serotonin and norepinephrine reuptake inhibition	REM suppression, increased REM latency
Trazodone, nefazodone	Serotonin-2 antagonism	Decreased sleep latency, increased slow wave sleep
Mirtazapine	Serotonin-2 and histamine H_1 antagonism	Decreased sleep latency, increased slow wave sleep
Bupropion	Norepinephrine and dopamine reuptake inhibition	Increased REM sleep

(Winokur & Demartinis 2012)

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EFFECTS OF SUBSTANCES ON SLEEP

Table 2.

Objective sleep changes during early and late abstinence, in comparison to healthy sleepers

	Alcohol		Cocaine		Cannabis		Opioids	
	Early Abs	Late Abs	Early Abs	Late Abs	Early Abs	Late Abs	Early Abs	Late Abs
Sleep latency	?	↑	?	↑	↑	?	↑	↑
Total sleep time	?	↓	?	↓	↓	↓	↓	↓
Slow wave sleep	?	↓	↓	↓	↓	?	↓	↓
REM sleep	?	?	?	↓	↑	↓	↓	?
REM latency	?	?	↓	?	↓	?	↑	?

Early Abs Early Abstinence or acute withdrawal

Late Abs Late Abstinence or subacute withdrawal

? Insufficient data or conflicting results across studies

APPROACHING SLEEP MEDICATION USE WITH PATIENTS

- Ensure you have the right diagnosis
  - Why is the patient on this medication?
  - Do they have chronic insomnia?
  - Was the medication started as a short-term solution but never stopped?
  - Are there other sleep disorders that may contribute?
  - Are there other medical or psychiatric comorbidities that may contribute?
- Have they had a full sleep evaluation? Polysomnography?
- Consider a thorough sleep history to identify sleep-related concerns which may contribute to medication use
  - E.g., environmental disruptions, nightmares/nighttime hyperarousal, pain

DEFINING AND DIAGNOSING INSOMNIA

- From DSM-IV to V: Name changed from Primary Insomnia to **Insomnia Disorder** (SAMHSA 2016)
- Recognizes insomnia as **COMORBID** with other psychiatric, substance use, and medical disorders (Morin & Jarrin 2022)
- Often insomnia symptoms persist even following successful treatment of other diagnoses (e.g., PTSD [e.g., Pruiksma et al. 2016], depression [e.g., Nierenberg et al. 2010])
- Timing- present for 3 months and 3 days per week to reflect severity (APA 2022)

DEFINING AND DIAGNOSING INSOMNIA

- **Definition of insomnia per DSM-V-TR (APA 2022):**
- Dissatisfaction with sleep quantity or quality, associated with 1 or more of the following: Difficulty initiating sleep, difficulty maintaining sleep, or early morning awakening
- Present for at least 3 months
- At least 3 times per week
- Causing clinically significant distress or impairment
- Sleep difficulty occurs despite adequate opportunity

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DEFINING AND DIAGNOSING INSOMNIA

- NOT better explained by or occurring exclusively during another sleep/wake disorder
- NOT adequately explained by comorbid medical or psychiatric disorder
- NOT attributable to the physiological effects of a substance

(APA 2022)

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DIFFERENTIAL DIAGNOSIS OF INSOMNIA

- Behaviorally insufficient sleep syndrome (BISS)
- **Other sleep disorders:**
  - Obstructive sleep apnea
  - Restless leg syndrome
  - Periodic leg movement disorder
  - Circadian rhythm disorders (delayed sleep-wake phase disorder, advanced sleep-wake phase disorder)
    - Also consider changes to sleep that occur during normal aging
- **Other psychiatric disorders:**
  - Major depressive disorder
  - Posttraumatic stress disorder (nightmares, nighttime hyperarousal)

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COMORBID INSOMNIA WITH OBSTRUCTIVE SLEEP APNEA (COMISA)

- Very common to have both!
  - These are the two most common sleep disorders
- 30-40% of insomnia patients have comorbid OSA
- 30-50% of patients with OSA report insomnia symptoms
- COMISA may also be associated with increased risk of cardiovascular disease and all-cause mortality
- Treating BOTH is important!
  - Managing insomnia in patients with OSA can lead to better outcomes
  - Comorbid insomnia can make CPAP adherence more challenging
  - CBT-I is effective for COMISA, may improve CPAP use
- Benzodiazepines can worsen OSA (respiratory depression -> worse apnea-hypopnea index)
  - Note Z-drugs do not carry same risk

(Sweetman et al. 2022)

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KEYS TO ADDRESSING INSOMNIA DURING GRADUAL DOSE REDUCTION OF HYPNOTICS

- Take a curious and collaborative stance with patients
- Involve patient in decision-making
- Ask – Tell – Ask
- Tell: Provide detailed explanations and rationale
- Acknowledge change will be difficult and respect decisions to not change
- Offset withdrawal effects by increasing sleep drive

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DISCUSSING HISTORY OF TREATMENT

- Find out:
  - Prior treatments
    - Prescribed sedative-hypnotics and sedating medications
    - Over-the-counter aids
    - Substances (such as alcohol and cannabis)
    - Sleep hygiene
    - CBT-I
  - Current treatments (including all categories above)
- What has worked? What hasn't worked?

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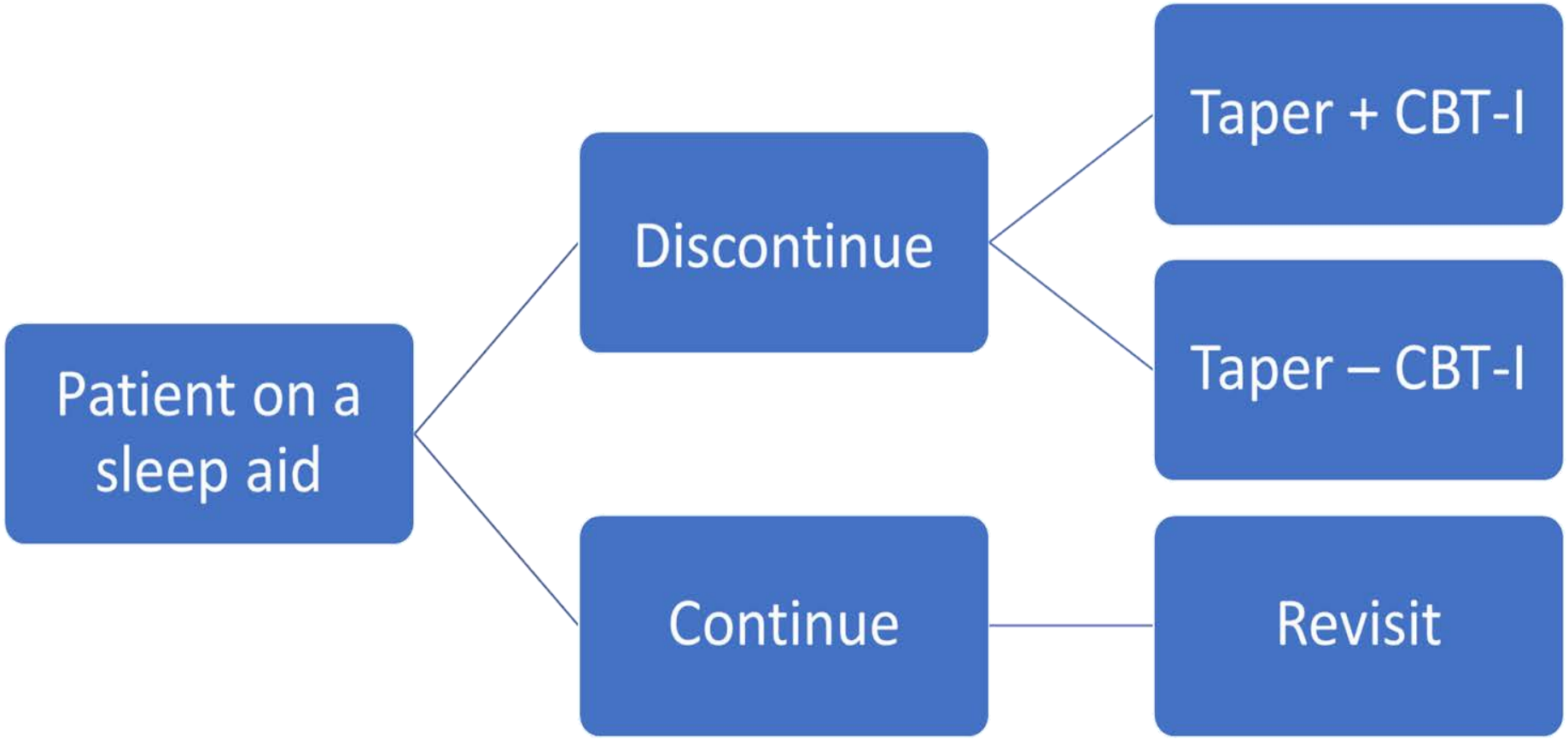
CLARIFY THE PATIENT'S GOALS



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TAPERING GUIDELINES

- Will review strategies recommended in the following recently published guidelines
  - Watson NF, Benca RM, Krystal AD, McCall WV, Neubauer DN. **Alliance for Sleep Clinical Practice Guideline on Switching or Deprescribing Hypnotic Medications for Insomnia**. *J Clin Med.* 2023;12(7):2493. doi: 10.3390/jcm12072493.
    - **Conducted literature search**
    - **Reviewed/graded evidence**
  - Palagini L, Brugnoli R, Dell'Osso BM, Di Nicola M, Maina G, Martinotti G, Maruani J, Mauries S, Serafini G, Mencacci C, Liguori C, Ferini-Strambi L, Georffroy PA, Balestrieri M. **Clinical practice guidelines for switching or deprescribing hyponotic medications for chronic insomnia: Results of European neuropsychopharmacology and sleep expert's consensus group.** *Sleep Medicine.* 2025;128:117-126. doi: 10.1016/j.sleep.2025.01.033.
    - **Updated for medications available in Europe**
    - **Also included literature search and review of evidence by professionals**

BENZODIAZEPINE RECOMMENDATIONS

- Withdrawal and rebound insomnia with abrupt discontinuation
  - More rebound if shorter half life
  - Data does not suggest that switching to a longer acting hypnotic medication facilitates taper
- Slow taper recommended
- No consensus on tapering
  - Generally, reduce dose by 10-25% 1-2 weeks at a time
- Behavioral strategies alongside tapering generally recommended
  - Though one meta-analysis showed CBT-I + gradual tapering more effective in short term (though not long term) (Takaesu et al. 2019)

(Watson et al. 2023, Palagini et al. 2025)

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BENZODIAZEPINE RECOMMENDATIONS

- Good studies to cite for patients:
  - Systematic review of deprescribing in older adults (Reeve et al. 2017):
    - Adding psychological support more effective than just patient education along with taper
    - Deprescribing DID NOT result in worse sleep quality
  - Another systematic review of deprescribing in older adults (Paquin, Zimmerman & Rudolph 2014):
    - All groups effective (taper, taper + CBT, taper + med substitution, independent of dose/duration) of medication use

(Watson et al. 2023, Palagini et al. 2025)

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Z-DRUG RECOMMENDATIONS

- Most studies of Z drugs have not tapered; instead, have substituted with placebo
- Tapering necessary, especially at high doses
  - Withdrawal/rebound insomnia seen with zolpidem
  - Less common in eszopiclone, generally not observed with zaleplon (no withdrawal
- Tapering schedule:
  - 25% reduction per week (10-25% per Palagini et al. 2025)
  - Note can be limited by formulation/available doses
- Discuss risks, educate patients about discontinuation, offer alternative strategies, such as CBT-I which can facilitate reduction

(Watson et al. 2023, Palagini et al. 2025)

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BRIDGING WITH ANOTHER MEDICATION

- Per European guidelines (Palagini et al. 2025):
  - Melatonin PR 2 mg and Daridorexant 50 mg can reduce sedative-hypnotic use
  - Eszopiclone can facilitate discontinuation of hypnotic benzodiazepines

ANTIDEPRESSANTS/ANTIPSYCHOTICS

- Gradual dose reduction
  - 10-25% per week like for benzodiazepines/Z-drugs

(Watson et al. 2023, Palagini et al. 2025)

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TAPER NOT REQUIRED

- Dual orexin receptor antagonists (unless at high doses)
  - Though some studies found rebound insomnia
- Doxepin
- Ramelteon (melatonin agonist)
- Melatonin 2 mg prolonged release

(Watson et al. 2023, Palagini et al. 2025)

ADJUNCT THERAPIES

- Written patient education
- Psychological
  - Sleep hygiene education
    - Insufficient evidence/not studied alone
  - Relaxation therapy
  - Stimulus control therapy
    - Part of other interventions studied, including CBT-I
      - More information to follow!
  - Sleep restriction therapy
    - More improvement/higher rates of discontinuation
      - Also part of CBT-I
  - Cognitive behavioral therapy
    - Some studies reporting higher rates of discontinuation, others with other sleep measures improved
- Self-efficacy enhancement
- Bridge with another medication

(Hintze & Edinger 2022)

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IMPORTANCE OF SCHEDULING A TAPER

- “PRN” reinforces distorted beliefs about needing to use a sleep aid
- PRN provides few opportunities to test assumptions about “perfect sleep = perfect day”
- PRN rewards being anxious before bedtime (relief is reinforcing)

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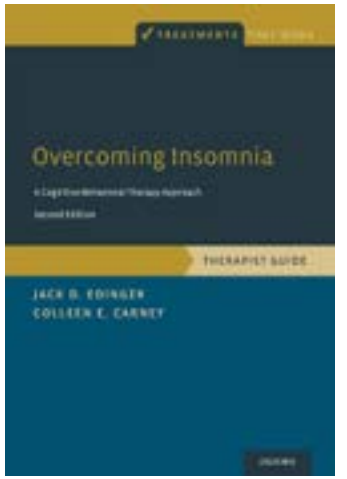
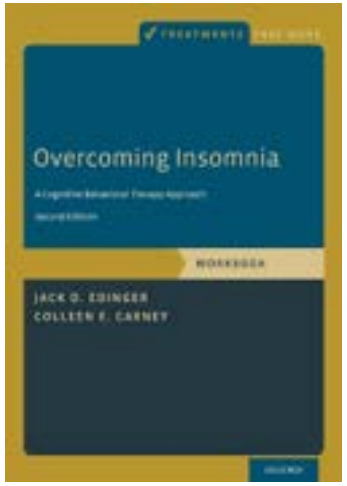
COMPONENTS OF CBT-I

- Psychoeducation ***most important
- Sleep Hygiene
- Sleep Diary
- Behavioral Components
  - –Stimulus Control***
  - –Time in bed restriction***
- Cognitive Components





Edinger, J. D., & Carney, C. E. (2008). *Overcoming insomnia: A cognitive-behavioral therapy approach, therapist guide.* Oxford University Press.

Edinger, J. D., & Carney, C. E. (2008). *Overcoming insomnia: A cognitive-behavioral therapy approach, workbook.* Oxford University Press.

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SLEEP HYGIENE

- Limit use of caffeinated beverages
- Limit use of alcohol/cannabis
- Get exercise (but not late in the evening)
- Keep bedroom quiet and dark
- Avoid an overly heated bedroom

(Edinger & Carney 2008)

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SLEEP DIARIES

- Consensus Sleep Diary
  - –Varying degrees of complexity
  - –Provides considerable data (potentially)
  - –Various means of calculating the parameters of interest
- Visual Sleep Log
- CBTi Coach App
  - –https://mobile.va.gov/app/cbt-i-coach

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	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
In Bed							
Time to Fall Asleep							
Awake After Sleep Onset							
Time Out of Bed							
Time in Bed TIB							
Total Sleep Time - TST							
Sleep Efficiency							

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TWO WEEK SLEEP DIARY

SleepEducation.org | AASM American Academy of SLEEP MEDICINE

INSTRUCTIONS:

(1) Write the date, day of the week, and type of day: Work, School, Day Off, or Vacation. **(2)** Put the letter "C" in the box when you have coffee, cola or tea. Put "M" when you take any medicine. Put "A" when you drink alcohol. Put "E" when you exercise. **(3)** Put a vertical line (|) to show when you go to bed. Shade in the box that shows when you think you fell asleep. **(4)** Shade in all the boxes that show when you are asleep at night or when you take a nap during the day. **(5)** Leave boxes unshaded to show when you wake up at night and when you are awake during the day.

SAMPLE ENTRY BELOW: On a Monday when I worked, I jogged on my lunch break at 1 PM, had a glass of wine with dinner at 6 PM, fell asleep watching TV from 7 to 8 PM, went to bed at 10:30 PM, fell asleep around Midnight, woke up and couldn't get back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7 AM.

Date	Day of the week	Type of Day (Work, School, Day Off, Vacation)	Noon	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Midnight	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM
sample	Mon.	Work		E					A				|									C M				
																									week 1	
																									week 2	

BEHAVIORAL COMPONENTS

- Stimulus Control of Sleep
  - Conditioning – the bed should only be associated with sleep and sex
  - Televisions don't belong in bedrooms!
  - Laptops/tablets/cellphones: light source, too much stimulation, introduce outside worries
- Time-in-Bed Restriction (Sleep Restriction)
  - Used to increase sleep drive at bedtime and throughout the night
  - Based on the calculation of Sleep Efficiency over a 1-2 week period
  - More details in CBT-I manual

(Edinger & Carney 2008)

STIMULUS CONTROL OF SLEEP: INSTRUCTIONS

- Use the bed only for sleep and sex
- Go to bed only when drowsy
- If you are lying in bed for 20-30 minutes and wide awake, frustrated, unable to sleep; get out of bed
- Go to another room and sit there and read or do some other relaxing activity until you feel drowsy, then return to bed
- Repeat as necessary until you fall asleep, or it is time to be out of bed for the day
- Get out of bed at the same time every day, regardless of how well you have slept
- Do not take naps

(Edinger & Carney 2008)

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COGNITIVE COMPONENTS

- Worrying about “things” – use Constructive Worry Time
  - Set aside a time during the day to “worry” even if you do not feel you need to; use the time for active problem-solving and planning.
  - Provide yourself with a reminder that you have this time set aside for worry.
    - https://drcolleencarney.com/resources/constructive-worry-worksheet/
- Worrying about sleep – addressing unhelpful beliefs and misattributions related to sleep
  - **Thought Records**
    - https://drcolleencarney.com/resources/the-thought-worksheet/
  - Guided discovery during session
  - Evidence for and against
  - Further psychoeducation (ask-tell-ask)

(Edinger & Carney 2008)

Constructive Worry Worksheet

CONCERNS	SOLUTIONS
1.	1.
	2.
	3.
2.	1.
	2.
	3.
3.	1.
	2.
	3.

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THOUGHT RECORD

The Thought Worksheet

Complete a Worksheet whenever you experience a distressing sleep- or fatigue-related thought

Situation	Mood	Distressing Thoughts Or Images	Evidence that the most distressing thought is true	Evidence that the most distressing thought may not be true	Alternative/ balanced thoughts	Rate mood now
Describe the situation in which the distressing thought arose	Describe mood in one word and rate the intensity (0-100%)	Write down any thoughts or images going through your mind. Does this thought activate fears about your well-being or how others may view you?	Circle the most distressing thought in the previous column. Write factual evidence for this distressing thought. Stay away from evidence that is not factual. For example, a thought that "feels" true is not factually true.	Write down evidence that does not support this thought (e.g., are there experiences that show this thought is not true 100% of the time?)	Write a thought that is a better summary of the evidence for the thought	Copy the feelings from column 2. Rerate the intensity of the feelings.

Reproduced from Carney & Manber (2008) *Quiet Your Mind and Get to Sleep*

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STRATEGIES FOR INCORPORATING CBT-I INTO MEDICATION TAPER (AND BEYOND!)

- Any introduction of CBT-I concepts into a visit can help!
- Remember, the environment plays a major role in the maintenance of insomnia
- Give basic sleep hygiene education
- Ask questions- a good sleep history can really help!
- Use sleep log to track medication use as well as gain other insights about sleep
- Look for patterns in sleep log that coincide with changes to medication dose

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STRATEGIES FOR INCORPORATING CBT-I INTO MEDICATION TAPER (AND BEYOND!)

- Ask what patients do when unable to sleep – and encourage them to get out of bed instead!
- Introduce constructive worry exercise -- quick to explain and useful to many patients with sleep-related anxiety
- Use sleep log data to help challenge maladaptive sleep cognitions (e.g., I can’t fall asleep without using zolpidem)
- Refer to sleep medicine if complex, interventions not working

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ONLINE RESOURCES

- Treatments that Work therapist manual and workbook
  - https://global.oup.com/academic/product/overcoming-insomnia-9780199339389?cc=us&lang=en&
  - https://global.oup.com/academic/product/overcoming-insomnia-9780199339402?lang=en&cc=us
- CBT-I worksheets and logs
  - https://drcolleencarney.com/resources/
- American Academy of Sleep medicine digital CBT-I resource list (though note this is evolving; published March 6, 2024)
  - Recommended first if access to formal therapy is limited
  - https://aasm.org/digital-cognitive-behavioral-therapy-for-insomnia-platforms-and-characteristics/
- Somryst: FDA-approved digital CBT-I prescription; has clinical trial data
  - https://dtxalliance.org/products/somryst/
- SleepioRx: Recently FDA-approved as well, also with clinical trial data
  - https://www.sleepiorx.com/
- CBT-I coach app
  - https://mobile.va.gov/app/cbt-i-coach

QUESTIONS/COMMENTS?

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CASE PRESENTATION: CBT-I + ZOLPIDEM TAPER

- 51 y/o M with mild OSA (not on CPAP), chronic pain, chronic insomnia (on zolpidem SA 12.5 mg for many years), PTSD, MDD, who presents for medication management with primary complaint of poor sleep
- He reports being uncertain as to why he has continued to take zolpidem despite feeling sleepy every day and sleeping over 8h each night
- Other psychotropic medications include citalopram, bupropion, propranolol, melatonin (9 mg)

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CASE PRESENTATION: CBT-I + ZOLPIDEM TAPER

- Did try dose reduction to 6.25 mg zolpidem with prior psychiatrist without success
- He also reports difficulty sleeping some nights due to pain, as well as nightmares which can be bothersome
  - Awakenings from nightmares can interrupt sleep, patients can have nighttime physiologic arousal -> alpha blockers (prazosin, clonidine)
- He is interested in zolpidem taper
  - We agree to full course of CBT-I combined with taper given prior difficulties

Sleep Diary

ID/NAME: [redacted]

	Sample	Th	F	S	S	M	T	W
Today's Date	4/5/08	4/10/25	4/11	4/12	4/13	4/14	4/15	4/16
1a. How many times did you nap or doze?	2 times	0	0	0	0	0	0	0
1b. In total, how long did you nap or doze?	1 hour 10 min.	0	0	0	0	0	0	0
2. What time did you get into bed?	10:15 p.m.	2100	2045	2200	2030	2100	2045	2040
3. What time did you try to go to sleep?	11:30 p.m.	2100	2045	2200	2050	2100	2045	2040
4. How long did it take you to fall asleep?	55 min.	3 min	5 min	5 min	5 min	5 min	3 min	5 min
5. How many times did you wake up, not counting your final awakening?	6 times	2	3	5	3	6	4	4
6. In total, how long did these awakenings last?	2 hours 5 min.	5 min	5 min	15 min	5 min	2 hrs.	5 min	5 min
7. What time was your final awakening?	6:35 a.m.	0805	0815	0915	0730	1030	0805	0805
8. What time did you get out of bed for the day?	7:20 a.m.	0810	0830	0940	0800	1040	0810	0810
9. Did you take any over-the-counter or prescription medication(s) to help you sleep?	☑ Yes ☐ No Medication(s): Relaxo-Herb Dose: 50 mg Time(s) taken: 11 pm	■ Yes ☐ No Medication(s): Dose: Time(s) taken:	■ Yes ☐ No Medication(s): Dose: Time(s) taken:	■ Yes ☐ No Medication(s): Dose: Time(s) taken:	■ Yes ☐ No Medication(s): Dose: Time(s) taken:	■ Yes ☐ No Medication(s): Dose: Time(s) taken:	■ Yes ☐ No Medication(s): Dose: Time(s) taken:	■ Yes ☐ No Medication(s): Dose: Time(s) taken:
10. How would you rate the quality of your sleep?	☐ Very poor ☑ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ☐ Poor ■ Fair ☐ Good ☐ Very good	☐ Very poor ☐ Poor ■ Fair ☐ Good ☐ Very good	☐ Very poor ■ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ☐ Poor ■ Fair ☐ Good ☐ Very good	■ Very poor ☐ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ■ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ☐ Poor ■ Fair ☐ Good ☐ Very good
11. Comments (if applicable)	I have a cold					Knees were hurting hacka bad		

There is hidden text between the data entry area and the computation area; This worksheet assumes the patient is in bed less than 24 hours

Week 1		sample	day 1	day 2	day 3	day 4	day 5	day 6	day 7	AVERAGE	
Dates		8/1/2021	4/10/2025	4/11/2025	4/12/2025	4/13/2025	4/14/2025	4/15/2025	4/16/25		
Naps (minutes)		30	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	**Naps (minutes)**
Bedtime (Time went into bed)	Q1_BT	23:30	21:00	20:45	22:00	20:30	21:00	20:45	20:40	20:57	**Bedtime**
Lights out (Try to go to sleep)	Q2_LO	23:45	21:00	20:45	22:00	20:30	21:00	20:45	20:40	20:57	**Lights out**
Latency to sleep (minutes to fall asleep)	Q3_SL	30	3:00	5:00	5:00	5:00	5:00	3:00	5:00	4:43	**Time to fall asleep**
Total awakenings	Q4	3:00	2:00	3:00	5:00	3:00	6:00	4:00	4:00	3.86	**# of awakenings**
minutes awake in middle of night (how long awakenings last)	Q5_WASO	60	5:00	5:00	25:00	5:00	120:00	5:00	5:00	24:29	**Minutes awake in middle of night**
Wake time (time of final awakening)	Q6a_WT	7:00	8:05	8:15	9:15	7:30	10:30	8:05	8:05	8:32	**Wake time**
Mins awake too early (how many minutes earlier)	Q6c_EMA	30								No Data	**minutes awake too early**
Out of bed (out of bed for the day)	Q7_OB	8:00	8:10	8:30	9:40	8:00	10:40	8:10	8:10	8:45	**out of bed for day**
Sleep Quality (1 thru 5; 5 = highest quality)		0:00	2:00	3:00	2:00	3:00	1:00	2:00	3:00	2.29	**Quality of sleep**
OPTIONAL VARIABLES:											**OPTIONAL:**
Number of Nightmares		3:00								No Data	**# of nightmares**
CPAP Hours used		4:00								No Data	**# of hours of CPAP use/night**
Time in Bed	TIB		11:17	11:75	11:67	11:50	13:67	11:42	11:50	11:48	**Time in Bed**
Total Sleep Time	TST		10:95	11:33	10:75	10:83	11:42	11:20	11:25	11:06	**Total Sleep Time**
Biological Sleep Need	BIO_SN		10:95	11:33	10:75	10:83	11:42	11:20	11:25	11:06	**24TST, Biological Need for sleep (TST + Naps)**
Sleep Efficiency	SE (%)		98.06%	96.45%	92.14%	94.20%	83.54%	98.10%	97.83%	94.03%	**Sleep Efficiency**
										0.46	**Lights Out Time Variability (SD)**
										0.94	**Wake Time Variability (SD)**
Comments		air conditioner broke.					Knees hurtin				

Sleep Diary

ID/NAME: [redacted]

	Sample	T	W	Th	F	S	S	M
Today's Date	4/5/08	4/24/25	4/25	4/26	4/27	4/28	4/29	~~4/30~~
1a. How many times did you nap or doze?	2 times	2	3	0	0	0	0	0
1b. In total, how long did you nap or doze?	1 hour 10 min.	1 hr	1.5 hr	0	0	0	0	0
2. What time did you get into bed?	10:15 p.m.	2115	2200	2150	2200	2145	2115	2115
3. What time did you try to go to sleep?	11:30 p.m.	2115	2200	2150	2200	2145	2115	2130
4. How long did it take you to fall asleep?	55 min.	~~2130~~ 15 min	10 min	5 min	5 min	5 min	5 min	2130
5. How many times did you wake up, not counting your final awakening?	6 times	8	7	6	8	5	5	8
6. In total, how long did these awakenings last?	2 hours 5 min.	1 hr	1 hr	20 min	30 min	15 min	15 min	30 min
7. What time was your final awakening?	6:35 a.m.	0925	0945	0845	0800	0740	0800	0700
8. What time did you get out of bed for the day?	7:20 a.m.	0940	0945	0845	0805	0750	0810	0715
9. Did you take any over-the-counter or prescription medication(s) to help you sleep?	☑ Yes ☐ No Medication(s): Relaxo-Herb Dose: 50 mg Time(s) taken: 11 pm	☑ Yes ☐ No Medication(s): Dose: Time(s) taken:	☑ Yes ☐ No Medication(s): Dose: Time(s) taken:	☑ Yes ☐ No Medication(s): Dose: Time(s) taken:	☑ Yes ☐ No Medication(s): Dose: Time(s) taken:	☑ Yes ☐ No Medication(s): Dose: Time(s) taken:	☑ Yes ☐ No Medication(s): Dose: Time(s) taken:	☑ Yes ☐ No Medication(s): Dose: Time(s) taken:
10. How would you rate the quality of your sleep?	☐ Very poor ☑ Poor ☐ Fair ☐ Good ☐ Very good	☑ Very poor ☐ Poor ☐ Fair ☐ Good ☐ Very good	☑ Very poor ☐ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ☑ Poor ☐ Fair ☐ Good ☐ Very good	☑ Very poor ☐ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ☑ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ☑ Poor ☐ Fair ☐ Good ☐ Very good	☐ Very poor ☑ Poor ☐ Fair ☐ Good ☐ Very good
11. Comments (if applicable)	I have a cold	recovery	recovery	[redacted] went to another bed				

Sleep Prescription:											
Week 3											
		sample	day 1	day 2	day 3	day 4	day 5	day 6	day 7	AVERAGE	
Date		1/1/2011	4/24/2025	4/25/2025	4/26/2025	4/27/2025	4/28/2025	4/29/2025	4/30/2025		
Naps (minutes)		30	60.00	90.00	0.00	0.00	0.00	0.00	0.00	21.43	Naps
Bedtime (Time went into bed)	Q1_BT	23:30	21:15	22:00	21:50	22:00	21:45	21:15	21:15	21:37	**Bedtime**
Lights out (Try to go to sleep)	Q2_LO	23:45	21:15	22:00	21:50	22:00	21:45	21:15	21:30	21:39	**Lights out**
Latency to sleep (minutes to fall asleep)	Q3_SL	30	15.00	10.00	5.00	5.00	5.00	5.00	3.00	6.86	**Latency to fall asleep**
Total awakenings	Q4	3.00	8.00	7.00	6.00	8.00	5.00	5.00	8.00	6.71	**# of awakenings**
minutes awake in middle of night (how long awakenings last)	Q5_WASO	60	60.00	60.00	20.00	30.00	15.00	15.00	30.00	32.86	**Minutes awake in middle of night**
Wake time (time of final awakening)	Q6a_WT	7:00	9:25	9:45	8:45	8:00	7:40	8:00	7:00	8:22	**Wake time**
Mins awake too early (how many minutes earlier)	Q6c_EMA	30								No Data	**minutes awake too early**
Out of bed (out of bed for the day)	Q7_OB	8:00	9:40	9:45	8:45	8:05	7:50	8:10	7:15	8:30	**out of bed for day**
Sleep Quality (1 thru 5; 5 = highest quality)		0.00	1.00	1.00	2.00	1.00	2.00	2.00	2.00	1.57	**Quality of sleep**
OPTIONAL VARIABLES:											**OPTIONAL:**
Number of Nightmares		3.00								No Data	**# of nightmares**
CPAP Hours used		4.00								No Data	**# of hours of CPAP use/night**
Time in Bed	TIB		12.42	11.75	10.92	10.08	10.08	10.92	9.75	10:50	**Time in Bed**
Total Sleep Time	TST		10.92	10.58	10.50	9.42	9.58	10.42	8.95	10:03	**Total Sleep Time**
Biological Sleep Need	BIO_SN		11.92	12.08	10.50	9.42	9.58	10.42	8.95	10:24	**24TST, Biological Need for sleep (TST + Naps)**
Sleep Efficiency	SE (%)		87.92%	90.07%	96.18%	93.39%	95.04%	95.42%	91.79%	92.69%	**Sleep Efficiency**
										0.30	**Lights Out Time Variability (SD)**
										0.91	**Wake Time Variability (SD)**
Comments		air conditioner broke	recovery	recovery		partner went to another bed					

CASE PRESENTATION: CBT-I + ZOLPIDEM TAPER

- Gradually tapered zolpidem from initial dose of 12.5 mg SA:
  - Reduced to 6.25 mg SA for several weeks, while also trialing 3 mg doxepin
  - Still with insomnia on this: ended up restarting prazosin and stopping doxepin completely
  - Began CBT-I on 4/10 (total of 7 sessions)
  - On 5/1: Reduced zolpidem to 5 mg IR for several weeks
  - THEN- over this month he reduced to 2.5 mg (as of 5/29) with prazosin titrated up to 4 mg
  - By 6/5 visit for medications- planned to stop zolpidem completely, on prazosin 5 mg
  - Final CBT-I visit 6/12

ADDRESSING UNHELPFUL BELIEFS AND MISATTRIBUTIONS ABOUT SLEEP

The Thought Worksheet

Complete a Worksheet whenever you experience a distressing sleep- or fatigue-related thought

Situation	~~Mood~~ Emotion	Distressing Thoughts Or Images	Evidence that the most distressing thought is true	Evidence that the most distressing thought may not be true	Alternative/ balanced thoughts	Rate mood now
Describing med changes	anxious, worried	I can't fall asleep without ambien I won't be able to stay asleep w/ new changes	when out close in NYC, sleep fitful ↳ DIDN'T well, didn't want to try again I hate sleeping	Other factors contributing other things different some evidence last dose relaxation didn't wake	Though I am nervous about the change, I believe will with the changes so far she don't see changes or my sleep toy	10 15 anxiety
Describe the situation in which the distressing thought arose	Describe mood in one word and rate the intensity (0-100%)	Write down any thoughts or images going through your mind. Does this thought activate fears about your well-being or how others may view you?	Circle the most distressing thought in the previous column. Write factual evidence for this distressing thought. Stay away from evidence that is not factual. For example, a thought that "feels" true is not factually true.	Write down evidence that does not support this thought (e.g., are there experiences that show this thought is not true 100% of the time?)	Write a thought that is a better summary of the evidence for the thought	Copy the feelings from column 2. Rerate the intensity of the feelings.

Reproduced from Carney & Manber (2008) *Quiet Your Mind and Get to Sleep*

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CASE PRESENTATION: CBT-I + ZOLPIDEM TAPER

- He continued to experience daytime sleepiness following CBT-I/stopping zolpidem
  - Likely 2/2 untreated OSA: encouraged him to consider discussing treatment with sleep medicine
  - Though OSA mild, can still contribute to daytime sleepiness
- He ultimately requested to add back occasional low dose zolpidem (2.5-5 mg) PRN ONLY for nights where his pain is quite bothersome and he knows it will affect his sleep
  - He had also discontinued prazosin due to side effects
- Encouraged PTSD-specific therapy protocol given remaining PTSD symptom concerns

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