Academic and private medicine partnership to improve care for sleep disorders, particularly insomnia in metropolitan Houston and surrounding areas.

Sudha Tallavajhula, M.D
Mary Rose, PsyD
Outline

• Background and rationale
• Project goal
• Suggested platform
• Scope of project and resources needed
• Challenges and limitations
Estimated **50-70 million U.S adults** have chronic sleep and wakefulness disorders

- Percentage of people who report < 7 hours of sleep on average increased from 1980s to approximately **$1/3$rd of all U.S adults**
- Unintentionally falling asleep during the day- **38%** (in past 30 days)- **highest in 18-24 age group** and highest in Hawaii and Texas!
- Nodding off or **falling asleep while driving (4.7%)**
- Persons with sleep insufficiency more likely to have chronic diseases- cardiac disease, diabetes, depression, obesity

**Direct costs of $2–16 billion per year**;

- Indirect costs of $75–100 billion. {worker absenteeism, lower productivity due to daytime impairment, and work-related accidents.}
Broad categories of sleep disorders

• Insomnias
• Hypersomnias
• Parasomnias
• Sleep related breathing disorders
• Circadian rhythm disorders
• Movement disorders
Chronic insomnia

- Difficulty falling or staying asleep
  - > 30 minutes
  - > 3 nights per week
  - Lasting >3 months
- Daytime impairment related to sleep problems
- Often starts during time of increased stress, declines in health, or major life transitions
- Over time, it is primarily cognitive/behavioral factors that maintain the disorder
Insomnia treatment

- Psychological and behavioral interventions are effective and recommended in the treatment of chronic primary and comorbid (secondary) insomnia.
- Short-term hypnotic treatment should be supplemented with behavioral and cognitive therapies when possible.
- Currently, about 3.5% of population uses some form of medication for inducing sleep.
- Prevalence up from 2.0% in 1999-2000 to 3.5% in 2009-2010.
- 55% use two and about 10% use more than two medications.

Clinical Guideline for the Evaluation and Management of Chronic Insomnia in Adults: an American Academy of Sleep Medicine clinical practice guideline. *Journal of Clinical Sleep Medicine, Vol. 4, No. 5, 2008*

CBT-I

• Behavioral strategies- Stimulus control therapy, relaxation therapy
• Cognitive strategies-
  – Improving understanding of sleep
  – removing misconceptions and negative attitudes re: sleep
• Sleep restriction
• Paradoxical intention
• Biofeedback
• Multimodal package
• Better long term efficacy over pharmacotherapy
CBTi is a highly efficacious treatment

• Recommended as first line treatment by the American College of Physicians
  – 20+ years of RCT research

ACP Recommends Cognitive Behavioral Therapy as Initial Treatment for Chronic Insomnia

Philadelphia, May 3, 2016 -- Cognitive behavioral therapy for insomnia (CBT-I) should be the first-line treatment for adults with chronic insomnia, the American College of Physicians (ACP) recommends in a new evidence-based clinical practice guideline published today in Annals of Internal Medicine.

“Cognitive behavioral therapy for insomnia is an effective treatment and can be initiated in a primary care setting,” said ACP President Wayne J. Riley, MD, MPH, MBA, MACP. “Although we have insufficient evidence to directly compare CBT-I and drug treatment, CBT-I is likely to have fewer harms. Sleep medications can be associated with serious adverse effects.”

“Medications should ideally be used for no longer than four to five weeks while the skills learned in CBT-I can manage insomnia over the longer term,” Dr. Riley said. “Before continuing drug therapy, doctors should consider treatable secondary causes of insomnia such as depression, pain, enlarged prostate, substance abuse disorders, and other sleep disorders like sleep apnea and restless legs syndrome.”

• Primary limitation is access to this treatment due to limited number of trained providers and treatment costs
Efficacy of CBTI

Figure from Morin, 2010, in Kryger, Roth & Dement (Eds.), *Principles and Practices of Sleep Medicine*
National landscape

• U.S. population 325 million
• 400 Cognitive Behavioral Therapy for Insomnia (CBT-I) providers in the United States
• The prevalence of clinically diagnosed insomnia is also high, with estimates of insomnia syndromes at approximately 10% of the general adult population and as high as 35% to 45% in adults older than 65 y.

Telehealth

• Survey of 1000 U.S employees from 2014-16, employers are projecting a 68% increase (from 22% to 37%) in use of telemedicine for consultations as alternative to office visits and ER visits

• In 2014, AASM convened a task force which reported in 2015 with recommendations and a position statement

Journal of Clinical Sleep Medicine, Vol. 11, No. 10, 2015
• Clinical considerations
  – Synchronous and asynchronous interactions
  – Technological requirements
  – Consultations, diagnostic testing, interpretation of sleep studies, prescription of medications, patient education, follow-up
  – REIMBURSEMENT
  – Other healthcare members.
Sleep disorders service line in Memorial Hermann Health System

- Eleven sleep disorders centers radially located
- Mostly geared towards diagnosis and treatment of obstructive sleep apnea.
- Multiple specialties involved in care; pulmonary medicine, neurology, internal medicine and others.
- No designated facility for psychotherapy for sleep disorders
Proposed UT- MHH sleep telehealth project

Referral -> Primary care physician

Sleep medicine physician

Other subspecialties (psychiatry, neurology, pulmonology)

Behavioral sleep medicine counselor

Screening for primary sleep disorders

Insomnia

Initiated into Cognitive Behavioral Therapy

OSA, RLS, Hypersomnias, Parasomnias and other sleep disorders

Referral to local sleep medicine specialist

Polysomnography and other testing

May consider CBT if co-existent insomnia.

Other medical or psychiatric disorder presenting with sleep symptoms

Report back to referring physician for appropriate evaluation
Logistics

• Teleconferencing equipment - Vidyo
• HIPAA compliant
• Initial plan to install stations at all peripheral sleep labs, and then transition to at home care
• Pilot project in Katy, TX (west of Houston) underway
Vidyo

- Teleconference system
- Currently being used at MH for Telehealth, with behavioral services, and now at Children’s MH and Pedi Surgery follow up visits
- Allows screen sharing (ie, powerpoint)
- Not so good with video sharing

- Cost: $250 for the license
- Can use any platform but suggest mobile devices for reduced technical difficulties
- 4G or Wifi but Wifi is better
Project Scope: Initial Intent

• Phase 1 - Consultation, Intervention and Education
  – Collect outcomes on sleep-related metrics: sleep onset latency, sleep efficiency, total sleep duration etc.
  – Patient goal tracking
  – Patient education
  – Appointment reminders
  – Report to referring physician: may suggest additional referrals or pharmacotherapy if required.
• Sleep schedule- Bedtime, arousals, wake up time
• Associations with sleep- television, electronic use, fear of not being able to fall asleep, nocturnal ruminations/worry, light sleep
• Weekly frequency of sleep difficulties
• Bed-partner
• Time in bed and time asleep.
• Daytime symptoms- sleepiness, fatigue, mood, concentration
• Objective scales (ESS, PSQI, BDI, Anxiety scale, Personality assessment)
Project Scope

• Phase 2 –
  – Clinical database for outcomes- analysis and research implications.
  – Multivariate analysis with biostatistician help- pre and post intervention metrics, impact of co-morbidities, patient and referring physician satisfaction, medication (especially hypnotic) use.

• Await Texas legislature decision on new version of telemedicine bill which will enhance capabilities for physicians
Return on Investment

• Operational efficiency
• Cost avoidance (travel, improved staff utilization, preventative outreach)
• Increased patient referral/participation
Project Limitations

• Relative immaturity for telemedicine across nation

• Licensure/Regulation:
  – Physicians can practice telemedicine in Texas but there are regulations limiting assessments without first the establishing a patient-physician relationship, limiting out of state and international assessments, restricted to underserved areas.
  – Telemedicine is still not approved in state legislation and regulation for PT and OT services in Texas
GUIDELINES FOR THE PRACTICE OF TELEPSYCHOLOGY

The delivery of psychological services by remote or electronic means is a rapidly expanding area. While the (Texas Board of Psychology) Board’s rules do not prohibit such services, it is important for psychologists to be aware of a number of concerns about the delivery of services via remote or electronic means, including the following:

1. The increased potential that a therapist will have limited knowledge of a distant community’s resources in times of crisis.
2. Problems associated with obtaining informed consent.
3. The lack of standards for training providers in the use of technology as well as the special therapeutic considerations in the use of the medium.
4. The lack of vocal, visual, and other sensory cues.
5. The potential that equipment failures may lead to undue patient anxiety particularly in crisis situations.
6. The potential inability of patients in crisis or those unfamiliar with technology to adequately access and use the technology.
7. The lack of confidentiality and privacy.
Project Limitations

• Reimbursement/Payment policy: Limitations on Medicare qualifications for reimbursable telemedicine services; Medicare does not reimburse behavioral health services for the most part when provided through telemedicine.
• Many private payors however do- pre-authorization.
• Concern that telehealth may increase utilization and therefore health-related expenses.

Questions?

TODAY WILL BE ONE OF THOSE DAYS THAT EVEN MY COFFEE WILL NEED A COFFEE