



**UW PACC**

Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

04/11/2019

**WELCOME!**

Today's Topic:

Substance Abuse and Insomnia

Barbara McCann, PhD

**PANELISTS:**

MARK DUNCAN MD, RICK RIES, MD, KARI STEPHENS, PHD, AND BARB MCCANN, PHD





**UW PACC**

Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

# SUBSTANCE ABUSE AND INSOMNIA

BARBARA S. MCCANN, PH.D.

DEPARTMENT OF PSYCHIATRY AND  
BEHAVIORAL SCIENCES

UNIVERSITY OF WASHINGTON



# GENERAL DISCLOSURES

The University of Washington School of Medicine also gratefully acknowledges receipt of educational grant support for this activity from the Washington State Legislature through the Safety-Net Hospital Assessment, working to expand access to psychiatric services throughout Washington State.

# GENERAL DISCLOSURES

UW PACC is also supported by Coordinated Care  
of Washington

# DISCLOSURES

I have no conflicts of interest to report.

# OBJECTIVES

- Examine the impact of alcohol and cannabis use on insomnia.
- Describe current practices in the use of benzodiazepines and non-benzo hypnotics in the treatment of insomnia
- Explore ways in which use of sleep aids modulates nighttime physiological arousal
- Discuss modifications of CBTi to address substance abuse

# QUESTIONS TO CONSIDER

- How do common substances impact sleep?
- How does withdrawal from substances affect sleep?
- What are the trends in the prescribing of nonbenzodiazepine hypnotics for insomnia? What accounts for these trends?
- How can we best help patients who have insomnia and use substances impacting sleep?

# ALCOHOL WITHDRAWAL SYMPTOMS

- Autonomic hyperactivity (e.g., sweating or pulse greater than 100 bpm)
- Increased hand tremor
- **Insomnia**
- Nausea or vomiting
- Transient visual, tactile, or auditory hallucinations or illusions
- Psychomotor agitation
- Anxiety
- Generalized tonic-clonic seizures



# SEDATIVE, HYPNOTIC, OR ANXIOLYTIC WITHDRAWAL SYMPTOMS

- Autonomic hyperactivity (e.g., sweating or pulse rate greater than 100 bpm)
- Hand tremor
- **Insomnia**
- Nausea or vomiting
- Transient visual, tactile, or auditory hallucinations or illusions
- Psychomotor agitation
- Anxiety
- Grand mal seizures

# CANNABIS WITHDRAWAL SYMPTOMS

- Irritability, anger, or aggression
- Nervousness or anxiety
- Sleep difficulty (e.g., **insomnia**, disturbing dreams)
- Decreased appetite or weight loss
- Restlessness
- Depressed mood
- One of: abdominal pain, shakiness/tremors, sweating, fever, chills, headache

# OPIOID WITHDRAWAL SYMPTOMS

- Dysphoric mood
- Nausea or vomiting
- Muscle aches
- Lacrimation or rhinorrhea
- Pupillary dilation, piloerection, or sweating
- Diarrhea
- Yawning
- Fever
- Insomnia

# EFFECTS OF ALCOHOL ON SLEEP

- Moderate alcohol use decreases REM duration
- Heavy alcohol use decreases SOL and SE, and increases WASO
- Heavy alcohol use and REM: Increases latency, decreases REM percent
- Undetectable levels of alcohol by bedtime are still associated with increased arousal during sleep

Chakravorty et al., 2016

# SLEEP DISTURBANCE IN AUD

- Relationship is bidirectional
- 30-80% AUD report insomnia
- 50% report insomnia during acute alcohol withdrawal
- Sleep disturbance early in recovery from AUD is especially problematic (greater likelihood of relapse)

Schmidt and Kolla, 2017

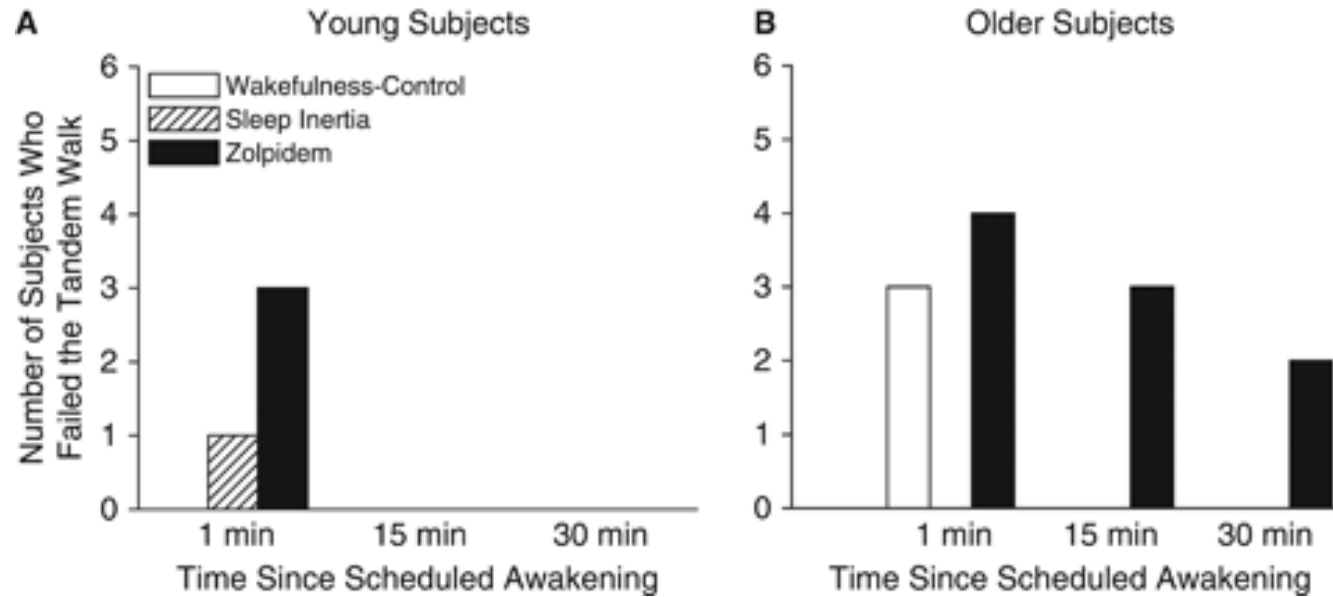
# NONBENZODIAZEPINE HYPNOTICS

- Z-drugs: zolpidem, eszopiclone, zolpidem, zaleplon
- Started appearing in the mid-eighties
- Traditional benzodiazepines associated with high risk of dependence, daytime drowsiness, tolerance, rebound insomnia, impaired performance, amnesia
- Do not appreciably change sleep architecture

# NONBENZODIAZEPINE HYPNOTICS

- Reports of abuse and dependence emerged in the 90's - - high doses
- Reports of increased hip fracture risk in the geriatric population
- Reports of “sleep driving”
- Sleepwalking/night eating

Influence of Zolpidem and Sleep Inertia on Balance and Cognition During Nighttime Awakening: A Randomized Placebo-Controlled Trial



Frey et al, 2011. Wiley.



# BALANCE BEAM TEST



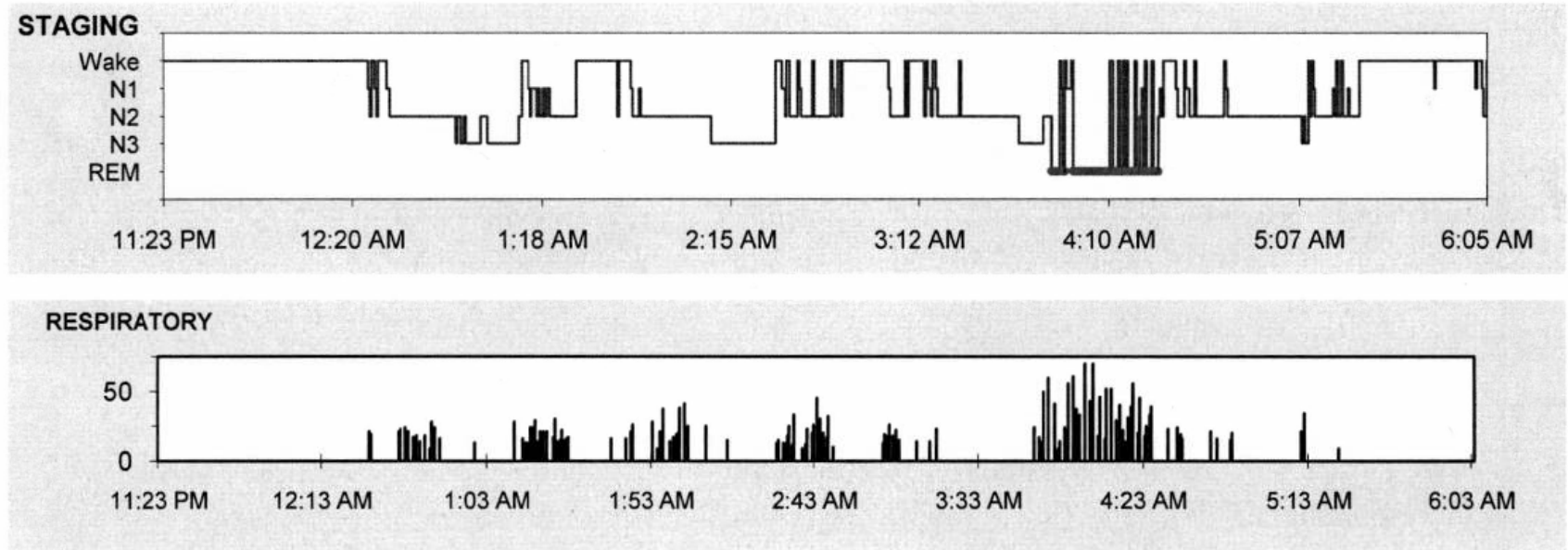
Frey et al, 2011. Wiley.

[Journal of the American Geriatrics Society, Volume: 59, Issue: 1, Pages: 73-81, First published: 13 January 2011, DOI: \(10.1111/j.1532-5415.2010.03229.x\)](#)

# CASE EXAMPLE

- 65 yo man, retired x3 yrs
- Zolpidem XR 12.5 mg qhs (6.25 + 6.25)
- Variable morning oob times (TIB 10-12 hrs)
- 4-6 standard drinks most nights
- Untreated OSA
- Prolonged SOL, multiple awake after sleep onset, multiple sleep locations within house
- PHQ-9 = 11; GAD-7 = 2; ISI = 16

# CASE EXAMPLE - POLYSOMNOGRAM



AHI: 1a = 28.8, 1b = 10.7 events per hour; O<sub>2</sub> nadir = 72%

# CASE EXAMPLE: SESSION 1 INSTRUCTIONS

- Start keeping Sleep Log
- Maintain zolpidem XR at 6.25 mg/qhs
- Refrain from alcohol use
- Sleep hygiene/Stimulus control
- TIB restriction midnight – 9 am

# CASE EXAMPLE, RESULTS:

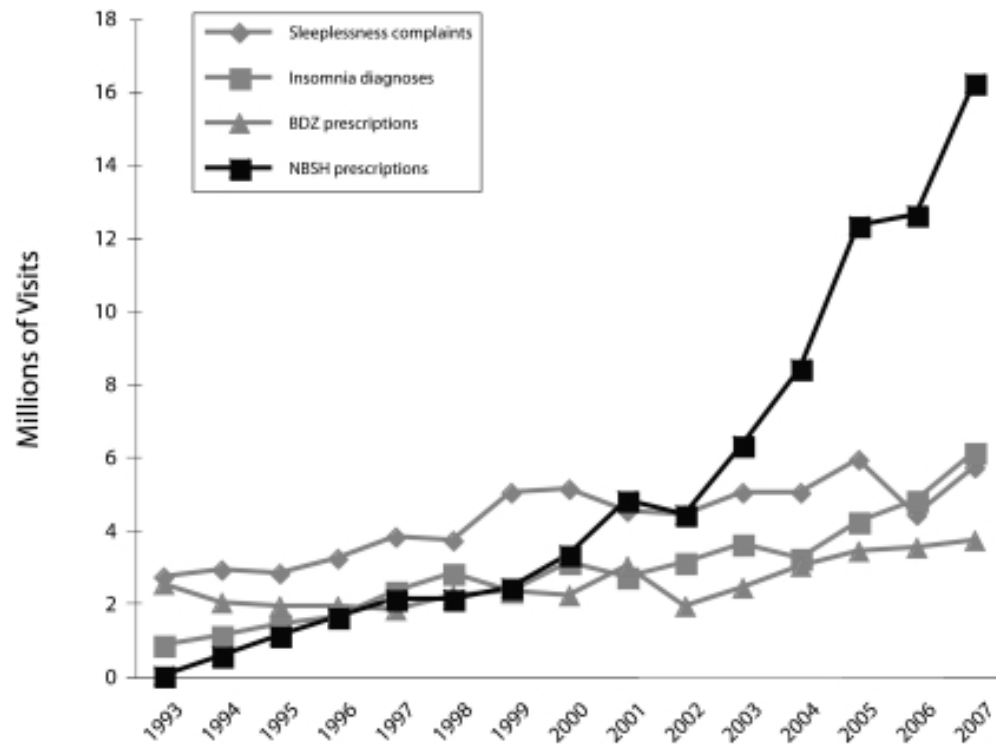
	Time in Bed (min)	Total Sleep Time (min)	Sleep Efficiency
Week 2	447	261	58%
Week 3	429	349	81%
Week 4	483	402	83%

- Discontinued zolpidem by end of first week
- Stayed out of bed longer than necessary during awakenings, prior to Week 2
- Significant stressor prior to Week 4
- Starting to use CPAP just prior to Week 4

# TREATING INSOMNIA: THE PRESCRIBER DILEMMA

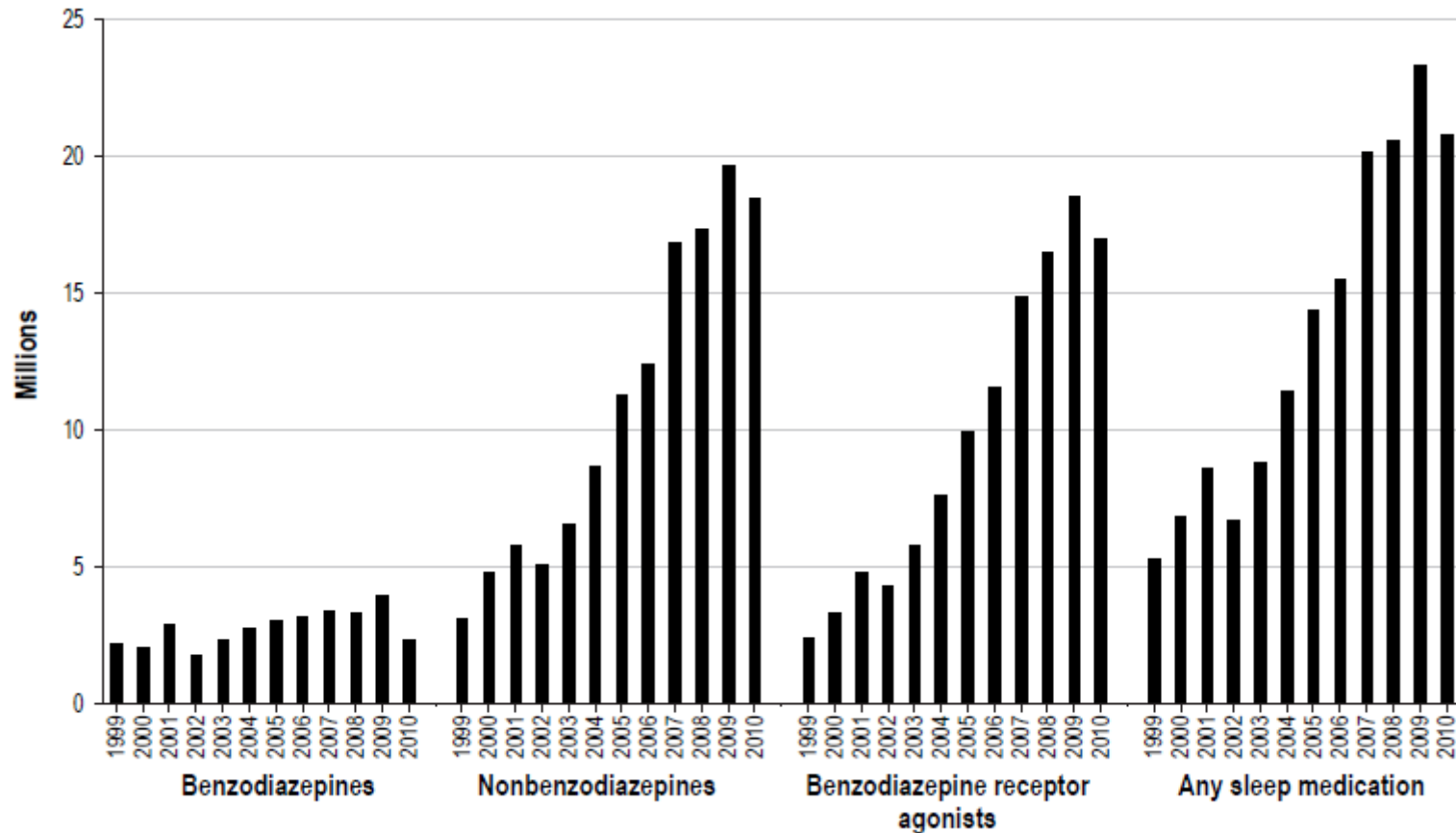
- Cognitive Behavior Therapy for Insomnia recommended as first line of treatment
- Access to, and dissemination of, evidence-based psychological interventions remains inadequate
- Nonbenzodiazepine hypnotics are *relatively* fast, effective, and safe

## SLEEPLESSNESS-RELATED TRENDS OF INSOMNIA COMPLAINT, INSOMNIA DIAGNOSIS, BDZ AND NBSH PRESCRIPTION AS A RESULT OF PHYSICIAN OFFICE VISITS, 1993-2007



Moloney et al, 2011

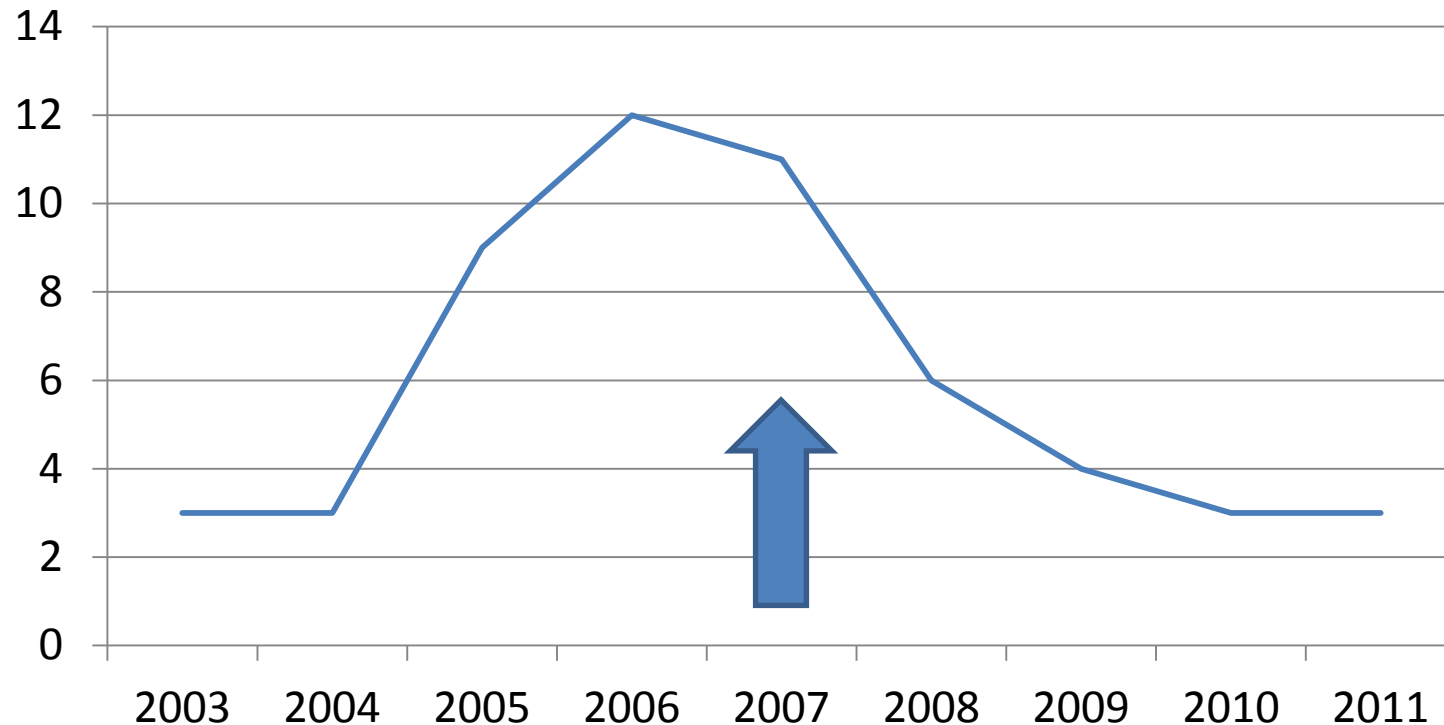
# ANNUAL NUMBER OF OFFICE VISITS ACCOMPANIED BY A PRESCRIPTION FOR SLEEP MEDICATIONS, NATIONAL AMBULATORY MEDICAL CARE SURVEY, 1999-2010



Ford et al., 2014



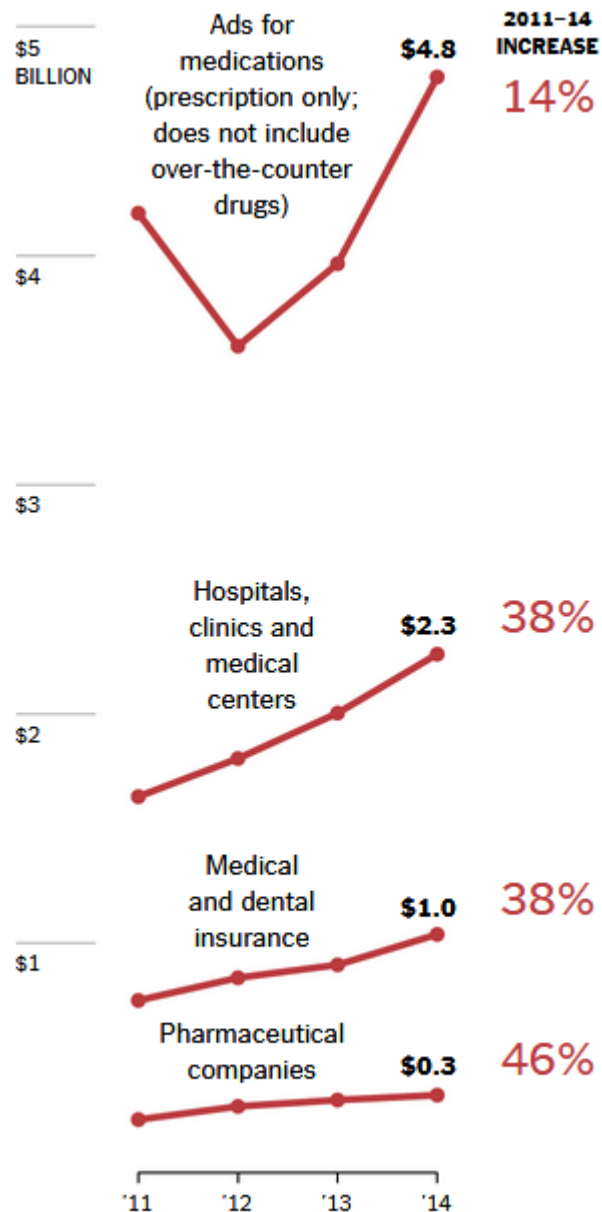
# HOUSEHOLD EXPOSURE TO PHARMACEUTICAL TV ADVERTISING FOR SLEEP DISORDERS



Kornfield et al 2015

## Annual Spending on Medical-Related Advertising (TV, radio, newspapers, magazines, websites, billboards)

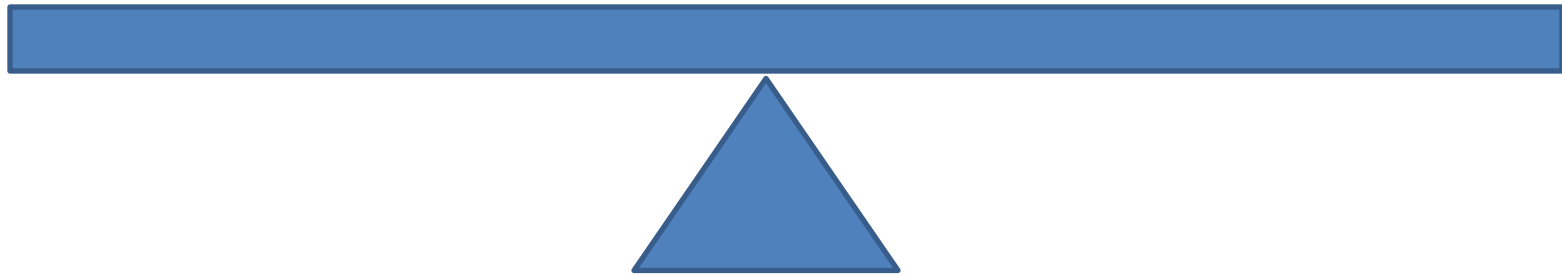
New York Times, 2-27-2016.  
Source: Kantar Media



# THE PRESCRIBER DILEMMA: “ASK YOUR DOCTOR.”

Patient autonomy (choice,  
advocacy)  
Patient satisfaction  
Drug vending machine?

Do no harm  
Beneficence  
Withholder of  
goodies?



# KEYS TO ADDRESSING INSOMNIA IN SUDS AND IN HYPNOTIC DISCONTINUATION

- Take a curious and collaborative stance with patients
- 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