MANAGEMENT OF INSOMNIA IN THE PRIMARY CARE SETTING

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Objectives

- Present available research on provider perspectives on Insomnia
- Review Sleep Hygiene Education evidence suggesting it is not effective as a stand-alone insomnia intervention.
- Discuss the challenge presented by the shortage of VA providers trained in CBTI.
- Propose an agenda for future directions for insomnia management within the VA.

What is Insomnia?
What is Insomnia Disorder?

Insomnia Diagnostic Criteria

ICD-10	DSM-V	ICSD-3
G47.00 Insomnia-NOS	**Insomnia Disorder**	**Insomnia Disorder**
F51.02-Adjustment Insomnia	-	-
F51.09-due to known physiological condition	-	-
F51.01-Primary Insomnia	-	-
F51.03-Paradoxical Insomnia	-	-
G47.01-Insomnia due to a medical condition	-	-
G47.09 Insomnia-other Insomnia	-	-

Insomnia: Shared Diagnostic Criteria

A complaint of dissatisfaction with sleep quantity or quality, associated with one (or more) of the following symptoms:

- **Difficulty falling asleep**
- **Difficulty staying asleep**
- **Early Morning Awakenings**

- Causes clinically significant distress or impairment
- Occurs ≥ 3 nights per week.
- Present ≥ 3 months.
- Occurs despite adequate opportunity for sleep.
- Not better explained by another sleep-wake disorder .

Poll Question #1

What is your primary role in VA?

- Primary Care Clinician
- Other Clinician
- Researcher
- Manager or policy-maker
- Other

The Scope of the Problem

- Insomnia Disorder: 6 – 10% of US adults & ≥ 50% of Veterans *(American Psychiatric Association, 2013; Jenkins et al, 2015).*
- When asked what services they would use if available, OEF/OIF/OND Veterans endorsed "help with sleep" more than any other mental health service *(Crawford et al, 2015).*
- In CPRS, insomnia diagnoses ↑ 7-fold from 2000-2016 *(Hermes, et al, 2014)*.
- In the Military, insomnia diagnoses ↑ 19-fold from 2000-2007 *(Armed Forces Health Surveillance Center, 2010)*.

Insomnia

Mental Health and Functioning

- Insomnia: more than triple the risk of developing depression (OR=3.95) *(Breslau et al, 1996)* , and increased risk of future anxiety (OR=1.6) *(Neckelmann et al, 2007).*

- Insomnia: predictor of suicidality. In Veterans completing suicide, the time lapse between the last VA visit and death was shorter for those having co-morbid insomnia relative to those without *(Pigeon et al, 2012).*

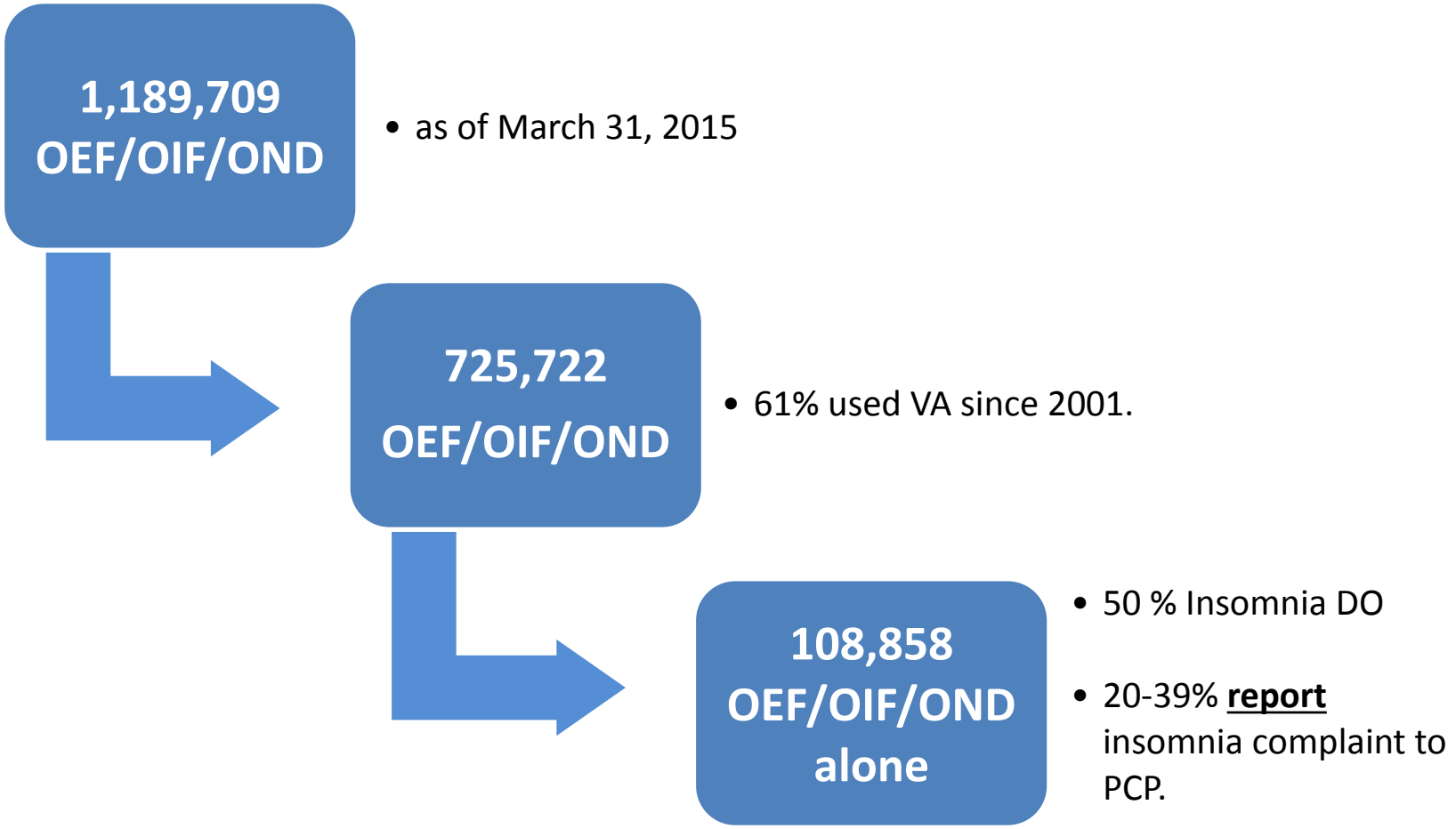
- Insomnia: associated with poorer quality of life *(Reimer et al, 2003)* more days of restricted activity due to illness, impaired ADLs, increased risk of industrial accidents *(Leger et al, 2002),* and increased risk of falling *(Brassington, et al, 2000).*

Insomnia & Sleep Disturbance

Cardiovascular Disease & Mortality Risks

	CVD Risk (95% CI)	Statistic	Reference
Insomnia	3.19 (1.87-5.43)	OR	Taylor, et al, 2007
Short Sleep (≤5 hrs)	2.10 (1.58-2.79)	HR	Gangwisch, et al, 2006
Insomnia + Short Sleep (<6 hrs)	3.5-5.1 (1.6-11.8)	OR	Vgontzas, et al, 2009
Heart Disease			
Difficulty Falling Asleep	1.25-3.9 (0.9-9.0)	RR	Bonnet & Arand, 2007
Mortality Risk			
Insomnia + Short Sleep (< 6 hrs)	Males: 4.33 (CI 1.25-15.04) Females: 1.45 (CI 0.13 -16.14)	OR	Vgontzas et al, 2010
Persistent Insomnia	1.58 (CI 1.02-2.45)	HR	Parthasarathy et al, 2015

The Scope of the Problem



Jenkins, et al, 2015; Ulmer, et al, in preparation.

Beneficial Effects of CBTI in Veterans

EFFECTS OF CBT FOR INSOMNIA ON SUICIDAL IDEATION IN VETERANS

Effects of Cognitive Behavioral Therapy for Insomnia on Suicidal Ideation in Veterans

Mickey Trockel, MD, PhD[1,2,*]; Bradley E. Karlin, PhD, ABPP[3,4,5,*]; C. Barr Taylor, MD[2]; Gregory K. Brown, PhD[6,7]; Rachel Manber, PhD[1,2]

Conclusion: This evaluation of the largest dissemination of cognitive behavioral therapy for insomnia (CBT-I) in the United States found a clinically meaningful reduction in suicidal ideation among Veterans receiving CBT-I. The mechanisms by which effective treatment of insomnia with CBT-I reduces suicide risk are unknown and warrant investigation. The current results may have significant public health implications for preventing suicide among Veterans.

Cognitive Behavioral Therapy for insomnia with veterans: Evaluation of effectiveness and correlates of treatment outcomes

Mickey Trockel [a,b,1], Bradley E. Karlin [c,d,*,1], C. Barr Taylor [a,b], Rachel Manber [a,b]

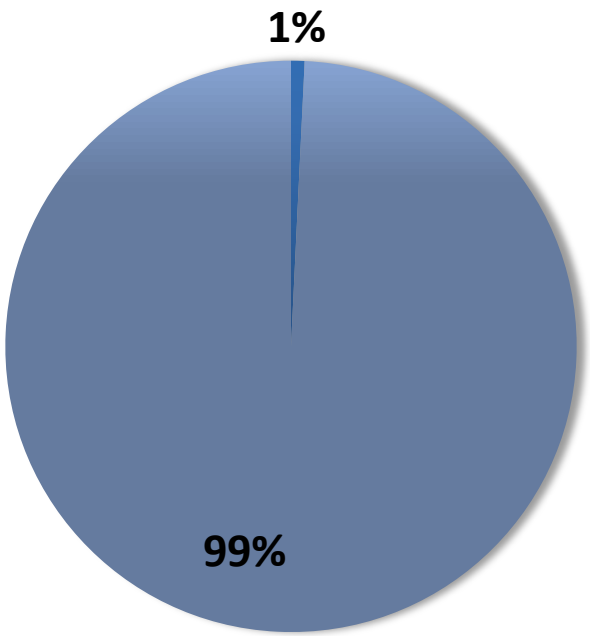
Affairs CBT-I Training Program and 696 patients receiving CBT-I from therapists undergoing training. Mixed effects model results indicate Insomnia Severity Index scores decreased from 20.7 at baseline to 10.9 ($d = 2.3$) during a typical course of CBT-I. Patients with highest tercile compared to those with

Insomnia Treatment Providers

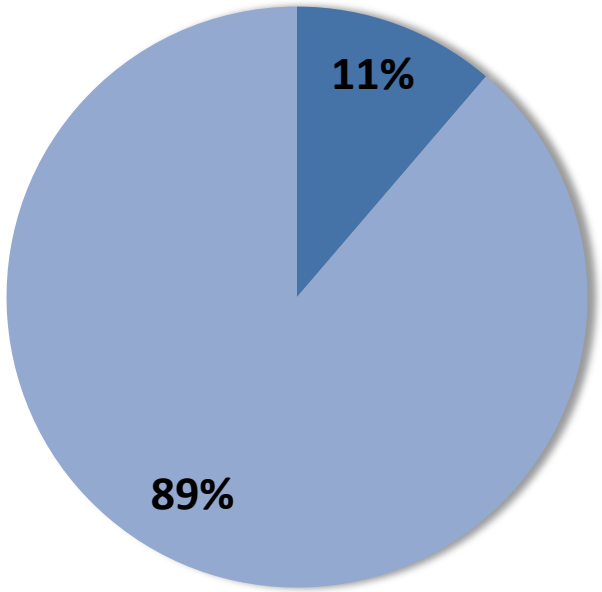
- Cognitive Behavioral Therapy for Insomnia in VA
  - 638 VA Mental Health providers trained in Cognitive Behavioral Therapy for Insomnia as of 9/12/2016
  - 127.6 FTE CBTI = 846 Veterans/provider to treat recent Vets
- Certified Behavioral Sleep Medicine Providers
  - In the US: ~213 Providers
  - In the VA: <10 VA CBSM providers offering a total of <300 hours/week; < 7 FTE; @ only 8 sites

Resource Comparison

Unique patients seen for at least 2 sessions and whose care was documented using EBP templates between September of 2015 and August of 2016



Veterans using VA with Insomnia Disorder treated with CBTI



Veterans using VA with PTSD treated with PE or CPT

PCP Survey on Insomnia Treatment

- VISN 6 PCPs surveyed about insomnia treatment practices.
- Email recruitment with link to survey behind VA firewall.
- Response rate was 13% (51/397).
- MDs (80.4%)
- 56.9% male
- 58.8% of PCPs provide care in a VA hospital setting
- VA & primary care work histories-bimodal distribution either 1-5 years or 10-20 years experience.

Barriers to Accessing ESTs for Insomnia:

Sleep Hygiene Education

Sleep Hygiene Education is most common insomnia treatment offered in primary care clinics.

of insomnia" and "Medicalization of insomnia". The main findings indicate that: 1) insomnia is often experienced as a 24-h problem and is perceived to affect several domains of life, 2) a sense of frustration and misunderstanding is very common among insomnia patients, which is possibly due to a mismatch between patients' and health care professionals' perspectives on insomnia and its treatment, 3) health care professionals pay more attention to sleep hygiene education and medication therapies and less to the patient's subjective experience of insomnia, and 4) health care professionals are often unaware of non-pharmacological interventions other than sleep hygiene education. An important implication of

Araujo T, Jarrin DC, Leanza Y, Vallieres A, & Morin CM. Qualitative studies of insomnia: Current state of knowledge in the field. *Sleep Medicine Reviews*, 2016

When a patient presents to your clinic complaining of difficulty falling asleep or staying asleep for 3 months or longer . . . which of the following treatment options are available to you?

Available Treatment Options	%
Provide the Veteran with guidance on healthy sleep habits.	76.5
Offer the Veteran pharmacotherapy, such as hypnotics or antidepressants.	70.6
Adjust or change medications that may contribute to insomnia.	66.7
Referral to a Sleep Specialist within my VA facility.	52.9
Referral to a VA provider who has been trained in Cognitive Behavioral Therapy for Insomnia	29.4
Written materials focused on helping with insomnia.	29.4
Internet-based or electronic self-management resources for insomnia.	7.8
Referral to a Sleep Specialist at another VA facility.	2
Referral to a Sleep Specialist outside of the VA.	2

Barriers to Accessing ESTs for Insomnia:

Sleep Hygiene Education

- Historically recommended for insomnia treatment.
- Now only recommended as an adjunct to behavioral interventions for insomnia.

" . . . the lack of supportive data and the availability of effective, empirically supported, behavioral treatment alternatives has led to the conclusion that sleep hygiene education is ineffective as a monotherapy for insomnia."

Irish, L.A., C.E. Kline, H.E. Gunn, et al., The role of sleep hygiene in promoting public health: A review of empirical evidence. *Sleep Med Rev*, 2015. 22: p. 23-36.

Inefficacy of Sleep Hygiene Education

Sleep Hygiene Education often used as comparison condition in research

Table 3. Sleep Diary Measures

Characteristic	BBTI: Pretreatment/ Posttreatment, Mean (SD)	BBTI: Difference (SE)	IC: Pretreatment/ Posttreatment, Mean (SD)	IC: Difference (SE) [95%	BBTI–IC Difference (SE) [95% CI], Cohen d Effect Size
Bed time, min from midnight	−35.19 (8.33)/ −19.87 (7.90)	15.32 (5.4	−26.60 (8.18)/ −32.41 (7.80)	−5.81 (5.35) [-	21.14 (7.66) [5.88 to 36.40], 0.63
Morning rise time, min from 7:00 AM	−24.12 (11.59)/ −57.18 (10.21)	−33.06 (7.4	−5.43 (11.39)/ −19.10 (10.08)	−13.67 (7.22) [-	−19.39 (10.35) [−39.99 to 1.22], 0.43
Time spent in bed, min	448.42 (11.27)/ 396.05 (9.90)	−52.36 (7.6	456.65 (11.06)/ 447.60 (9.77)	9.05 (7.45) [-	−43.31 (10.67) [−64.56 to −22.05], 0.93
Sleep latency, min	42.54 (4.49)/ 19.71 (3.17)	−22.8 (3.7	31.17 (4.40)/ 30.17 (3.10)	−1.00 (3.59) [-	−21.83 (5.16) [−32.11 to −11.55], 0.96
Wake after sleep onset, min	52.06 (5.51)/ 28.02 (5.16)	−24.0 (5.7	51.08 (5.31)/ 47.67 (5.03)	−3.41 (5.55) [-	−20.63 (8.00) [−36.56 to −4.71], 0.59
Total sleep time, min	342.57 (10.89)/ 339.47 (10.64	−3.1 (8.0	355.04 (10.61)/ 358.39 (10.30)	3.36 (7.77) [-	−6.46 (11.20) [−28.77 to 15.84], 0.13
Sleep efficiency, %	78.58 (1.57)/ 87.33 (1.53)	8.75 (1.5	81.05 (1.53)/ 82.25 (1.47)	1.21 (1.50) [-	7.54 (2.16) [3.25 to 11.83], 0.80
Sleep quality, 0-100	51.03 (2.24)/ 64.39 (2.46)	13.36 (2.6	51.79 (2.18)/ 55.15 (2.43)	3.36 (2.58) [-	9.99 (3.68) [2.65 to 17.32], 0.62

−52.36 −22.83 −24.04 −3.11 8.75 13.35

−9.05 −1.00 −3.41 3.36 1.21 3.36

Abbreviations: BBTI, brief behavioral treatment for insomnia; CI, confidence interval; IC, information control.

Buysse DJ, Germain A, Moul DE, et al, Efficacy of brief behavioral treatment for chronic insomnia in older adults. Arch Intern Med. 2011 May 23;171(10):887-95.

Barriers to Accessing ESTs for Insomnia:

Unawareness of CBTI and status as recommended treatment

- CBTI is recommended as the first line treatment for insomnia by:
  - **American Academy of Sleep Medicine**
  - **Society of Behavioral Sleep Medicine**
  - **National Institutes of Health**
  - **American College of Physicians**
- In our survey, 43% of PCPs didn't know if CBTI was available at their facility, and only 29% perceived CBTI to be an available treatment option.

Barriers to Accessing ESTs for Insomnia: Unawareness of CBTI and status as recommended treatment

Are you familiar with Cognitive-Behavioral Therapy for Insomnia (CBTI)?

	% Endorsed
No, I have never heard of it	9.8
Yes, I have heard of it but I don't really know how it works.	43.1
Yes, I have heard of it and have a general understanding of how it works.	29.4
Yes, I have heard of it and have a very good understanding of how it works.	13.7
Yes, I use it in my practice.	2.0

When a patient presents to a primary care clinic complaining of difficulty falling asleep or difficulty staying asleep, primary care providers often suggest that the patient try one of several behavioral strategies to address their sleep complaint.

RECOMMENDATION	%	RECOMMENDATION	%
Avoid stimulants before bedtime.	84.30	Give yourself time to "wind-down" before bedtime.	21.60
Keep bedroom environment quiet, dark and comfortable.	68.60	Wake-up and get out of bed at the same time every day.	19.60
Use the bed only for sleeping.	52.90	Get out of bed when you can't sleep.	19.60
Maintain a regular sleep schedule.	49.00	Go to bed only when you are sleepy.	7.80
Do not watch TV in your bed.	49.00	Do not try too hard to sleep. Just let sleep unfold naturally.	3.90
Do not nap during the day.	39.20	Do not worry or plan in bed.	3.90
Exercise regularly.	37.30	Avoid alcohol around bedtime.	29.40
Go to bed at the same time every day.	31.40	Give yourself time to "wind-down“ before bedtime.	21.60
Avoid excessive fluid intake near bedtime.	29.40	Shorten your time in bed.	2.00
Avoid alcohol around bedtime.	29.40		

Barriers to Accessing ESTs for Insomnia:

Equating Sleep Hygiene Education to CBTI

How does Sleep Hygiene differ from CBT-I?	
Sleep Hygiene Education	**CBT-I**
• Avoid stimulants for several hours before bedtime. • Avoid alcohol around bedtime. • Exercise regularly. • Allow at least a 1-hour period to unwind before bedtime. • Keep the bedroom environment quiet, dark and comfortable. • Maintain a regular sleep schedule.	• Sleep Restriction • Stimulus Control • Relaxation Training • Cognitive Therapy • Sleep Hygiene Education (except for regular bedtime) • Circadian Rhythm Entrainment
Standard Guidelines	**Individualized Multi-Component Intervention**
Helps Normal Sleepers Maintain Sleep Health	**Treatment for Insomnia Disorder**
Preventive	**Curative**
The Dental Hygienist	**The Dentist**
Minimal Impact on Insomnia Disorder	**Very Effective Insomnia Disorder Treatment**
Inactive Condition in Insomnia Research	**Active Condition in Insomnia Research**

Poll Question #2

After a Veteran has been successfully treated for PTSD or Depression, their sleep difficulties will _____ remit.

-Always
-Often
-Sometimes
-Rarely
-Never

VISN 6 PCPs		
	Frequency	**%**
Often	23	45.1
Sometimes	25	49.0
Missing	3	5.9
Total	51	100.0

Barriers to Accessing ESTs for Insomnia: Perception of Insomnia as a Symptom of another Condition

Most cases of insomnia are comorbid with other conditions. Historically, this has been termed "secondary insomnia." However, the limited understanding of mechanistic pathways in chronic insomnia precludes drawing firm conclusions about the nature of these associations or the direction of causality. Furthermore, there is concern that the term "secondary insomnia" may promote undertreatment. Therefore, we propose that the term "comorbid insomnia" may be more appropriate.

NIH (2005) Manifestations and Management of Chronic Insomnia in Adults, NIH Consensus and State-of-the-Science Statements, 22.

Barriers to Accessing ESTs for Insomnia:

Perception of Insomnia as a Symptom of another Condition

Results We interviewed 28 patients and 23 health professionals. Practitioners focused on treating the cause of insomnia rather than the insomnia itself. They described providing stepped care for insomnia, but this focused on sleep hygiene which patients often disregarded, rather than cognitive behavioural therapy for insomnia (CBT-I). Practitioners were ambivalent towards hypnotic drugs

Davy Z, Middlemass J, Siriwardena AN. Patients' and clinicians' experiences and perceptions of the primary care management of insomnia: qualitative study. Health Expect. 2015 Oct;18(5):1371-83.

Barriers to Accessing ESTs for Insomnia: Perception of Insomnia as a Symptom of another Condition

What do you think causes insomnia?

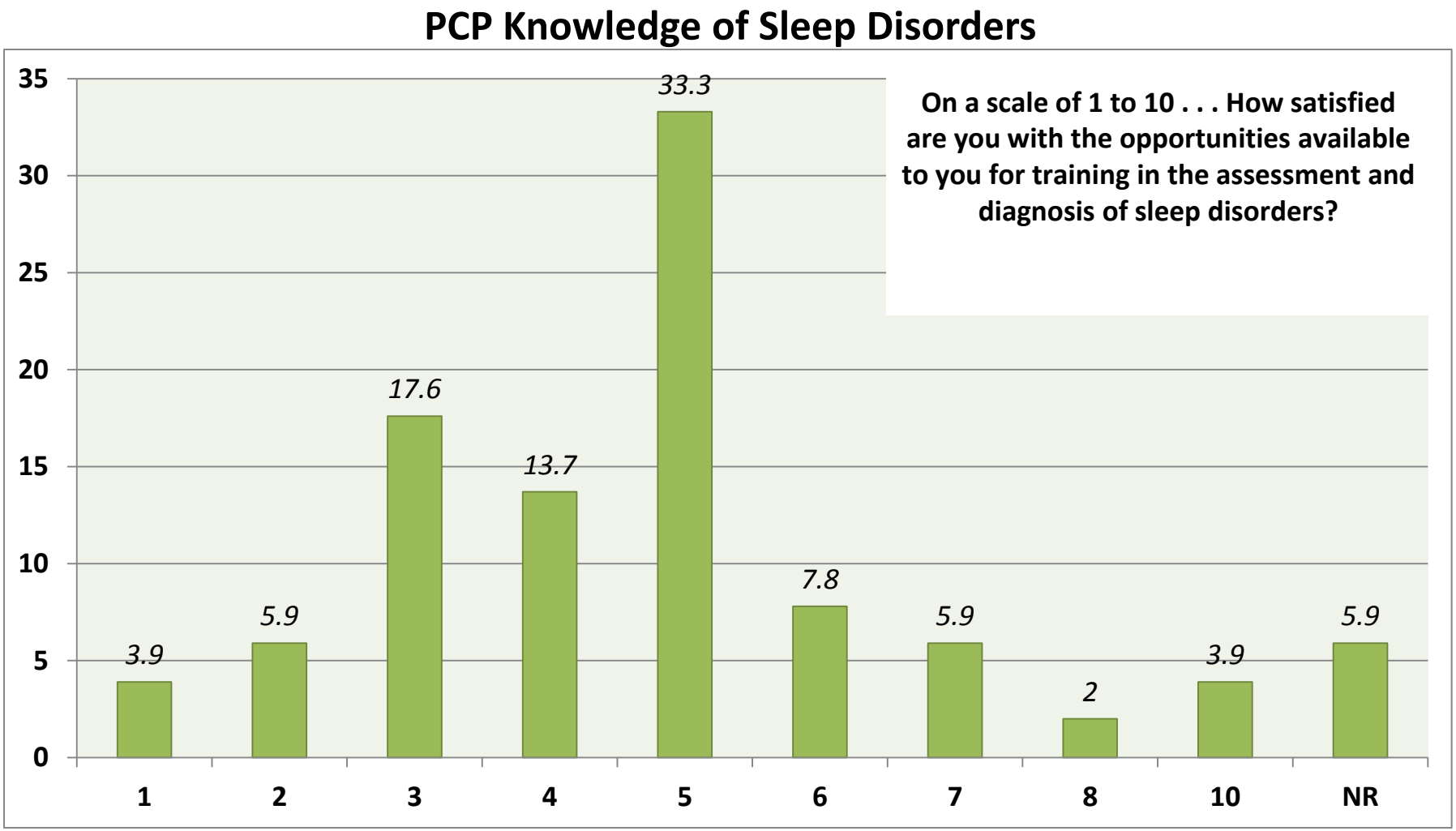
"Oh, the list is endless. Anything from physical complaints, chemical imbalances, preoccupation, mental health issues, physical health issues, concerns of daily life . . . chemical issues, such as caffeine, nicotine, alcohol or medication side effects."

How would treating depression or anxiety resolve insomnia?

". . . So, treating the depression can help resolve it. Anxiety issues the same thing. Of course, depression and anxiety wind up together sometimes, so it's hard to tell what's what." **So, you're saying that if their depression or anxiety is relieved they would be able to sleep?**

"*Yeah.*"

Barriers to Accessing ESTs for Insomnia:



Barriers to Accessing ESTs for Insomnia:

Failure to Document Insomnia Disorder in the Medical Record

- Insomnia prevalence is 6%–10% in US adults *(American Psychiatric Association, 2013).*
- More than 50% of OEF/OIF/OND Veterans may meet diagnostic criteria for Insomnia Disorder *(Jenkins, et al, 2015).*

Hermes E, Rosenheck R. Prevalence, pharmacotherapy and clinical correlates of diagnosed insomnia among Veterans Health Administration service users nationally. Sleep Med. 2014 May;15(5):508-14.

Results: Of the 5,531,379 individuals receiving VHA care in 2010, 190,378 (3.4%) received an insomnia diagnosis. Controlling for clinical characteristics, the presence of an insomnia diagnosis was associated

Conclusion: The diagnosis of insomnia is associated with the filling of more psychotropic prescriptions, net of the presence of psychiatric co-morbidity in national VHA administrative data, and the prevalence of diagnosed insomnia is lower than that found in systematic surveys of the general population, a potential impediment to optimal treatment.

Barriers to Accessing ESTs for Insomnia:

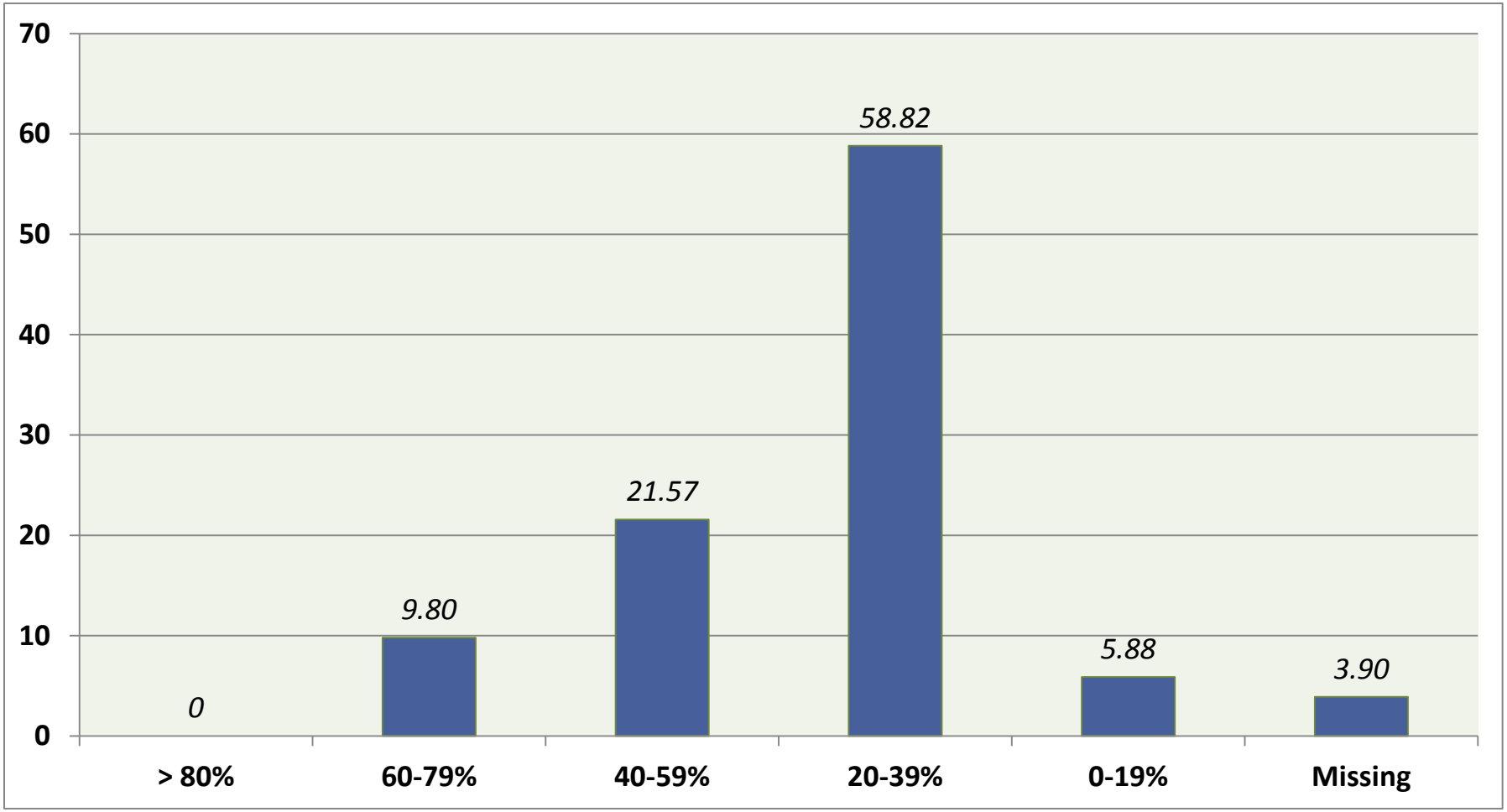
Failure to Document Insomnia Disorder in the Medical Record

When a patient presents to your clinic with a complaint of difficulty falling asleep or staying asleep for 3 months or longer . . . how often do you enter an Insomnia diagnosis code into: A) the encounter form; and B) the CPRS problem list?

	Encounter Form (%)	CPRS Problem List (%)
Always	9.8	9.8
Most of the Time	43.1	29.4
Sometimes	29.4	47.1
Rarely	13.7	11.8
Never	2.0	0

Barriers to Accessing ESTs for Insomnia:

Unknown Prevalence of Insomnia Disorder



Barriers to Accessing ESTs for Insomnia:

Failure to educate providers about Behavioral Medicine

What treatments do you find to be most effective for insomnia?

(after describing the pros and cons of various medications at length) . . . "*the mental health providers here do sleep hygiene . . . if it seems like it would be something beneficial they are definitely willing to sit down with them. . . . and if they're willing to see mental health, they kinda go into it in more detail but, unless something else is going on, often they're not going to mental health just for insomnia. I don't believe I've ever had anyone request to see them just for insomnia. It's usually that something else is there also. . . . If their only complaint was insomnia and I suggested mental health or a coach as we sometimes call them, they would probably be resistant to that cause they would think that they were going to be tricked into seeing a counselor or psychiatrist, probably.*"

Agenda for Increasing Access to Care

- Increase access to Evidence-Based Insomnia Treatments
  - CBTI Roll-Out
  - Stepped Care
- PCP Education on Insomnia
  - How to diagnose insomnia
  - Education on how insomnia develops from acute to chronic insomnia
  - Emphasize insomnia is not merely a symptom of another condition
  - CBTI is effective and recommended as 1st line insomnia treatment
  - CBTI treatment approach and components
  - How to describe CBTI to patients

Agenda for Increasing Access to Care

- Document Insomnia Disorder in the Medical Record
- Insomnia screening for primary prevention
- Research on prevalence in Veterans
- De-Implementation of Sleep Hygiene Education
- Integrate Behavioral Sleep Medicine into Sleep Clinics

Agenda for Increasing Access to Care:

Stepped Care Treatment of Insomnia

Relevant Ongoing Research and Clinical Projects:

- CBTI in Primary Care (Pigeon-PI)
- BBTI in Primary Care (Bramoweth-PI)
- Self-Management CBTI
  - **Workbook Alone (Ulmer & Farrell-Carnahan-Co-PIs)**
  - **Workbook with Nurse Support (Ulmer-PI)**
- Group-Based CBTI (Manber-Contractor)
- VA Online CBTI (Greene-PM; Ulmer & Farrell-Carnahan-SMEs)
- VA Virtual Medical Center Sleep Center (Ingmundson-SME)
- CBTI-Coach-Stand-alone treatment (Kuhn-PM)
- Integrated Sleep Project (Sarmiento-PM)
- VA Sleep Network (Kuna & Gottlieb-Coordinators)

Thank You

CDA Mentors, Advisors, and Research Team

CDA Mentors & Consultants	Research Team & Advisors
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Want to learn more . . .

Provider Resources

- VA CBT-I SharePoint site
  - **https://vaww.portal.va.gov/sites/OMHS/cbt_insomnia/default.aspx**
  - **Identify CBTI trained providers at your facility**
  - **CBTI Fact Sheet for Clinicians**
  - **Powerpoint presentation for Primary Care Clinicians**

- Sleep Education Website
  - **http://www.sleepeducation.org/**

- Society of Behavioral Sleep Medicine website
  - **Find CBSM trained providers**
  - **http://www.behavioralsleep.org/**

Questions

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