Nano-interventions for insomnia: Brief primary care introductions to CBT-i for cascading benefits

Dorje Jennette, PsyD | Tom Ferguson, MD, PhD | Melody Fo, PsyD | Roy Grabow, PhD | Michelle Famula, MD

UNIVERSITY
OF
CALIFORNIA

Davis and Santa Cruz campuses
Agenda / Purpose / Objectives
Presenter: Dorje Jennette, PsyD, CAPS Clinical Director at UC Santa Cruz

• Who’s here? What roles are represented in the audience?
• Purpose: Learn how to briefly introduce and refer to (a “nano-intervention”) CBT for insomnia (CBT-i) in primary care practice.
• Objectives:
  • Discuss the complications of hypnotics
  • Describe CBT for Insomnia
  • List research-established benefits of CBT-i
  • Explain how to engage students in CBT-i through a brief introduction to relevant resources
What roles are represented in the audience?
Presenter: Michelle Famula, MD, Executive Director at UC Davis

- Primary care provider
- Pharmacist
- Nurse
- Psychiatrist
- Psychologist/Psychotherapist
- Dietician
- Medical assistant
- Health promotion
- Other roles?
Purpose: CBT-i in primary care practice
Presenter: Michelle Famula, MD, Executive Director at UC Davis

“Despite robust scientific evidence of the effectiveness and safety of CBT-i, along with strong professional endorsements that it should be the first-line treatment for chronic insomnia, a major gap exists between the current state of the science and actual clinical practice. Insomnia is often unrecognized and untreated. When treatment is initiated, it is often with over-the-counter products with unknown risks and benefits or prescription medications (some of which are not even approved for insomnia treatment) that have known adverse effects. Cognitive behavioral therapy is relatively unfamiliar to and underutilized by medical practitioners... Of course, such barriers as limited time and expertise complicate the management of insomnia with CBT-i in primary care practices.”

Purpose: CBT-i in primary care practice
Presenter: Michelle Famula, MD, Executive Director at UC Davis

“Use of print and digital self-help materials may complement [the introduction to CBT-i]. These self-guided interventions can facilitate access to CBT-i for a larger number of patients with insomnia... Although we lack an easy-to-swallow ‘CBT pill’ for insomnia, the reality is that drug therapy alone does not address the underlying psychological and behavioral factors that perpetuate insomnia over time. Thus, investing in CBT-i provides behavioral guidance and self-management skills so that patients can manage some of the factors that contribute to their sleep difficulties. Over the long run, improving sleep and reducing the use of hypnotic medications is likely to improve patient well-being and decrease health care costs.”

Sedative hypnotics: a complicated set of tools
Presenter: Michelle Famula, MD, Executive Director at UC Davis

• short-term benefits
• side effects
• REM suppression/rebound
• potentially dangerous misuse
• next-day drowsiness, dizziness, falls, and fractures
• missed opportunities to address etiology of insomnia
Etiology of insomnia (e.g., stimulant misuse)
Presenter: Tom Ferguson, MD, PhD, Medical Director at UC Davis

- Many potential etiologies, with stimulant misuse among them
- Half-life of ADHD stimulants taken at night for studying
- Prior practice—ADHD evals conducted by psychiatrists
- New practice—Computer-administered psychometric testing to validate current ADHD symptoms (including symptom validity testing and developmental history from a caregiver)

- Trends reversed
  - Misuse
  - Prescription rates
  - Doses prescribed
Stimulant misuse in past 12 months (NCHA)
Presenter: Tom Ferguson, MD, PhD, Medical Director at UC Davis

[Diagram showing trends in stimulant misuse from 2009 to 2015, with data points for ADHD evaluations and UC Davis reference group.]
Distinct patients prescribed stimulants
Presenter: Tom Ferguson, MD, PhD, Medical Director at UC Davis
Stimulant doses prescribed

Presenter: Tom Ferguson, MD, PhD, Medical Director at UC Davis
Opioid Prescribing UC Davis: Quality of Care Concern

**Background:**

- NCHA data indicate 4.5% of students using ‘pain killers’ prescribed for others
- Opioid OD death surpassing other causes mortality this demographic
- Medical staff education 2012-15
- Controlled substance guidelines/contract 2015 for chronic use (>3 months)

**Impact on Doses Opioids Prescribed**

![Impact on Doses Opioids Prescribed](chart.png)
Sedative Hypnotic Prescribing: Quality of Care ‘Sleeper’?

- Side effects/Interactions
- Dependence
- CBT therapy is a ‘Best Practice’
  - Good efficacy
  - Probably longer term benefit
  - Minimal side effects
- Isn’t this analogous to Opioid Prescribing quality of care concern project ???

Became quality of care improvement project in our integrated health center (UC Davis)

Integration Team:
1. Recommendations try to improve access to CBT insomnia resources (08/2015)
2. Online licensing of a commercial product-CBT-I (10/2015)
3. Secure messaging ‘macro’ to patients from providers recommending patient/client consider CBT
Impact on Doses of Sedative Hypnotics prescribed in Clinics

- Staff education began over summer 2015 encouraging CBT-I CDROM.
- CBT-Insomnia messaging starting October 2015 with licensing of online resource for CBT-I home use.
- Overall Trend
  - Prescribing of Sedative Hypnotics has declined especially since provider staff education/discussions
  - Not shown here but messaging to patients about Sleep Hygiene and CBT-I self study has increased over same time period (May 2016 = 99 messages sent)
Sedative hypnotic Rx rates at UC Davis
Presenter: Tom Ferguson, MD, PhD, Medical Director at UC Davis

Number of Hypnotic Medication Prescriptions Before and After PCP Training on CBT-I as First-Line Insomnia Tx

Before (Oct'14-Mar'15): 70
After (Oct'15-Mar'16): 32
Sedative hypnotic Rx rates at UC Santa Cruz
Presenter: Dorje Jennette, PsyD, CAPS Clinical Director at UC Santa Cruz

Percent of Students Prescribed Sedative for Sleep Concerns Pre- and Post- PCP Training on CBT-i as First-line Insomnia Treatment

- 2014-15: 40%
- 2015-16: 20%
CBT-i referral rates at UC Santa Cruz
Presenter: Dorje Jennette, PsyD, CAPS Clinical Director at UC Santa Cruz

Percent of Students Referred to CBT-i for Sleep Concerns Pre- and Post- PCP Training on CBT-i as First-line Insomnia Treatment

- 2014-15: 9.2%
- 2015-16: 69%
Sedative hypnotic Rx rates at UC Santa Cruz

Presenter: Dorje Jennette, PsyD, CAPS Clinical Director at UC Santa Cruz

SEDATIVE PRESCRIPTION AND CBT-I INTERVENTION RATES PRE- AND POST- PCP TRAINING ON CBT-I AS FIRST-LINE INSOMNIA TREATMENT FOR STUDENTS WITH SLEEP CONCERNS

<table>
<thead>
<tr>
<th>Year</th>
<th>Hypnotic</th>
<th>No Hypnotic</th>
<th>Hypnotic</th>
<th>No Hypnotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>36.7</td>
<td>54.1</td>
<td>2.8</td>
<td>28.2</td>
</tr>
<tr>
<td>2015-16</td>
<td>3.7</td>
<td>5.5</td>
<td>16.9</td>
<td>52.1</td>
</tr>
</tbody>
</table>

Legend:
- No CBT-i
- CBT-i
Cognitive Behavioral Therapy for Insomnia
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

• Assessment
• Brief treatment (2-6 sessions)

• Components
  • Sleep Hygiene Education (SHE)
  • Sleep Restriction (SR)
  • Stimulus Control (SC)
  • Cognitive Therapy (CT)
  • Relaxation Training (RT)
Sleep Hygiene Education
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

- Regular sleep schedule
- Avoid long daytime naps
- Bedroom that is quiet, cool, and dark
- Avoid alcohol and caffeine in evening
- Avoid stimulating activities before bedtime
- Regular exercise 3-4 hours prior to bedtime
Sleep Restriction
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

• Behavioral strategy to consolidate sleep
• Limit time in bed to approximate hours asleep at baseline
• Increase time in bed as hours asleep increase
• Increases fatigue and sleepiness
• Not recommended for patients with Bipolar Disorder
Stimulus Control
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

• Behavioral strategy to strengthen association of bedroom with sleep
• Limit time in bedroom to time sleeping or sexual activity
• Go to bed only when sleepy
• Do not stay in bed more than 30-60 minutes if awake
Cognitive Therapy
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

• Changing maladaptive beliefs about sleep
  • “I must get 8 hours of sleep in order to function tomorrow”
  • “I must get to sleep quickly”
  • “I didn’t sleep at all last night”
  • “I will always have insomnia”
  • “This is one more indication that I cannot cope with stress”
  • “Oh no, I’m awake!”
  • “My insomnia is the result of a chemical imbalance”
Relaxation Training
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

• Progressive muscle relaxation
• Guided imagery
• Induce parasympathetic arousal
• Reduce focus on worrisome thoughts
Research-established benefits of CBT-I

Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

• The standards of practice committee of the American Academy of Sleep Medicine (AASM, 2006) recommends CBT-i as first-line treatment for people with both primary and secondary chronic insomnia, including chronic hypnotic users.

• Meta-analyses of CBT-I effectiveness
  • for non-comorbid, as well as comorbid chronic insomnia
  • compared to waitlist or SHE
CBT-I for Non-comorbid Insomnia
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis
From M. Brasure, et al., 2016, Annals of Internal Medicine

• CBT-I compared to information (SHE) or waitlist controls

• Improved Sleep outcomes: SOL, WASO, SE
• Improved Global outcomes: self-report of SQ, functioning, and distress
• All delivery modes effective (individual, group, internet)

• Multicomponent Behavior Therapy less effective
• Stimulus Control (alone) improved SOL and TST
• Sleep Restriction (alone): little evidence of effectiveness
• Relaxation Training (alone): little evidence of effectiveness
CBT-I for Insomnia with Comorbid MH Disorder
Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

- High rate of comorbidity with psychiatric disorders
- Traditional view vs. possible bi-directional relationship
- CBT-I added to AD medication alleviated insomnia and depression more than medication alone (Manber et al., 2008, Sleep)
- Mood, energy, concentration, coping often affected by poor sleep
Strategies for Increasing Utilization of CBT-I

Presenter: Roy Grabow, PhD, Coordinator of Behavioral Health at UC Davis

- Educate and remind providers about insomnia and CBT-I
- E-messages to patients (SHE and link to on-line CBT-i)

- High utilization by medical and MH providers
- Respondents rated the information as helpful
- Most patients did not independently complete longer CBT-I program

- Suggests utility of stepped care model including nano-interventions: SHE, eCBT-i, therapist-administered CBT-i
Student Intervention Options

• Engage students in CBT-i through a brief introduction to relevant resources

• CBT-i Coach with access to primary care psychologist for additional coaching as needed.
  • Coaching may be via phone, secure message, or in-person.

• 15-30 minute consultation w/ primary care psychologist to determine best plan for student.

• Individual, in-person CBT-i w/ primary care psychologist.
  • Consider for students with low motivation, complicated sleep patterns or symptoms.
CBT-i Text Macro Highlights
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz

• I want to be sure you are aware of resources for coping with insomnia. You may use these resources on your own, or call to schedule a meeting with a therapist for coaching on how to improve the quality of your sleep and to discuss any related concerns.
  • For CBT-i Coach App: CBT-i is a free app that is available on both Android and iPhone/iPad by downloading at the Google Play store or iTunes.
  • For Conquering Insomnia Program: The program consists of 5 audio sessions ranging from 7 to 15 minutes each and is entirely self-guided. For best results, listen to one session per week and practice concepts at home between sessions with the accompanying CBT-i workbook.

• CBT-i may benefit anyone who is experiencing regular insomnia, and those who just want to sleep better.

• Designed by leaders in the health field and based on research to help you develop good sleep habits and help you sleep better, CBT-i will “guide users through the process of learning about sleep, developing positive sleep routines, and improving [your] sleep.”
CBT-i Coach phone/tablet app
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Monitoring and Prescribing Sleep
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Monitoring and Prescribing Sleep

Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Monitoring and Prescribing Sleep
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Improving Sleep and Insomnia Prevention
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Improving Sleep and Insomnia Prevention
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Improving Sleep and Insomnia Prevention
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz

Tools
- Create New Sleep Habits
- Quiet Your Mind
- Prevent Insomnia in the Future

Quiet Your Mind
- Relaxation exercises are opportunities to help your body learn to relax. Try each of the exercises to determine which ones are the most appealing and useful.
  - Winding Down
  - Schedule Worry Time
  - Change Your Perspective
  - Breathing Tool

- Progressive Muscle Relaxation
- Guided Imagery: Forest
- Guided Imagery: Country Road
- Guided Imagery: Beach
- Observe Thoughts: Clouds in the Sky
Improving Sleep and Insomnia Prevention
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Insomnia Psychoeducation
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
Personalized Reminders
Presenter: Melody Fo, PsyD, Behavioral Health Consultant at UC Santa Cruz
MindShift Phone/Tablet App
Presenter: Dorje Jennette, PsyD, CAPS Clinical Director at UC Santa Cruz

collaboration between AnxietyBC, a non-profit organization devoted to increasing the public’s awareness and access to evidence-based resources on anxiety disorders, and BC Mental Health & Substance Use Services, an agency of the Provincial Health Services Authority in Canada

• Test Anxiety
• Perfectionism
• Social Anxiety
• Performance Anxiety
• Worry
• Panic
• Conflict
THINKING RIGHT

General

When learning to manage our anxiety and face challenging situations, it’s important to make sure that we tell ourselves both TRUTHFUL and HELPFUL things. Check out these helpful thoughts for dealing with specific situations by clicking on a situation listed below. Or, use the realistic thinking for everyday to help shift your self-talk in any situation. Star the ones you want to remember.

Realistic thinking for everyday

My Favourites

Managing worry

Coping with test anxiety

Tackling social fears

Facing performance anxiety

Dealing with conflict

CHECK YOURSELF:

General

It can be helpful to rate your anxiety level in general and check whether you are experiencing common symptoms of anxiety.

Rate your overall anxiety level on a scale of 0 (no anxiety) to 10 (totally freaking out)

7

Your entry has been saved.

Have you experienced any of the following anxiety symptoms? (check all that apply to you)

- Racing heart
- Tightness in your chest
- Stomachaches or headaches
- Nausea or diarrhea
- Lightheadedness or dizziness
- Muscle tension
MindShift

ADD A SITUATION
Choose a situation that you would like help with. Then, follow the steps to set up a personalized plan to cope better with that situation.

Managing worry
Coping with test anxiety
Tackling social fears
Facing performance anxiety
Dealing with conflict
Taking charge of panic
Letting go of perfectionism

CHILL OUT TOOLS: Relaxation Exercises
Calm Breathing
When your brain thinks you are in a scary situation (or even just imagining one), it gets you ready to deal with that danger by revving up your body. By slowing down your breathing, you help your body calm down.

Female Voice
Male Voice
Given what you’ve learned today, how might you respond to a student who requests a hypnotic medication?

Sample script:

Because of limited benefits and substantial risks, we advise that sleeping pills should be used only with great caution. The American Academy of Sleep Medicine no longer recommends sleeping drugs as a first-choice treatment for chronic insomnia, opting instead for cognitive behavioral therapy for insomnia. In general, sleeping pills should be reserved for short-term insomnia—such as that caused by jet lag, anxiety after the death of a family member, or job loss.
Contact us

• Dorje Jennette, PsyD
  CAPS Associate Director for Clinical Services at UC Santa Cruz
  jennette@ucsc.edu

• Tom Ferguson, MD, PhD
  Medical Director at UC Davis
  tferguson@shcs.ucdavis.edu

• Melody Fo, PsyD
  CAPS Psychologist, Behavioral Health Consultant at UC Santa Cruz
  melodyfo@ucsc.edu

• Roy Grabow, PhD
  Coordinator of Behavioral Health at UC Davis
  rgrabow@shcs.ucdavis.edu

• Michelle Famula, MD
  Executive Director at UC Davis
  mfamula@shcs.ucdavis.edu