Wisconsin Public Psychiatry Network Teleconference (WPPNT)

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- **Online:** https://dhswi.zoomgov.com/j/1606358142
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- Enter the Webinar ID: 160 635 8142#.
  - Press # again to join. (There is no participant ID)

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- Join online or by phone by 11 a.m. Central and wait for the host to start the webinar. Your camera and audio/microphone are disabled.
- Download or view the presentation materials. The evaluation survey opens at 11:59 a.m. the day of the presentation.
- Ask questions to the presenter(s) in the Zoom Q&A window. Each presenter will decide when to address questions. People who join by phone cannot ask questions.
- Use Zoom chat to communicate with the WPPNT coordinator or to share information related to the presentation.

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Working with Sleep Disturbance from a Co-Morbid and Transdiagnostic Approach

Wisconsin Public Psychiatry Network Teleconference
4/28/2022
Meredith Rumble, PhD

Learning Objectives

- Review importance of sleep and co-morbidity of sleep disturbance
- Identify benefits and overview of a transdiagnostic approach to sleep
- Describe the following:
  - Cross-Cutting Modules
  - Core Modules
  - Optional Modules
- Apply the following:
  - Cross-Cutting Modules
  - Core Modules
  - Insomnia (Improving Sleep Efficiency)

Sleep is Important and a Common Co-Morbidity!

- Historically, sleep disturbance has been considered a secondary symptom of psychiatric disorders, leading to the consequence of sleep disturbance being disregarded
- However, more recently, a large body of prospective studies has demonstrated a bidirectional relationships between sleep disturbance and psychiatric disorders
  - Most evidence to support insomnia's bidirectional relationship with depression, anxiety, alcohol abuse, psychosis, and suicidality
  - That is, sleep disturbance is a common **co-morbidity**

Freeman et al., Lancet Psychiatry (2017) 4: 749-758.
Hertenstein et al., Sleep Med Rev (2019) 43: 96-105.
Rössler et al., Front Psychiatry (2018) 9: 320.

Example: Behavioral sleep intervention helpful in context of co-morbidity

- Meta-analysis of Cognitive Behavioral Therapy (CBT) for Insomnia in those with co-morbid alcohol dependence, depression, PTSD, and mixed psychiatric diagnoses
  - Findings: Medium to large effects for insomnia outcomes and modest effects on psychiatric symptom outcomes

Wu et al (2015). JAMA Intern Med, 175,1461-1472.

- RCT examining Internet-based delivery of CBT for Insomnia versus treatment as usual in 3755 college students in the UK reporting insomnia symptoms
  - Findings: Significantly less insomnia symptoms and reduced paranoia, hallucinations, depressive symptoms, and anxiety symptoms

Freeman et al (2017). Lancet Psychiatry, 4, 749-758.

Example:
DSM-5 criteria for Insomnia Disorder

- One or more:
  - difficulty initiating sleep
  - difficulty maintaining sleep
  - waking up too early
- Sleep difficulty occurs:
  - despite adequate opportunity for sleep
  - at least 3 nights a week
  - at least 3 months
- Daytime consequences
- Not explained by another sleep-wake disorder or substance use
- Co-existing mental disorders and medical conditions do not adequately explain the predominant complaint of insomnia

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- Apply the following:
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  - Core Modules
  - Insomnia (Improving Sleep Efficiency)

A Transdiagnostic Approach

- Transdiagnostic Sleep and Circadian Intervention (TranS-C)
  - Book:
    - Harvey, A., & Buysse, D. (2018). Treating sleep problems: A transdiagnostic approach. Guildford Press: New York.
- What are some advantages specific to TranS-C?
  - Based on evidence-based behavioral sleep interventions
  - Modular approach, which offers flexibility and customization
  - Has been tested in adult community mental health center populations with co-morbidities such as schizophrenia, bipolar disorder, PTSD, and depression
    - e.g., Harvey et al. (2021) J of Consult Clin Psychol 89:537-550.
  - Has been tested in youth as young at 10-18 years old with more delayed sleep phase issues
    - e.g., Dong et al. (2020). J of Child Psychol and Psychiat 61:653-661.
  - Designed to be given in 50-minute visits over the course of 4-10 visits—a frequency of every 2 weeks works well for these interventions

TranS-C Overview

Cross-Cutting Modules

- Case Formulation
- Psychoeducation
- Behavior Change and Motivation
- Goal Setting

Core Modules

- Consistency in Sleep-Wake Schedule
- Rise-Up and Wind-Down Routines
- Coping with Daytime Symptoms
- Unhelpful Sleep-Related Beliefs
- Maintenance

Additional Modules

- Insomnia
- Excessive Time in Bed
- Delayed/Advanced Sleep Phase
- Sleep-Related Worry and Vigilance
- Adherence to PAP Therapy
- Working with the Sleep Environment
- Nightmares

Learning Objectives

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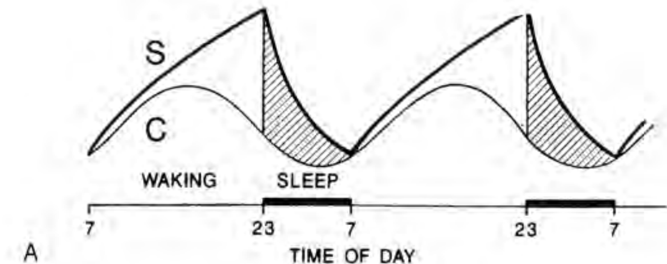
- Apply the following:
  - Cross-Cutting Modules
  - Core Modules
  - Insomnia (Improving Sleep Efficiency)

Cross-Cutting Modules

- Case formulation
  - What brings you here today and what keeps things stuck?
- Education
  - Can I offer some information that may be helpful in considering changes and goals?
- Behavior change and motivation
  - What do you want to change and what makes you want to make this change?
- Goal setting
  - Do you want to set a goal that helps you with this desired change?

Sleep Diary ID/Name:________________

	Sample							
Today's date	4/5/08							
1. What time did you get into bed?	10:15 p.m							
2. What time did you try to go to sleep?	11:30 p.m							
3. How long did it take you to fall asleep?	1 hour 15 min.							
4. How many times did you wake up, not counting your final awakening?	3 (times)							
5. In total, how long did these awakenings last?	1 hour 10 min.							
6. What time was your final awakening?	6:35 a.m.							
7. What time did you get out of bed for the day?	7:20 a.m							
8. 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



Core Modules

- Establishing regular sleep-wake times
  - Rationale: One of the best ways to regulate our body's clock, which is central to not only sleep, but also to mood and many other important processes
- Learning a wind-down *and* a wake-up routine
  - Rationale for wind-down: The plane needs a gentle landing for sleep
  - Rationale for wake-up: Light, movement, and food are further inputs to help strengthen our body's clock ability to help us wake up

Core Modules

- Improving daytime functioning (e.g., how to cope when feeling fatigued)
  - Rationale: How we cope with the impact of sleep, impacts sleep
- Working with unhelpful sleep-related beliefs
  - Rationale: How we think about sleep impacts how we sleep
    - "Sleep is a waste of time."
    - "I have to get 8 hours."
    - "If I don't sleep, then X."
- Maintenance of behavior change
  - What helped the most?
  - How did you stick with it?
  - What would you do if sleep disturbance returned?

Additional Modules

- Insomnia (Improving Sleep Efficiency)
- Excessive Time in Bed
- Delayed/Advanced Sleep Phase
- Sleep-Related Worry and Vigilance
- Adherence to PAP Therapy
- Working with the Sleep Environment
- Nightmares

Improving Sleep Efficiency

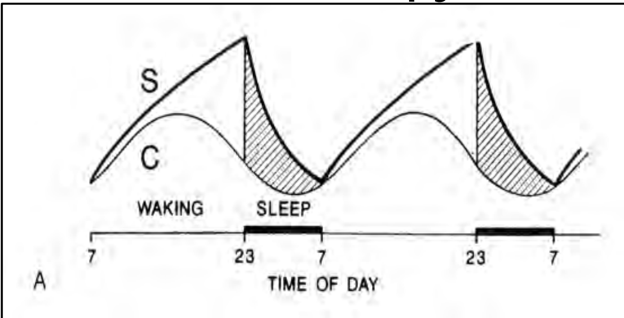
- This module is based off of stimulus control and sleep restriction
  - (AKA, our behavioral interventions superstars from CBT-I)

- A brief detour to CBT-I evidence base:
  - Well-established treatments:
    - Relaxation
    - Stimulus control
    - Sleep restriction therapy
    - Multi-component CBT-I
  - Not efficacious as a stand alone treatment:
    - Sleep hygiene only
    - Cognitive therapy only

- Multi-Component CBT-I typically includes:
  - Stimulus control
  - Sleep restriction therapy
  - Cognitive therapy
  - Sleep hygiene
  - Optional: Relaxation therapies

A Cognitive-Behavioral Model of Insomnia

Cognitive Therapy



Cognitive Factors
Sleep Effort
Unhelpful Sleep-Related Thoughts & Beliefs

Sleep Hygiene

Stimulus Control

Homeostatic Dysregulation
Sleep Extension

Circadian Disruption
Irregular Sleep Scheduling

Inhibitory Factors
Poor Sleep Hygiene
Hyperarousal
In-bed Habits
Conditioned Arousal

Sleep Restriction

Chronic Insomnia

Relaxation Therapies

Stimulus Control:

Reconditioning the Bedroom with Sleeping & Setting the Body's Clock

- Rationale: Nighttime wakefulness is a learned habit and can be unlearned, and sleep is more predictable if the body's clock is strong and there's a fence around sleep
- Treatment:
  - Select a standard wake-up time
  - Avoid sleep-incompatible activities in bed
  - Get out of bed when unable to sleep and engage in calming activities
    - After 15-20 minutes if feeling relaxed
    - Directly if more activated
  - Avoid napping
  - Target bedtime and then only going to bed when sleepy

Bootzin (1972)

Sleep Restriction Therapy:
Increasing Sleep Drive & Setting the Body's Clock

- Rationale: It is all about the pizza dough or a balloon
- Treatment:
  - Patient completes sleep logs
  - Compute average total sleep time (TST)
  - Limit time in bed (TIB) to TST + 30 min
    - Best to never go below 5.5 hours
  - Increase TIB 15-30 min in follow-ups when sleep efficiency ≥ 85% and patient remains sleepy
  - Decrease TIB 15-30 min. in follow-ups when sleep efficiency is < 80 %
  - No napping or dozing
  - Use great caution if using this treatment with individuals with bipolar disorder or a history of seizures

Spielman et al. (1987)

Learning Objectives

- Review importance of sleep and co-morbidity of sleep disturbance
- Identify benefits and overview of a transdiagnostic approach to sleep
- Describe the following:
  - Cross-Cutting Modules
  - Core Modules
  - Optional Modules
- **Apply the following:**
  - **Cross-Cutting Modules**
  - **Core Modules**
  - **Insomnia (Improving Sleep Efficiency)**

Case Example: Chief Complaint & Sleep Co-Morbidities

- 58 year old female living with partner
- Chief sleep complaint: Difficulty initiating and maintaining sleep with hypersomnia during the day
- Onset: Current concerns started about 2-3 years ago when PAP therapy was discontinued for sleep apnea due to an insurance/provider change
- Sleep Co-Morbidities:
  - Sleep apnea
    - Restarted PAP therapy nightly; some benefit to hypersomnia, some issue with use
  - Delayed sleep preference

Case Example: Other Co-Morbidities

- Medical Co-Morbidities
  - Obesity
- Psychiatric Co-Morbidities
  - Anxiety and Depression
    - Recently started anti-depressant and therapy with benefit
  - Complex Trauma History
    - Discussing with therapist about potential treatment options
  - History of Suicidal Ideation and Behavior
    - In context of past abusive relationship with multiple attempts

Case Example:
Other Themes

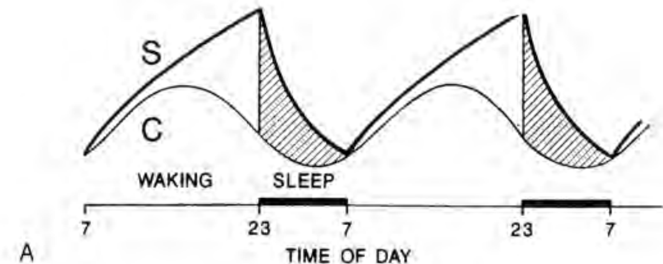
- Current relationship is supportive and good social support otherwise
- Has hesitancy with the medical community given changes made 2-3 years ago that have greatly impacted her
- Also, has the ability to form relationships with providers and is demonstrating motivation for change

Cross-Cutting Modules

- Case formulation
  - What brings you here today and what keeps things stuck?
- Education
  - Can I offer some information that may be helpful in considering changes and goals?
- Behavior change and motivation
  - What do you want to change and what makes you want to make this change?
- Goal setting
  - Do you want to set a goal that helps you with this desired change?

Sleep Diary ID/Name:____________________

	Sample							
Today's date	4/5/08							
1. What time did you get into bed?	10:15 p.m							
2. What time did you try to go to sleep?	11:30 p.m							
3. How long did it take you to fall asleep?	1 hour 15 min.							
4. How many times did you wake up, not counting your final awakening?	3 (times)							
5. In total, how long did these awakenings last?	1 hour 10 min.							
6. What time was your final awakening?	6:35 a.m.							
7. What time did you get out of bed for the day?	7:20 a.m							
8. 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



Avg time attempting sleep = ~10:45pm
Avg sleep onset latency = ~160 m
Avg wake time after sleep onset = ~60 m
Avg time awake for the day = ~8:40am

Avg total sleep time = 6.2 hours
Avg total wake time = 3.8 hours
Avg sleep efficiency = 61%

Consensus Sleep Diary (Core Items Only) ID/Name:____________

	Sample							
Today's date	4/5/10	Fri	Sat	Sun	Mon	Tues	Wed	Thur
1. What time did you get into bed?	10:15 p.m	10:25p	11:30p	11:30p	9:50pm	10:30p	12:00am	9:10pm
2. What time did you try to go to sleep?	11:30 p.m	10:30p	11:35p	11:45p	10:00pm	10:40p	12:05am	9:15pm
3. How long did it take you to fall asleep?	1 hour 15 min.	3 hrs.	minutes	1 hr.	6h 20m	4 hrs.	1hr.	3hr 30m
4. How many times did you wake up, not counting your final awakening?	3 (times)	2	1	2	3	1	2	2
5. In total, how long did these awakenings last?	1 hour 10 min.	40	5	80	120	60	40	60
6. What time was your final awakening?	6:35 a.m.	9am	9:45a	9:30a	7a	7a	9am	9:30am
7. What time did you get out of bed for the day?	7:20 a.m	9am	9:45a	9:30a	7a	7a	9am	9:30am
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First Treatment Visit

Core Modules

- Set up a new sleep-wake schedule that better fits actual sleep pattern
  - this overlaps with improving sleep efficiency module so more details in a moment on this front
- Review wind down routine prior to new bedtime and wake-up routine after new wake-up time; indirectly working with sleep-related anxiety at bedtime with wind down routine
  - this overlaps with improving sleep efficiency module so more details in a moment on this front
- Process ways to cope with sleepiness during the day and in the evening prior to new bedtime
  - Coloring at her desk, watching favorite reality show sitting up on couch, engaging in active chores
- Reinforcing her motivation for change; providing opportunity for autonomy in making decisions with a collaborative spirit

Additional Modules

- Insomnia (Improving Sleep Efficiency)
- Excessive Time in Bed
- Delayed/Advanced Sleep Phase
- Sleep-Related Worry and Vigilance
- Adherence to PAP Therapy
- Working with the Sleep Environment
- Nightmares

Stimulus Control:

Reassociating the Bedroom with Sleeping & Setting the Body's Clock

- Rationale: Nighttime wakefulness is a learned habit and can be unlearned, and sleep is more predictable if the body's clock is strong and there's a fence around sleep
- Treatment:
  - Select a standard wake-up time
  - Avoid sleep-incompatible activities
  - **Get out of bed when unable to sle calming activities**
    - **After 15-20 minutes if feeling relax**
    - **Directly if more activated**
  - **Avoid napping**
  - Target bedtime and then only going to bed when sleepy

Bootzin (1972)

First Interventions:
Reading out of bed with option of reading some in bed to transition, keeping in mind the goal of this intervention

Napping has not been occurring with restart of CPAP therapy, so reinforcing this change

Sleep Restriction Therapy:
Increasing Sleep Drive & Setting the Body's Clock

- Rationale: It is all about the pizza dough or a balloon
- Treatment:
  - Patient completes sleep logs
  - Compute average total sleep time (TST)
  - Limit time in bed (TIB) to TST + 30 min
    - Best to never go below 5.5 hours
  - Increase TIB 15-30 min in follow-ups when sleep efficiency ≥ 85% and patient remains sleepy
  - Decrease TIB 15-30 min. in follow-ups when sleep efficiency is < 80 %
  - No napping or dozing
  - Use great caution if using this treatment with individuals with bipolar disorder or a history of seizures

Spielman et al. (1987)

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Avg sleep onset latency = ~160 m
Avg wake time after sleep onset = ~60 m
Avg time awake for the day = ~8:40am

Avg total sleep time = 6.2 hours
Avg total wake time = 3.8 hours
Avg sleep efficiency = 61%

Consensus Sleep Diary (Core Items Only) ID/Name:__________

Today's date	Sample 4/5/10	Fri	Sat	Sun	Mon	Tues	Wed	Thur
1. What time did you get into bed?	10:15 p.m	10:25p	11:30p	11:30p	9:50pm	10:30p	12:00am	9:10pm
2. What time did you try to go to sleep?	11:30 p.m	10:30p	11:35p	11:45p	10:00pm	10:40p	12:05am	9:15pm
3. How long did it take you to fall asleep?	1 hour 15 min.	3 hrs.	minutes	1 hr.	6h 20m	4 hrs.	1hr.	3hr 30m
4. How many times did you wake up, not counting your final awakening?	3 (times)	2	1	2	3	1	2	2
5. In total, how long did these awakenings last?	1 hour 10 min.	40	5	80	120	60	40	60
6. What time was your final awakening?	6:35 a.m.	9am	9:45a	9:30a	7a	7a	9am	9:30am
7. What time did you get out of bed for the day?	7:20 a.m	9am	9:45a	9:30a	7a	7a	9am	9:30am
	☐ Very poor … ☐ Very good	☐ Very poor … ☐ Very good	☐ Very poor … ☐ Very good	☐ Very poor … ☐ Very good	☒ Very poor … ☐ Very good	☒ Very poor … ☐ Very good	☐ Very poor … ☐ Very good	☐ Very poor … ☐ Very good

First Treatment Visit

First intervention: Trying mild restriction with a bedtime of 11:30pm and wake-up time of 7:30am with option to move to 8am or 8:30am if too challenging

Two Weeks Later

Avg time attempting sleep = ~10:45pm; LV, ~10:45pm
Avg sleep onset latency = ~47 m; LV, 160 m
Avg wake time after sleep onset = ~75 m; LV, ~60 m
Avg time awake for the day = ~8:11am; LV, ~8:40am

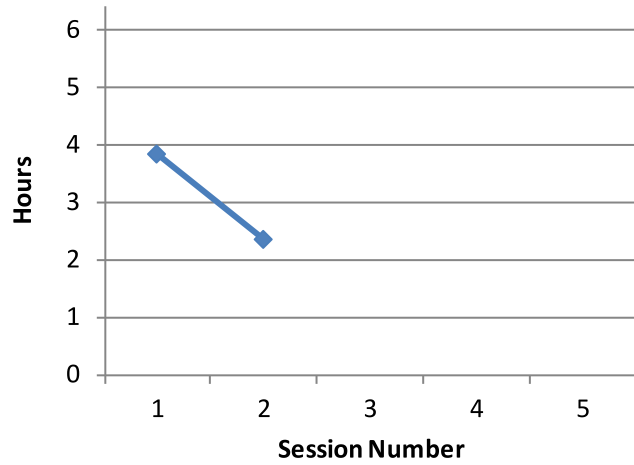
Avg total sleep time = 7.5 h; LV, 6.2 h
Avg total wake time = 2.3 h; LV, 3.8 h
Avg sleep efficiency = 75%; LV, 61%

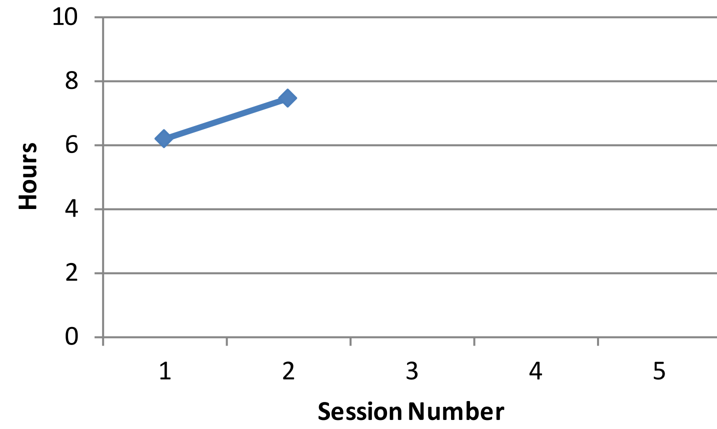
Consensus Sleep Diary (Core Items Only)

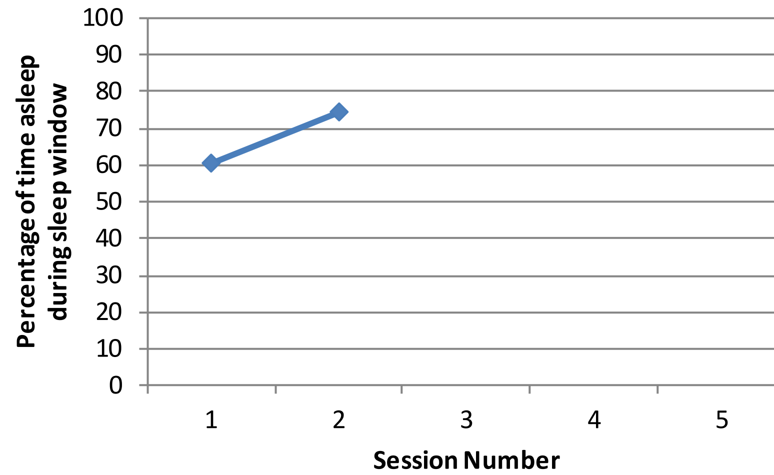
ID/Name:____________________

	Sample							
Today's date	4/5/10	Fri	Sat	Sun	Mon	Tues	Wed	Th
1. What time did you get into bed?	10:15 p.m	11:00pm	11:45pm	10pm	10pm	9:30pm	10 am	10:30pm
2. What time did you try to go to sleep?	11:30 p.m	11:30pm	12am	10:30pm	10:15pm	9:45pm	10:05am	10:45pm
3. How long did it take you to fall asleep?	1 hour 15 min.	45 m.	60 m	120 m	30 m	60	5 m	15
4. How many times did you wake up, not counting your final awakening?	3 (times)	2	2	2	1	2	1	2
5. In total, how long did these awakenings last?	1 hour 10 min.	100	90	90	40	100	5m	100
6. What time was your final awakening?	6:35 a.m.	9am	10:30am	6:50am	7:00am	5am	10am	9am
7. What time did you get out of bed for the day?	7:20 a.m	9am	10:30am	6:50am	7:00am	5am	10am	9am
8. 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

Second Treatment Visit


Total Wake Time
Hours
0
1
2
3
4
5
6
1
2
3
4
5
Session Number


Total Sleep Time
Hours
0
2
4
6
8
10
1
2
3
4
5
Session Number


Sleep Efficiency
Percentage of time asleep during sleep window
0
10
20
30
40
50
60
70
80
90
100
1
2
3
4
5
Session Number

Additional Modules

- Insomnia (Improving Sleep Efficiency)
- Excessive Time in Bed
- Delayed/Advanced Sleep Phase
- Sleep-Related Worry and Vigilance
- Adherence to PAP Therapy
- Working with the Sleep Environment
- Nightmares

Summary

- Sleep is important
- Sleep is best considered in the context of a co-morbid model
- A transdiagnostic approach to sleep disturbance has many advantages in treating sleep in the co-morbid setting
- CBT for Insomnia is a powerful tool that has much to offer; additional behavioral sleep interventions are also available to help support sleep more broadly

Resources

- Therapist Guide to the TranS-C
  - Harvey, A., & Buysse, D. (2018). Treating sleep problems: A transdiagnostic approach. Guildford Press: New York.
- Sleep log
  - http://drcolleencarney.com/wp-content/uploads/2016/01/Final-CSD-Morning-only-with-instructions.pdf
- CBT-I App for use with a therapist (free for all):
  - CBT-I Coach
    - Sleep log, psychoeducation, relaxation practices
- Bibliotherapy:
  - End the Insomnia Struggle by Colleen Ehrnstrom and Alicia Brosse (2016: New Harbinger)
    - Sleep log, discussion of broader sleep concerns, modular approach to insomnia treatment with option for patient to tailor treatment, extra interventions for an active mind