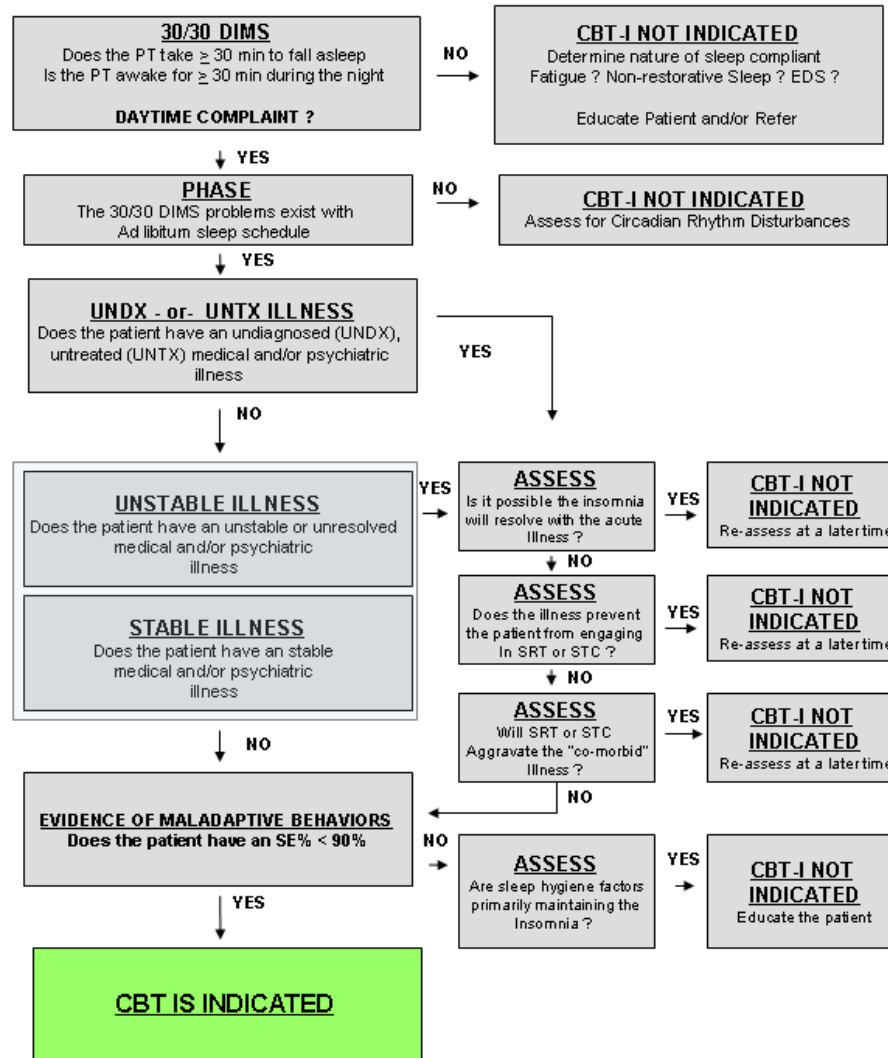


THE COGNITIVE BEHAVIORAL TX OF INSOMNIA



4 CASE EXAMPLES

ASSESSMENT ALGORITHM : IS CBT- I INDICATED ?



CASE 1



Case courtesy of S.J.C. RN, CNS
Seoul Korea

Tx was conducted by staff or trainees at
this locale.

INITIAL PRESENTATION

- **68 year old Female**
 - Married/ lives with her husband
 - Three daughters are all married
- **Onset of insomnia: 6 yrs ago**
- **2yrs ago: Dx & Tx GERD → somewhat improved**
- **Increased fluid intake during night time (3-5cups/night)**
 - She thought it helpful for GERD
 - Nocturnal frequency
- **TTB** Variable from 10-11pm
- **TOB =** 6am
- **SL =** 43 minutes
- **WASO =** 55 minutes
- **TST =** 6.27 (~6 hrs. 15 min)
- **TIB =** ~8.0 hours
- **SE =** 78%

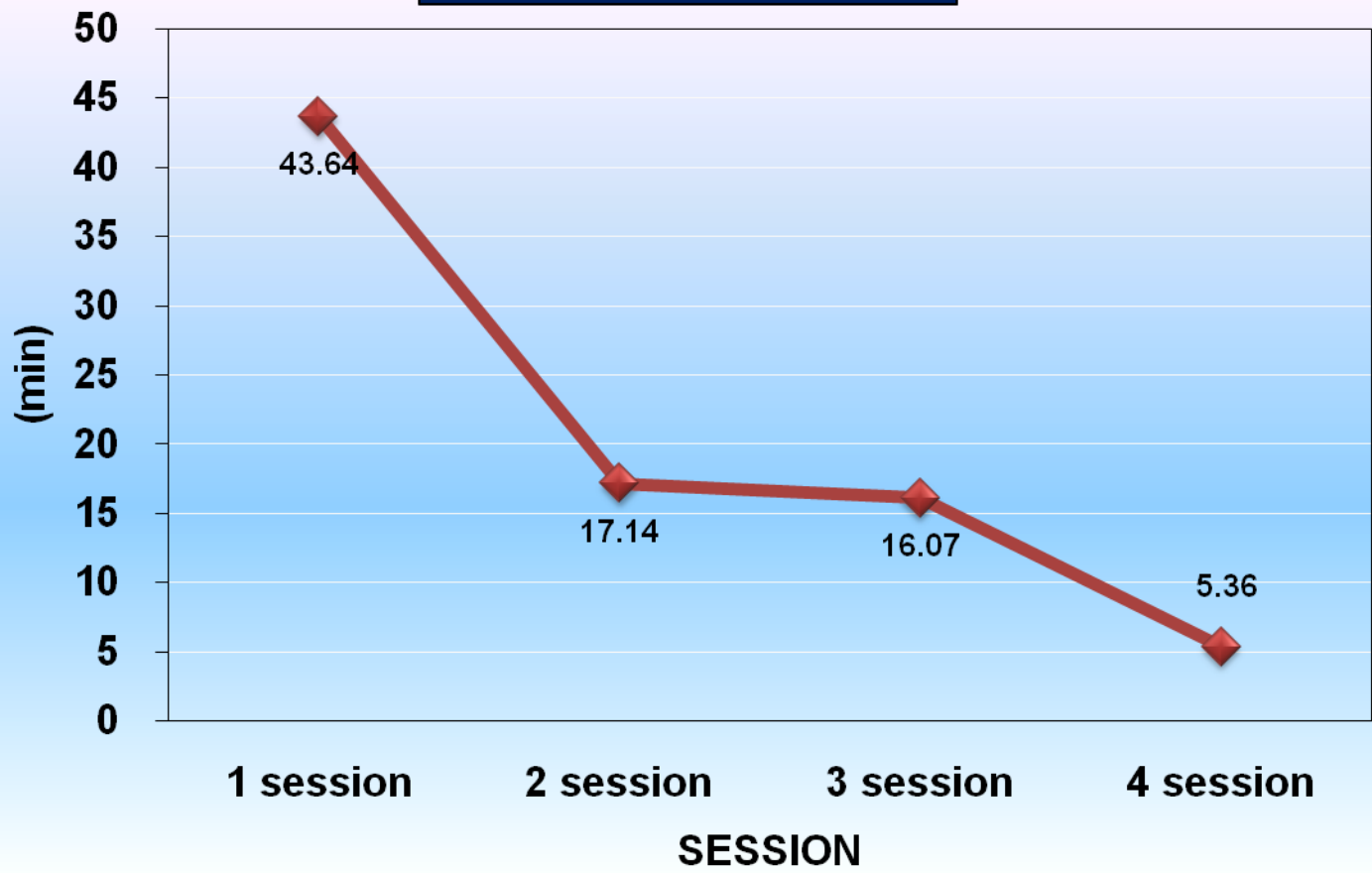
MEDICATION & TX STATUS

- Medications for Insomnia
 - alprazolam 0.25mg 1~1.5T hrs
 - triazolam 1T hrs
 - frequency: 1/week
- Medication for GERD
 - PPI (rabeprazole 10mg qd)
- Medication for menopause
 - Intermittent hormonal replacement IV form

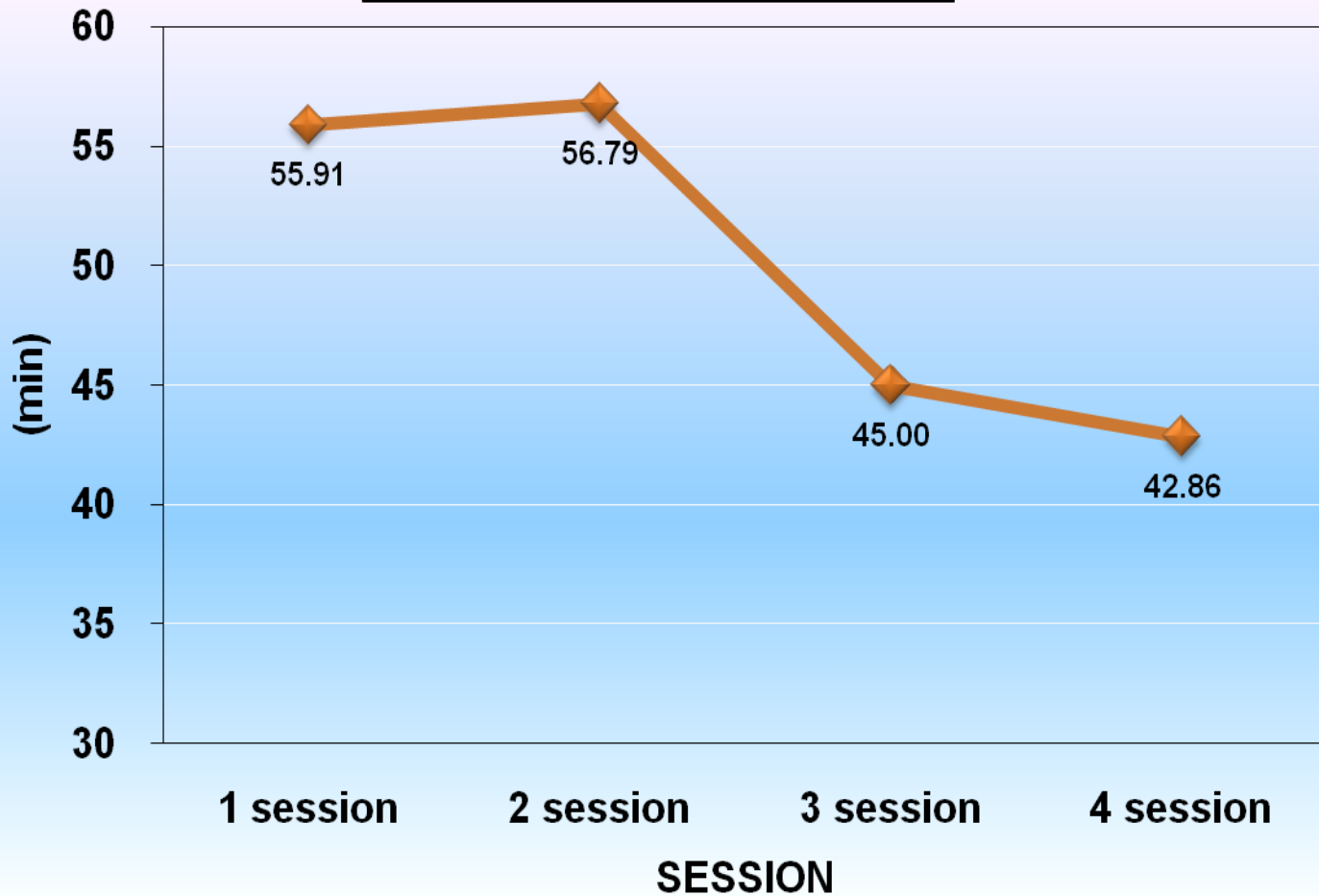
TREATMENT

- **1st session**
 - Introduction of CBT-I
 - Hx, sleep pattern
- **2nd session**
 - Education about sleep/wake regulation
 - Behavioral/Relaxation Tx
- **3rd session**
 - Cognitive Tx
 - Medication tapering
- **4th session**
 - Review progress & wrap up

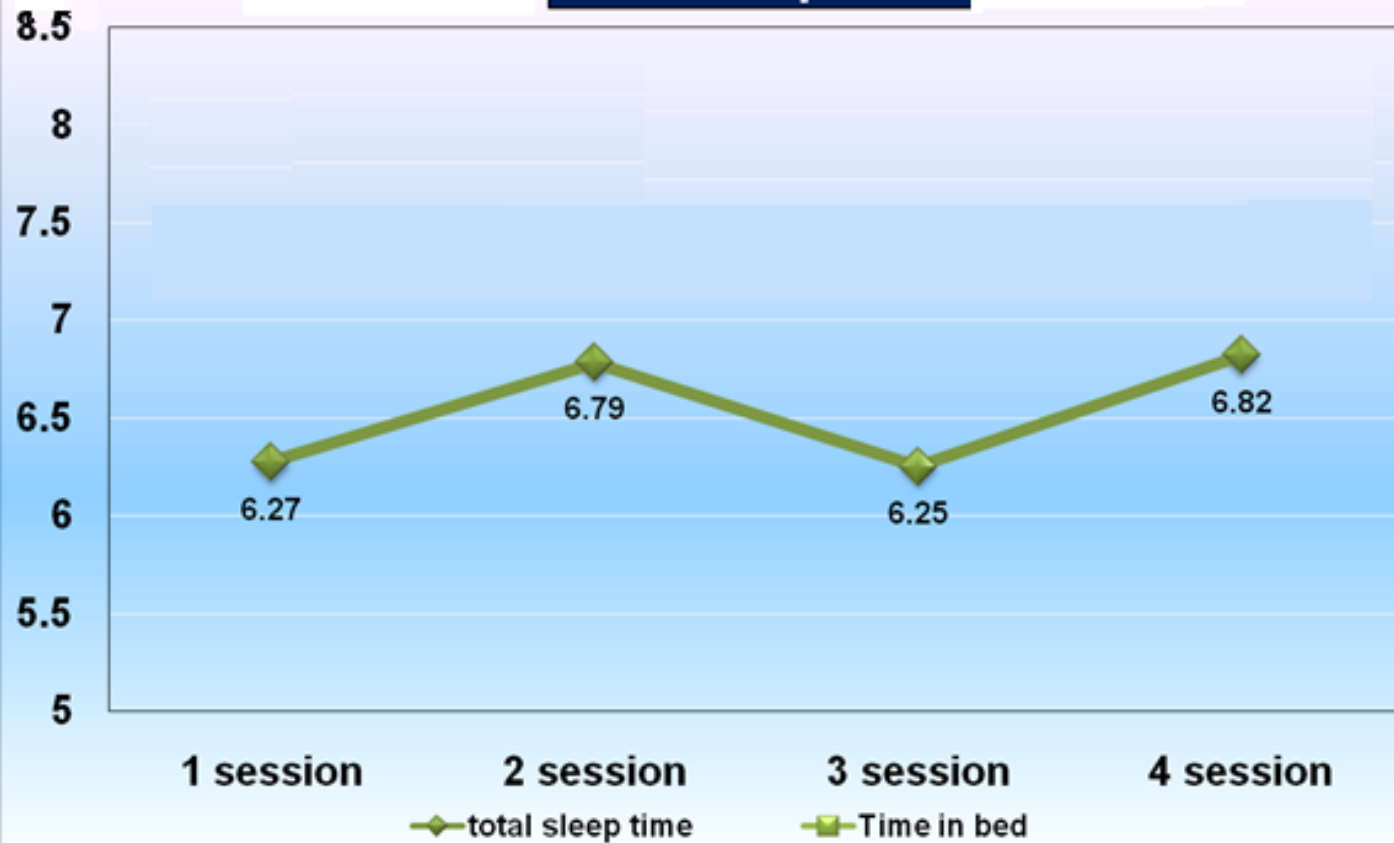
Sleep Onset Latency



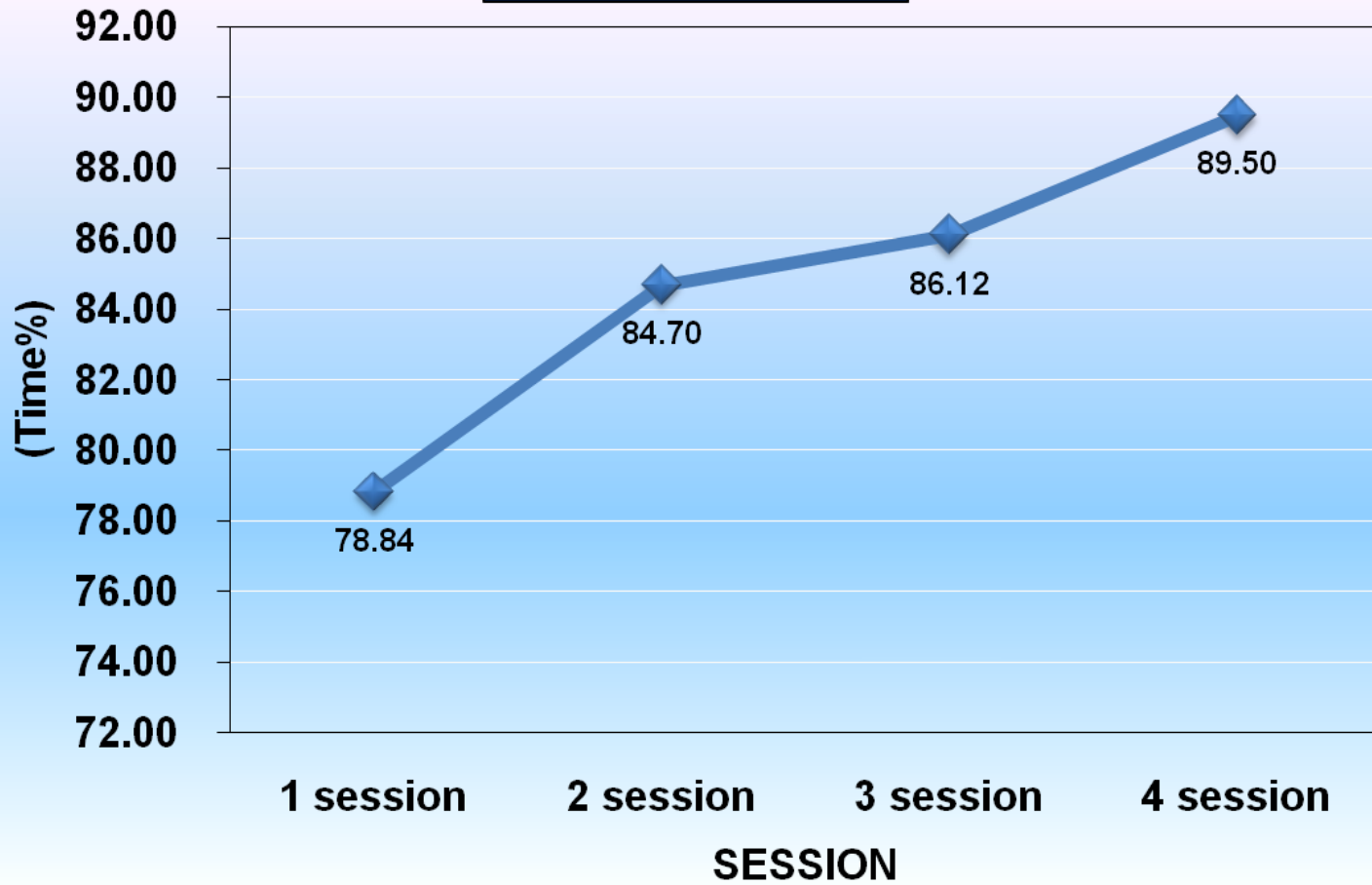
Wake After Sleep Onset



Total Sleep Time



Sleep Efficiency



PRE-POST COMPARISON

Pre-Tx

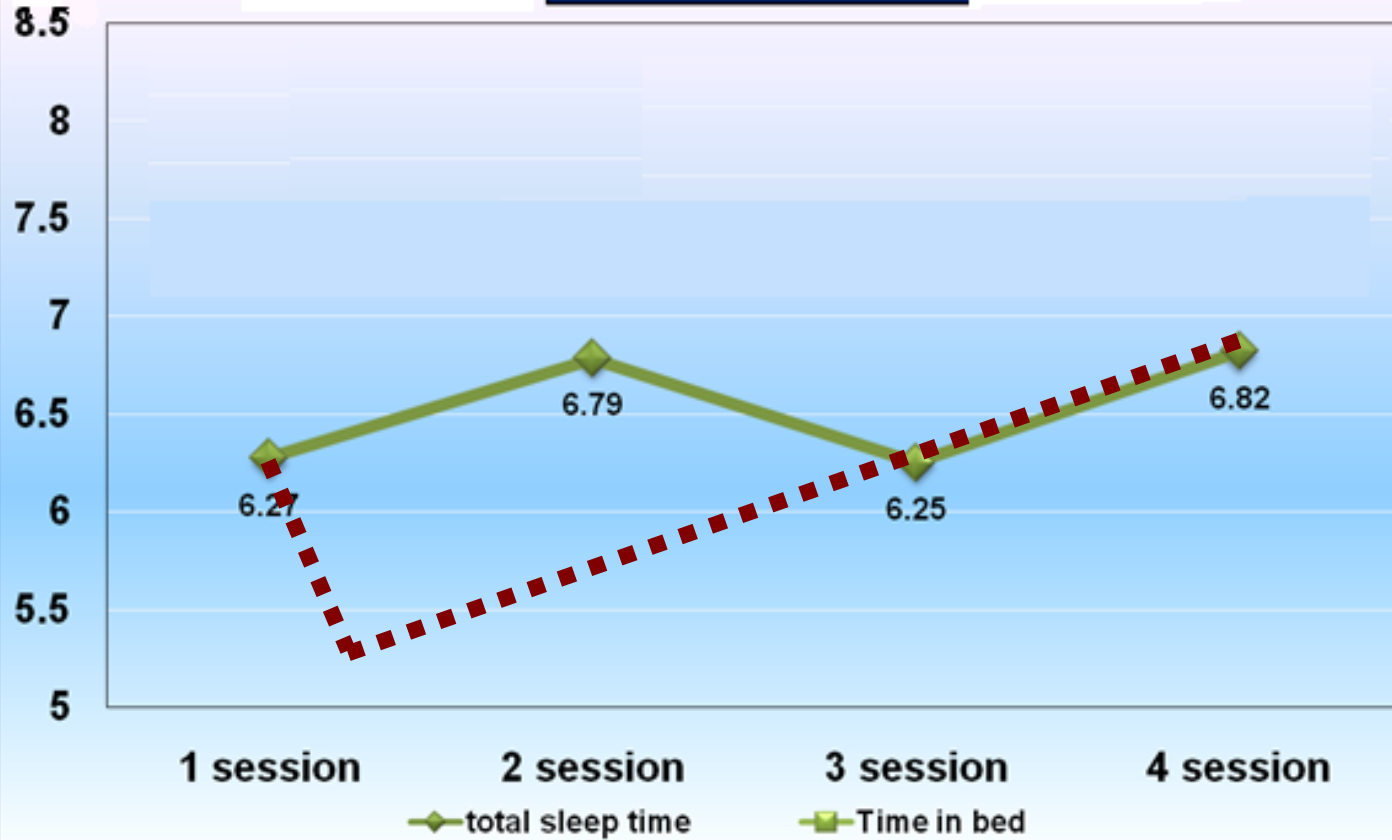
| | |
|-------------|---------------------|
| SOL | 43.8 min |
| TST | 6.27 hours |
| WASO | 55.8 min |
| NWAK | 2.36 numbers |
| SE | 78.8 % |

Post-CBT

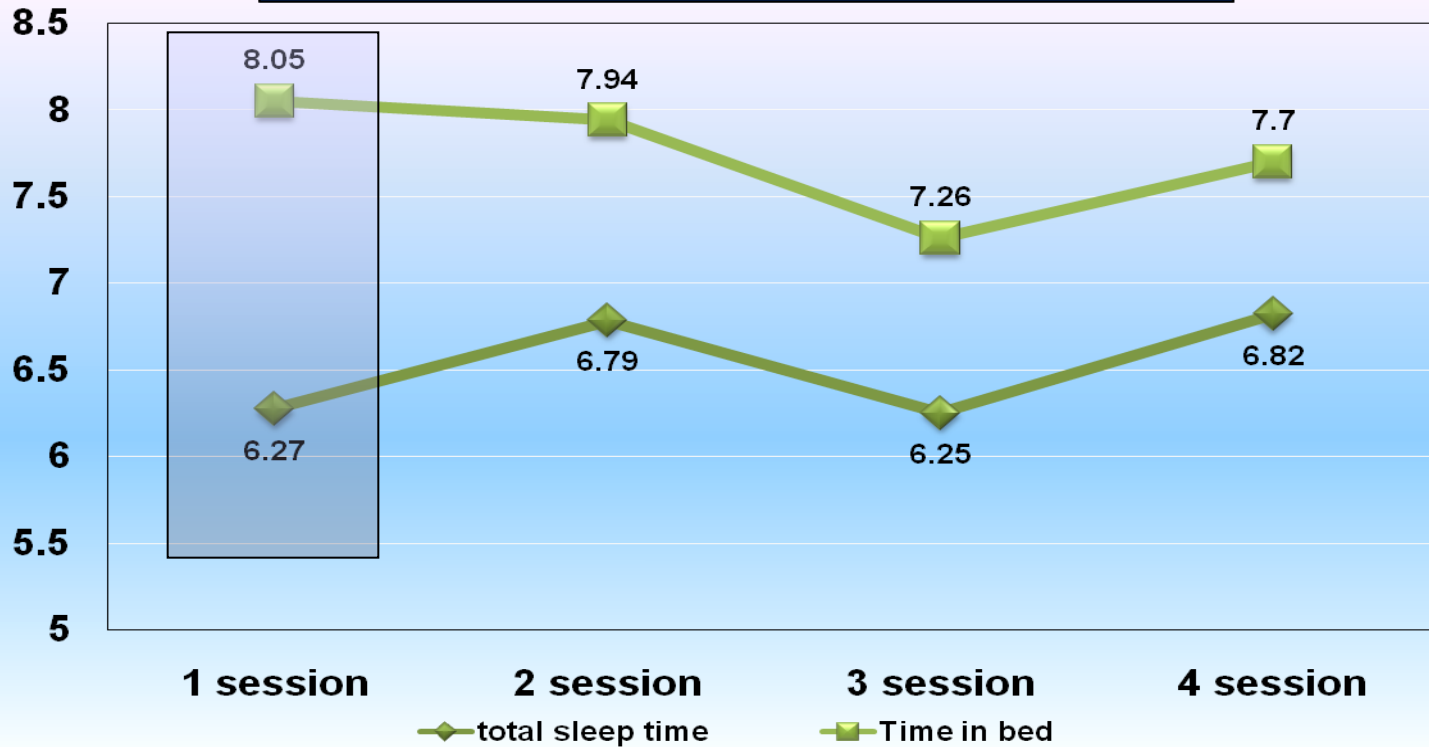
| | |
|-------------|-------------------|
| SOL | 5.4 min |
| TST | 6.82 hours |
| WASO | 42.6 min |
| NWAK | 2.43 |
| SE | 89.5 % |

- At 4th session of CBT-I, she discontinued triazolam.
- 3 months after CBT-I, she could also discontinued alprazolam.

Total Sleep Time



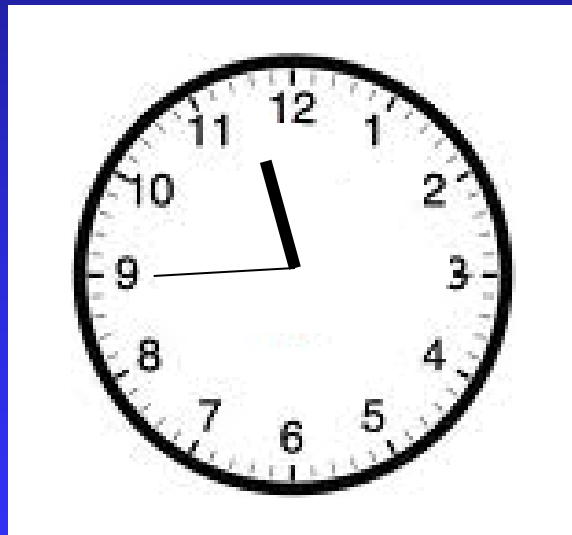
Total Sleep Time vs. Total Time in bed



- SRT IS NOT INCLUDED ? (JUST STC)
- 4 VS. 8 SESSIONS OF TREATMENT

PTTB

Since TST was 375 min. (~ 6 hrs & 15 min) and time out of bed needed to be 6am, then what should The PTTB be ?



CASE 2



Case Courtesy of MCZ, PhD
Tel Aviv, Israel

Tx was conducted by staff or trainees at
this locale.

INITIAL PRESENTATION

- Demographics:
 - Age: 42
 - Sex: Female
 - Marital Status: Married (15 years)
 - Children: 3 (ages 5,10, 13)
 - Employed full-time/avid karate athlete
- Onset of Insomnia:
 - 2 years ago, thyroid cancer (in remission)
 - Exacerbation 2.5 months ago, work-related stress
- TTB = 12pm
- TOB = 730am
- SL = 60 minutes
- WASO = 32 minutes
- TST = 6.0
- SE = 60%

MEDICATION & TREATMENT STATUS

- **Stilnox (Zolpidem; 5mg), 2-3x/week**
- **Eltroxine (thyroid replacement)**
- **Wyethia (homeopathic remedy, ADHD)**
- **Carcinosin (homeopathic remedy, Cancer)**

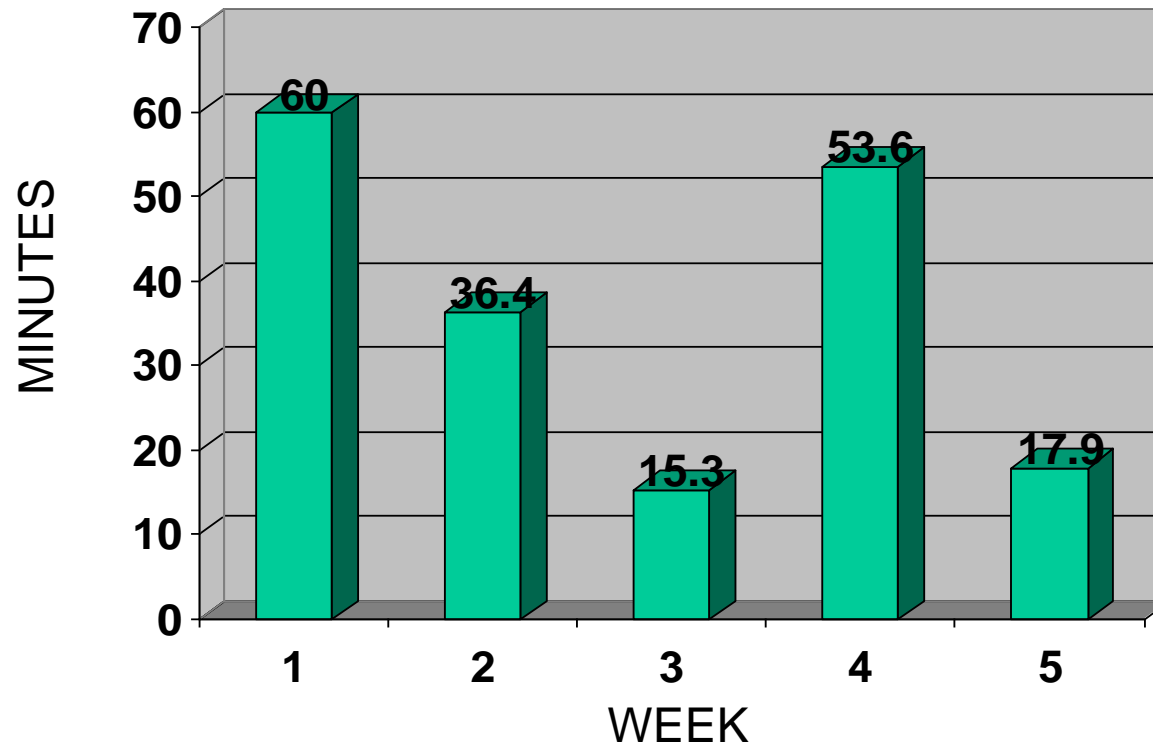
TREATMENT ??

- Assessment and baseline (1-2 weeks)
- Explanation of Spielman & Stimulus Control Concepts
- Initiation of SRT (by average TIB) and STC

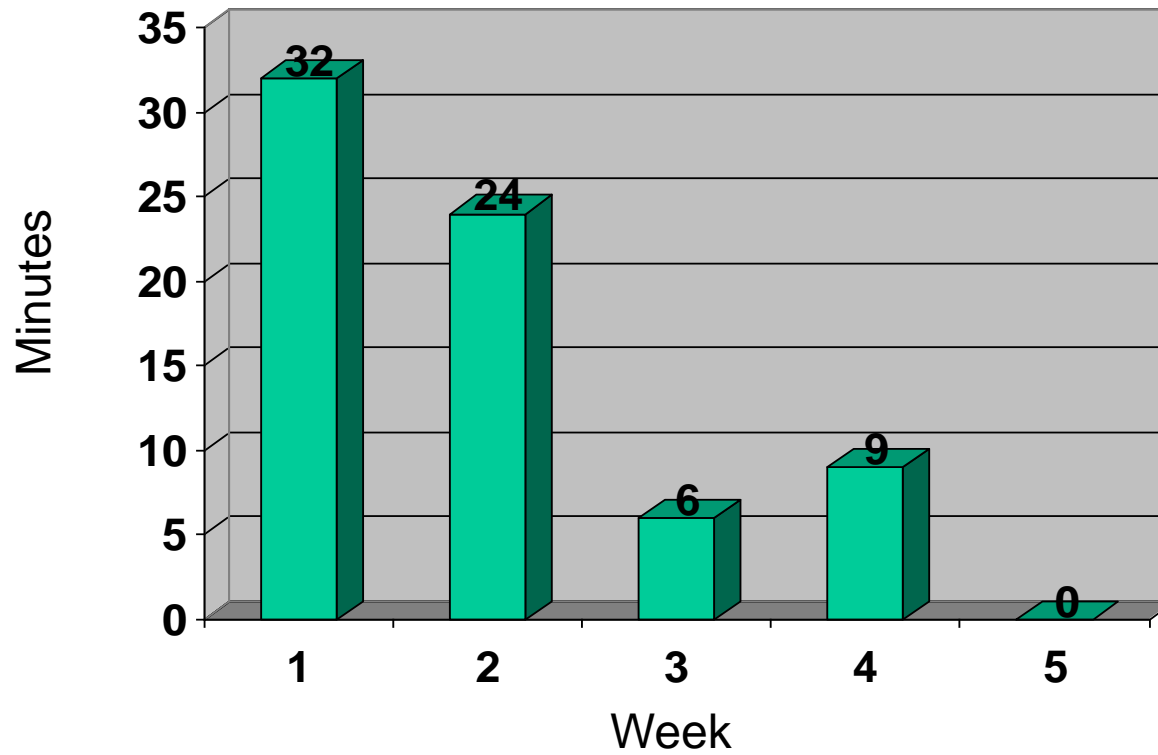
BEST GUESS WAS D/C SLEEP MEDICATION AND RESTRICT SLEEP PERIOD BY 1 HOUR

- Titration
- Titration & Cognitive Therapy (decatastrophization)
- Titration (Sessions 6 & 7)
- Relapse Prevention

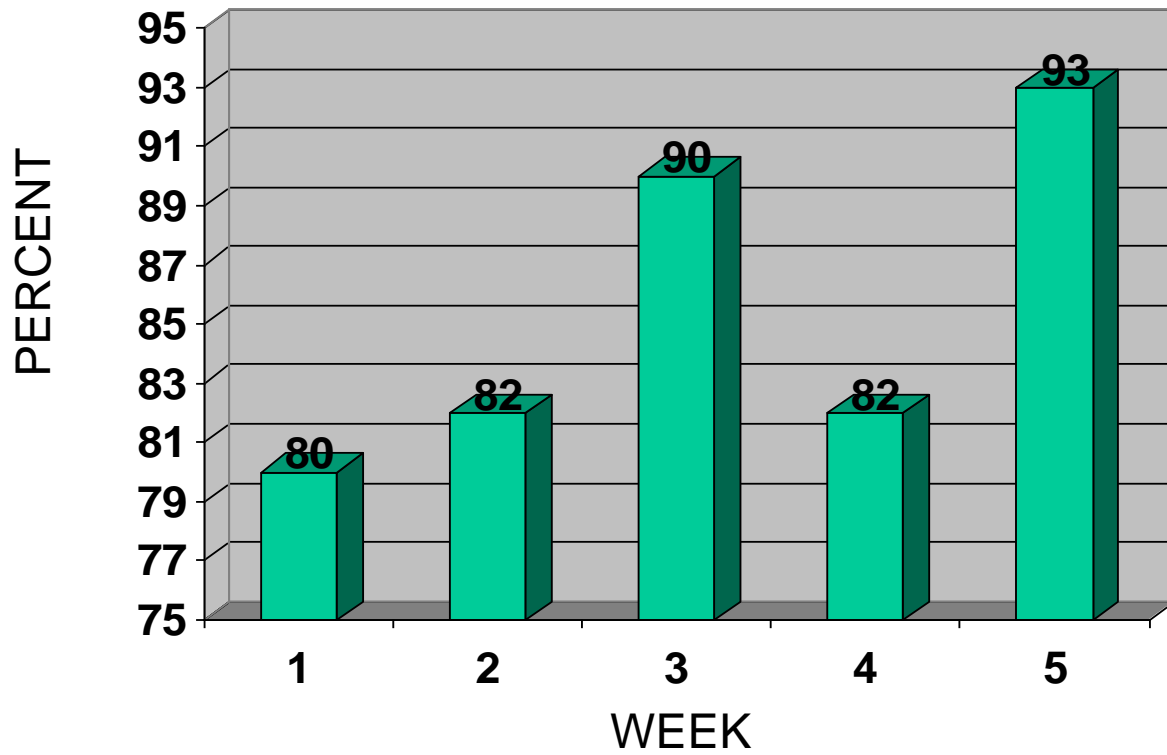
SLEEP ONSET LATENCY



WAKE AFTER SLEEP ONSET

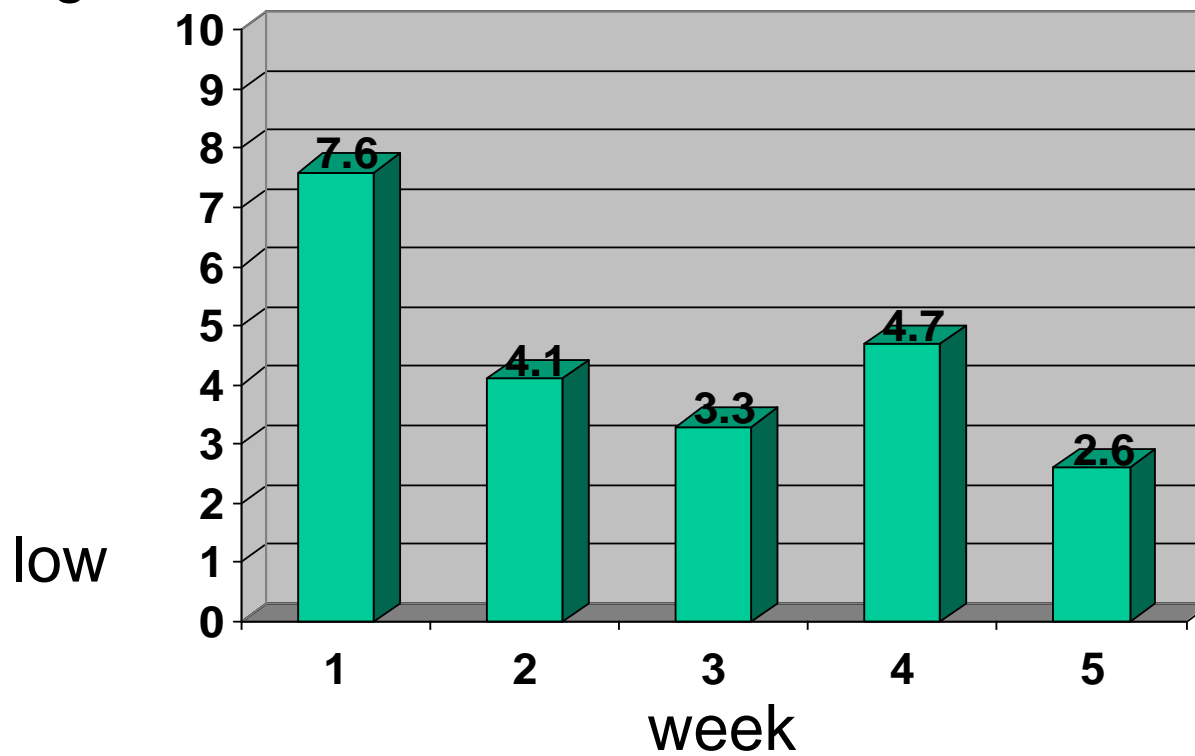


SLEEP EFFICIENCY



DAYTIME SLEEPINESS (SCALE 1-10)

high



PRE-POST COMPARISON

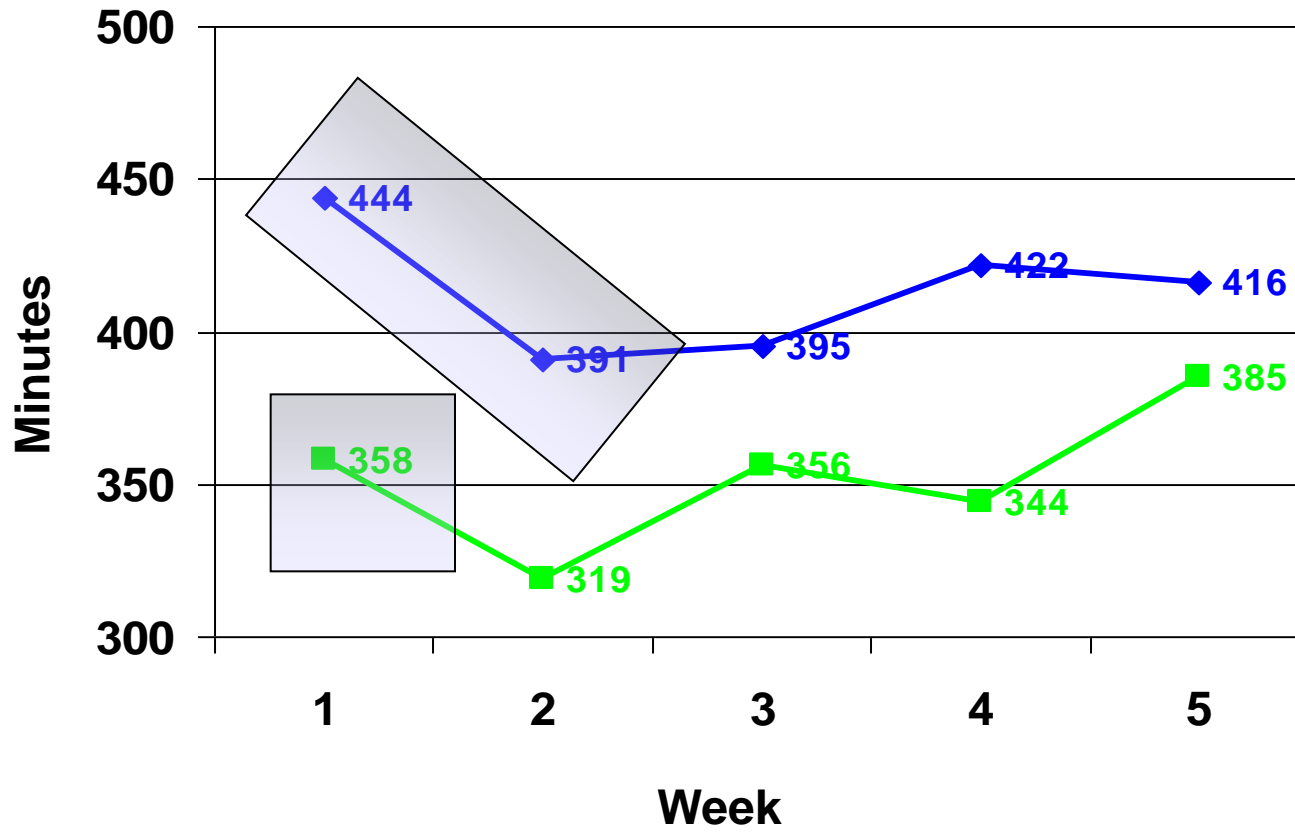
Pre-Treatment

- **SOL** **60.0 min**
- **WASO** **32 min**
- **TST** **6.0 hrs**
- **SE** **80%**
- **EDS** **7.6**

Post-Treatment

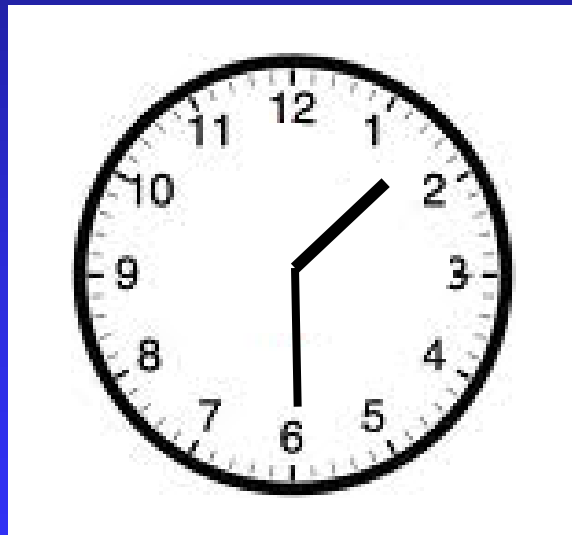
- **SOL** **17.9 min**
- **WASO** **0 min**
- **TST** **6.4 hrs**
- **SE** **93%**
- **EDS** **2.6**

TIME IN BED VS. TOTAL SLEEP TIME

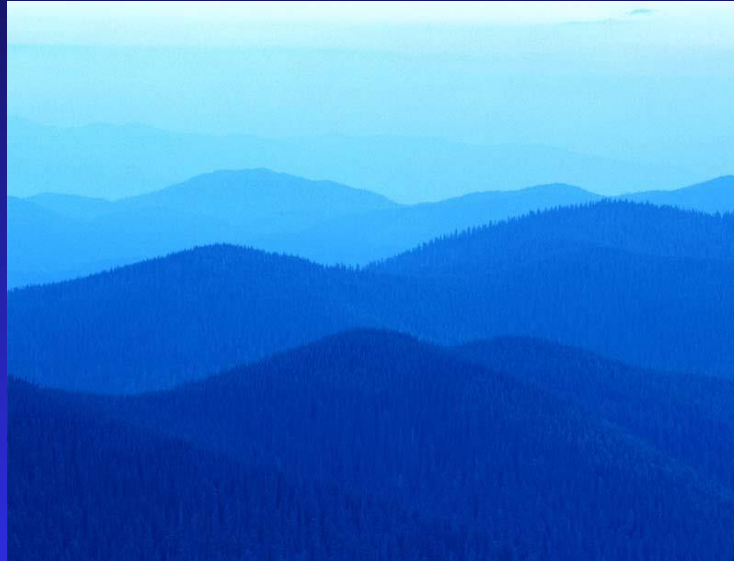


PTTB

Since TST was 360 min. (6 hrs) and time out of bed needed to be 730am, then what should The PTTB be ?



CASE 3



Case Courtesy of SD PhD
UCSD

Tx was conducted by staff or trainees at
this locale.

INITIAL PRESENTATION

- 35 year old Hispanic male Navy veteran
- Married with a 6 year old son
- Difficulty initiating and maintaining sleep
- Onset: after doing shift work
exacerbated from back injuries
- Med Dx: Degenerative arthritis of the spine, back injuries treated with surgery (spinal fusion)
- Meds: Pregabalin, Tramadol, Fluoxetine, Prilosec, and Zolpidem
- TTB ~11pm
- TOB = ~6am
- SL = 41 minutes
- WASO = 57 minutes
- TST = 319 (5.31 hrs)
- SE = 76%

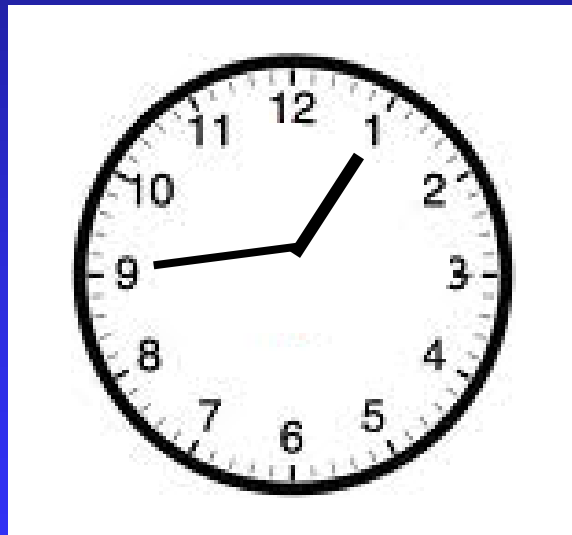
- **Precipitating factors**
 - Shift work in the Navy
 - Pain (back injury and subsequent surgeries)
 - Living with 5 pet cats who are active at night
- **Perpetuating factors**
 - Attempting to sleep before sufficiently tired
 - Other healthcare providers advised patient to “try harder” to fall asleep if unable at night
 - Attempted naps
- **Evidence of conditioned hyperarousal**
 - Reports of feeling “very tired” while watching TV in his living room at night, followed by immediate alertness/feeling awake when patient lies down in bed

TREATMENT

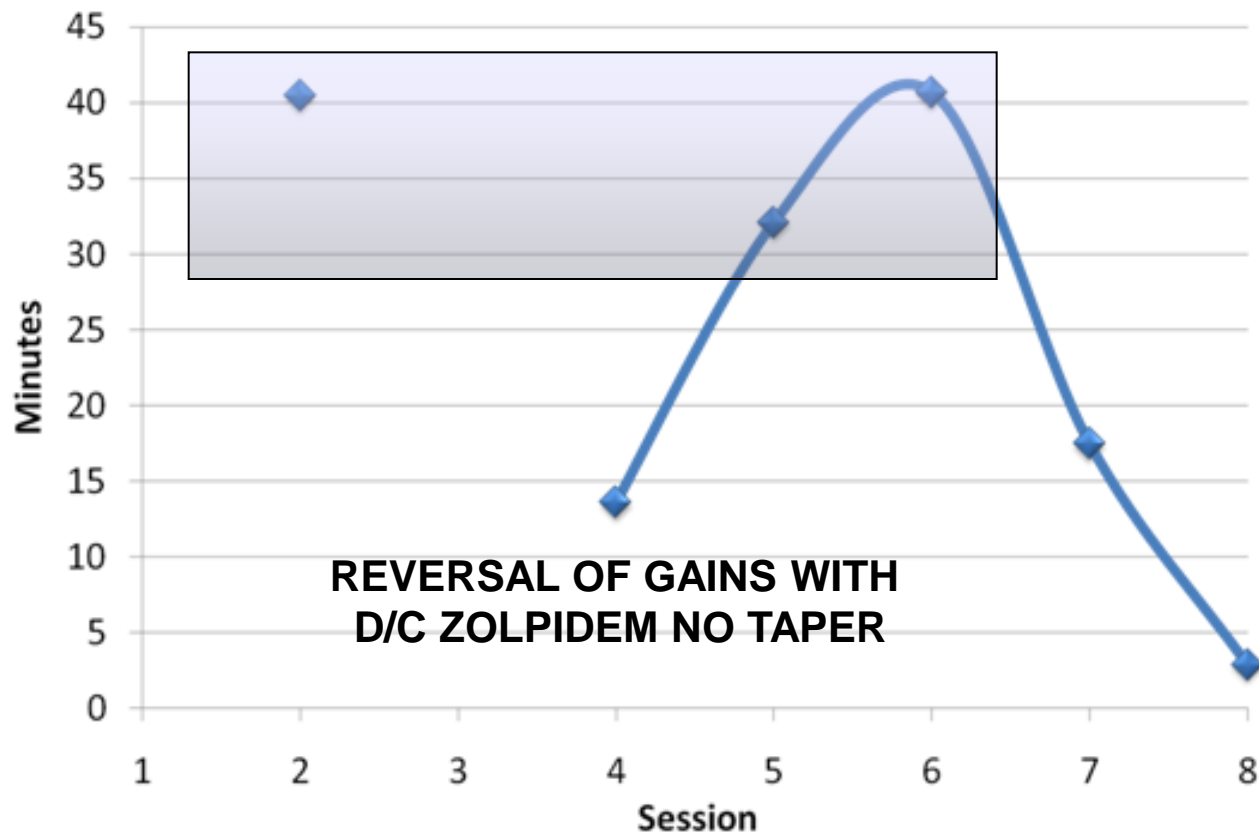
- **Individual Therapy**
Therapist 3rd Year Grad Student
- **Assessment and baseline (1-2 weeks)**
- **Explanation of Spielman & Stimulus Control Concepts**
Initiation of SRT (by average TST) and STC (initiate when aware of being awake or annoyed [not by time elapsed])
- **Titration (15 min based on 80/85/90 rules) & Sleep Hygiene Review**
- **Cat Noise a focus**
- **D/C Zolpidem during Tx**

PTTB

TST was 319 min. (call it 315 min) and time out of bed needed to be 6am, then what was the PTTB ?

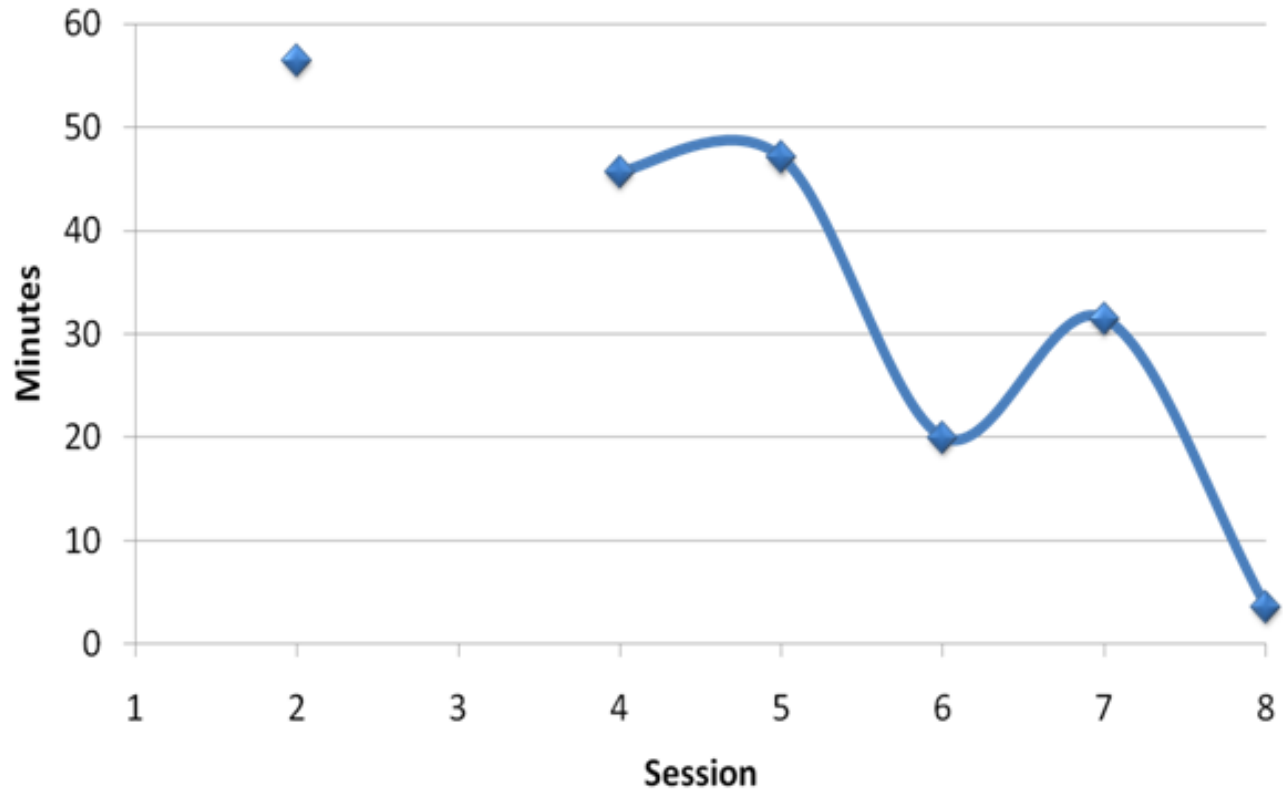


SLEEP LATENCY



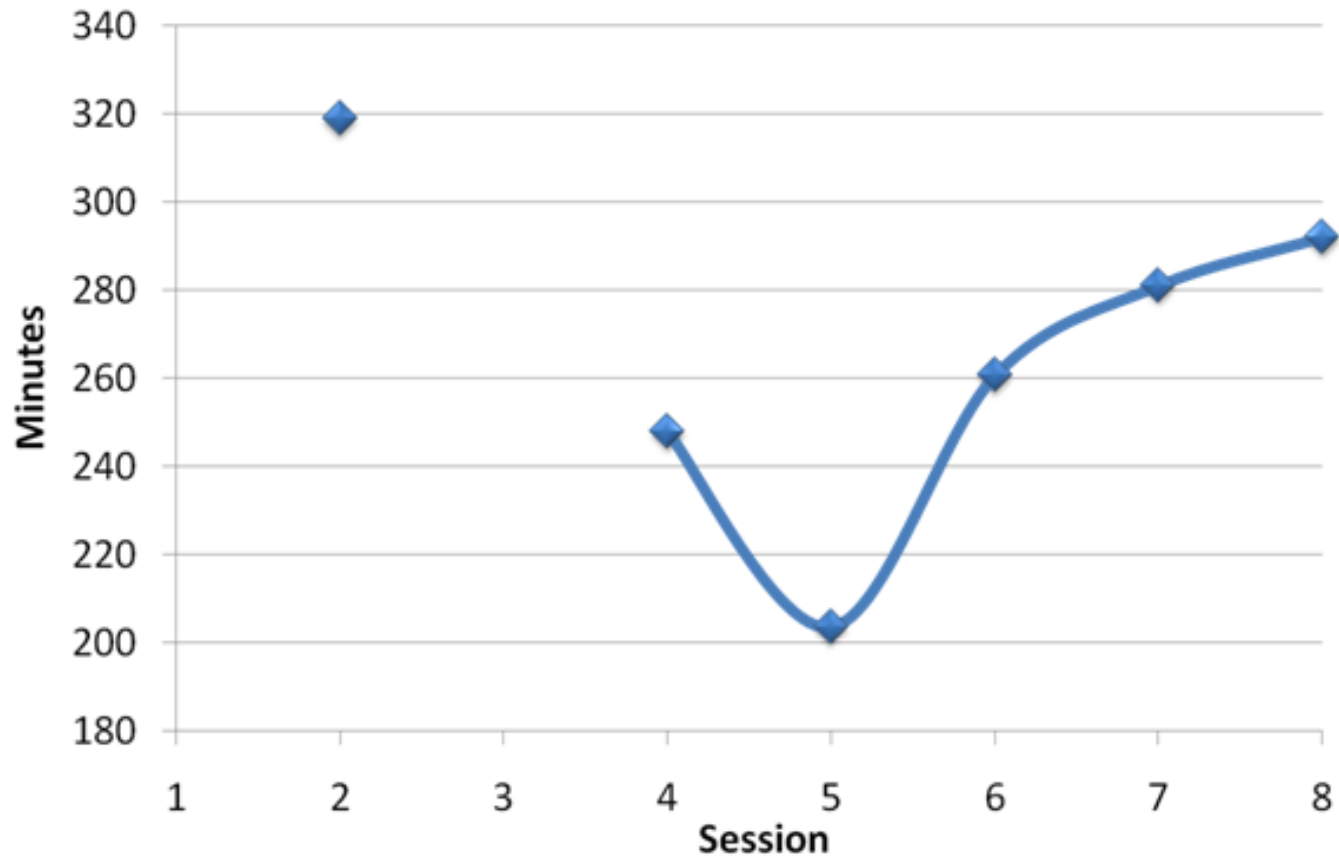
* Patient did not bring a sleep diary to session 3

WASO



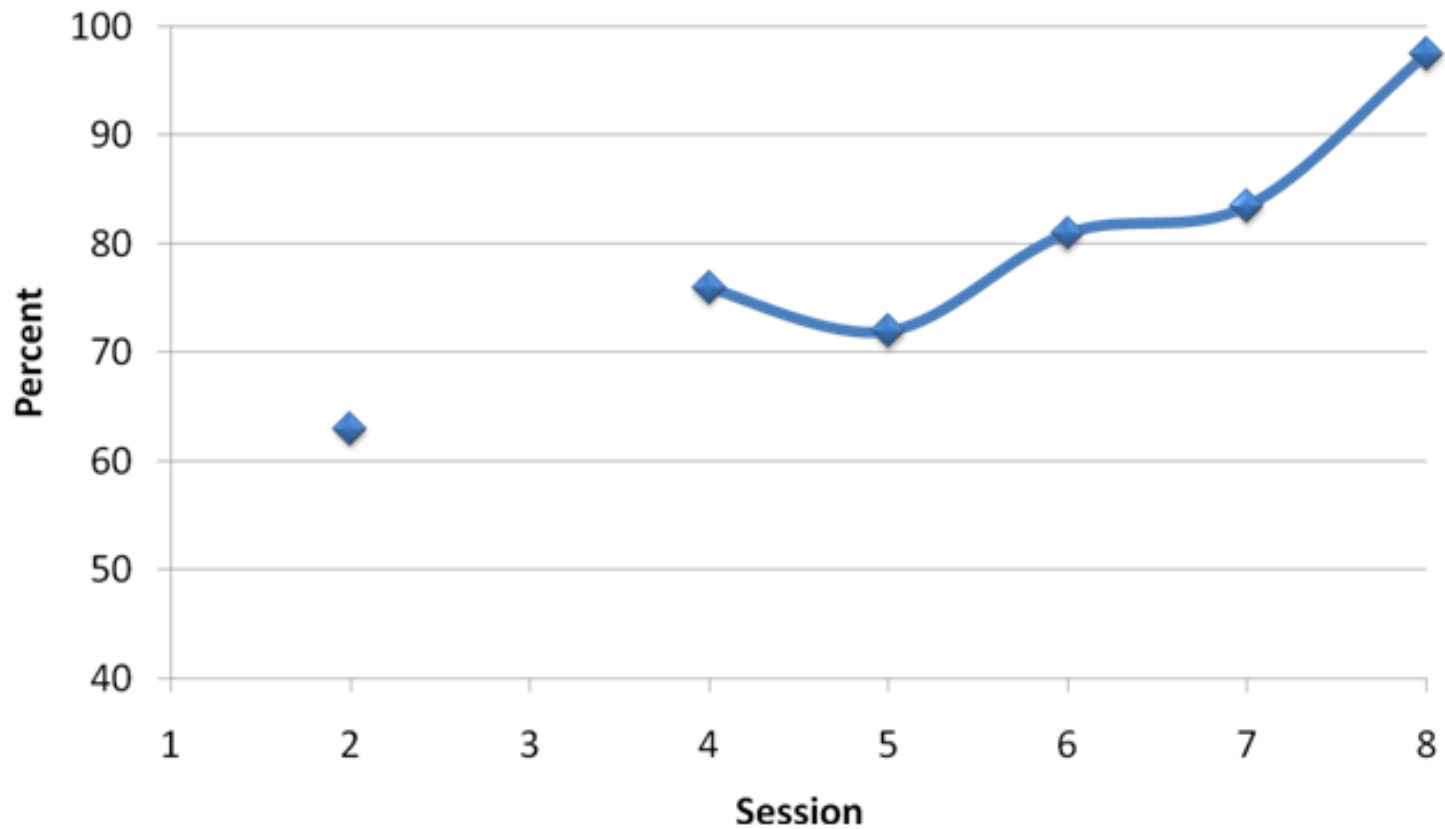
* Patient did not bring a sleep diary to session 3

TST



* Patient did not bring a sleep diary to session 3

SE



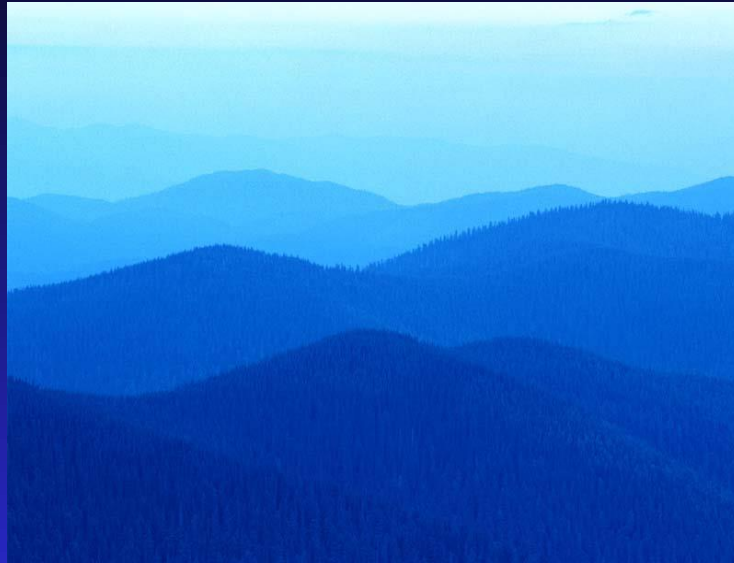
* Patient did not bring a sleep diary to session 3

PRE-POST COMPARISON

| | Pre-Tx | Post-Tx |
|------|---------|---------|
| SL | 41 Min | 3 Min |
| NOA | 2.2 | 0.6 |
| WASO | 57 Min | 4 Min |
| TST | 319 Min | 292 Min |
| SE | 63% | 98% |
| ISI | 27 | 21 |
| PSQI | 19 | 11 |

REALLY NEEDED THE ESS !

CASE 4



**Case Courtesy of
SH PhD D-ABSM
Montefiore Hospital
New York, New York**

Tx was conducted by staff or trainees at
this locale.

INITIAL PRESENTATION

- **Female - 82 years Old**
- **Widowed**
- **5th Grade Education**
- **Non-English Speaker**
- **Med Dx: Arthritis, Hypothyroidism, Hypertension, moderate OSA (compliant with CPAP).**
- **Meds: Synthroid, Amlodipine, and Lisinopril**
- **Assessment showed mild depression (BDI=14)**

Case was conducted using a phone interpreter

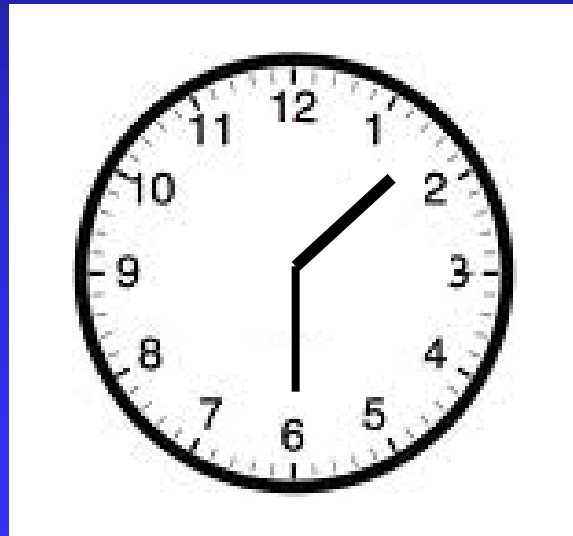
INITIAL PRESENTATION (CONT'D)

- TTB = 8pm
- TOB = 8am
- SL = 240 minutes
- WASO = 60 minutes
- TST = 390 (6.5 hrs)
- SE = 54%

Patient very lonely, spent most of day and evening in bed watching TV

PTTB

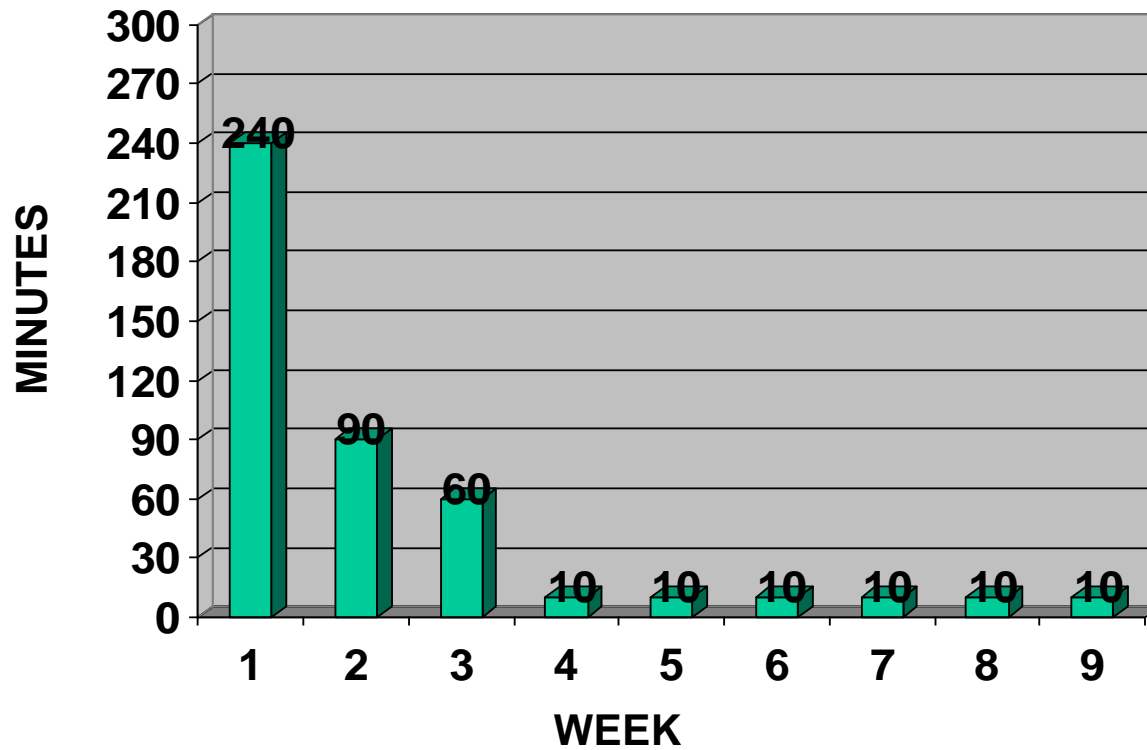
Since TST was 390 min. (6.5 hrs.) and time out of bed needed to be 8am, what should have the PTTB been ?



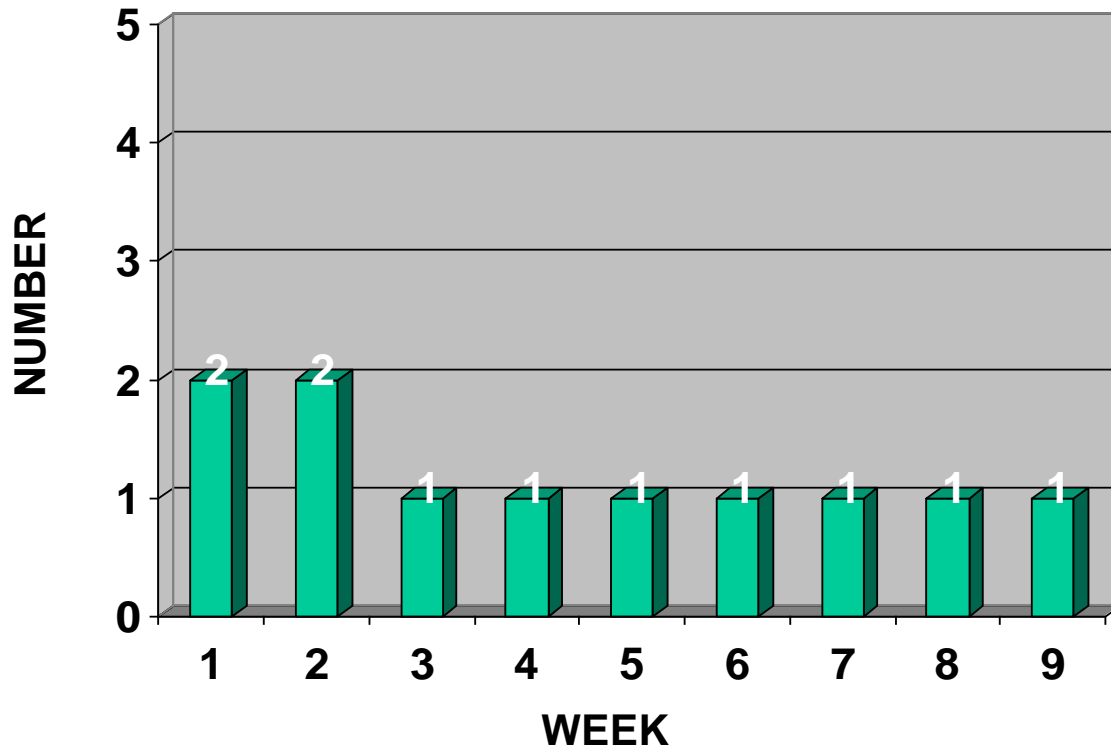
TREATMENT PLAN

- **Two week prospective assessment**
- **SRT + SCT (Titration rule 80% / 85%)**
- **Patient resistant to Phase Delay of TTB switched to Sleep Compression (delay over 2 weeks [not sure how this was done])**
- **Made a plan for Time Awake (photo albums and scrap book)**

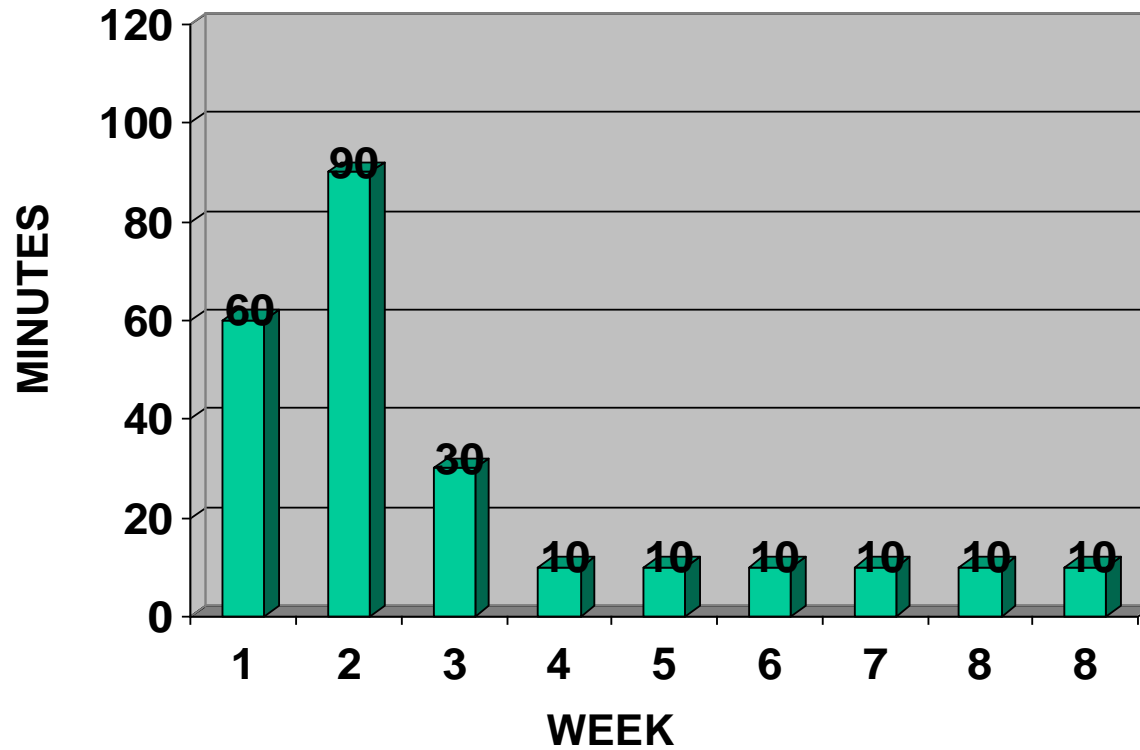
SLEEP ONSET LATENCY



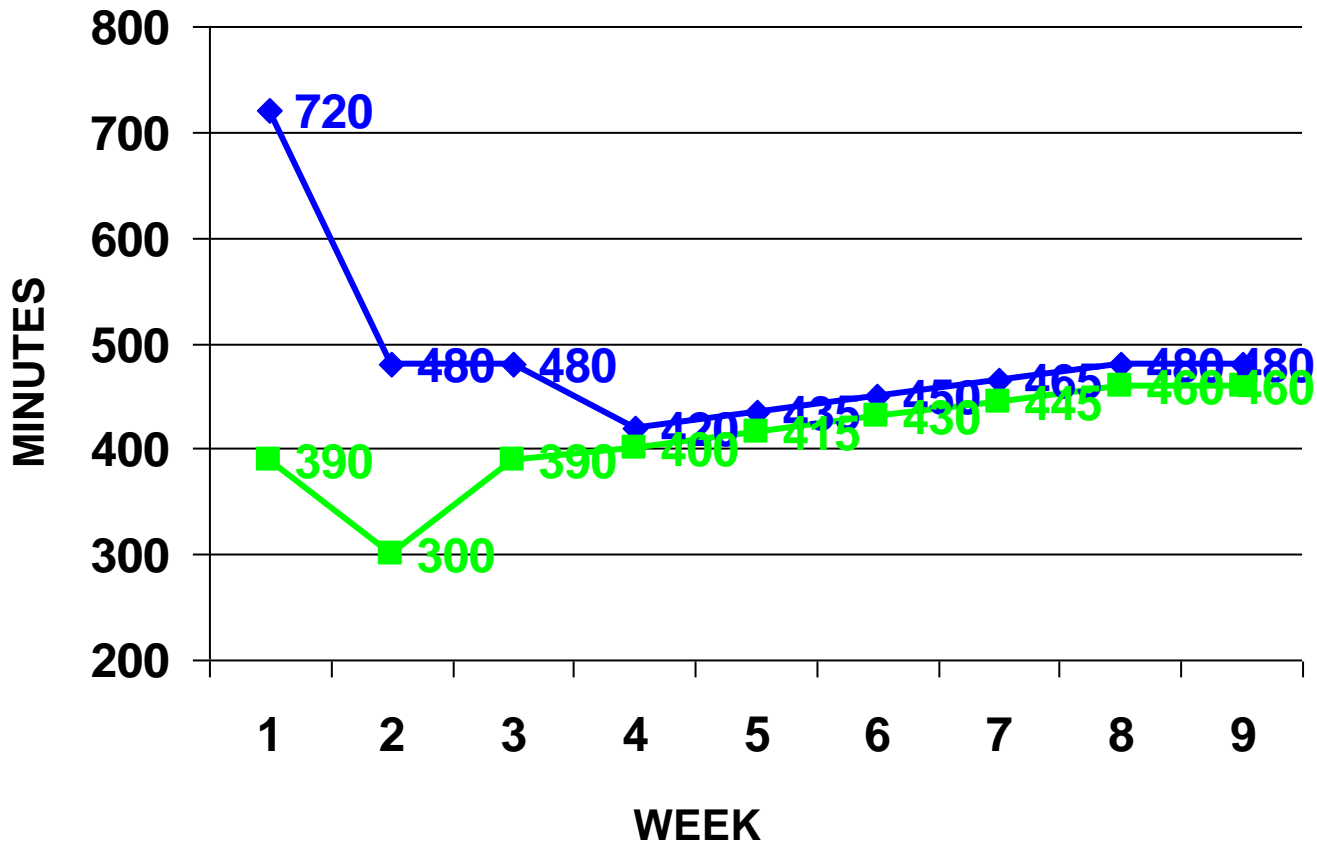
NUMBER OF AWAKENINGS



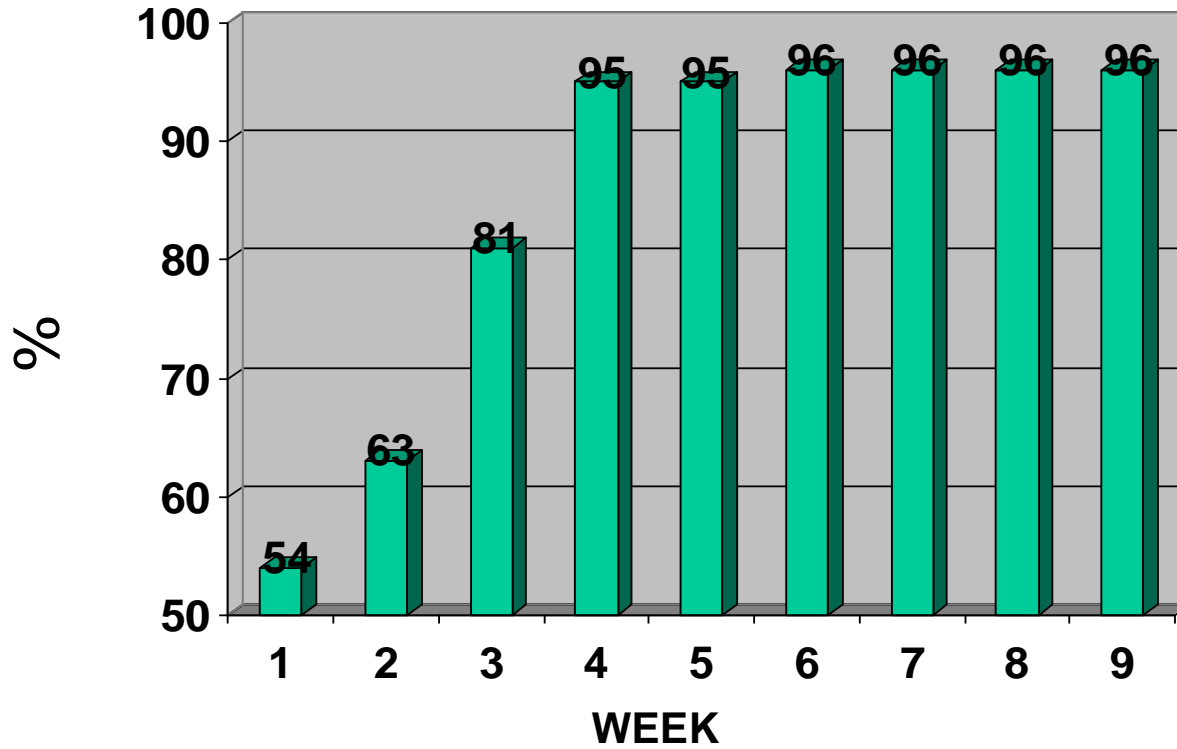
WAKE AFTER SLEEP ONSET



TIME IN BED VS. TOTAL SLEEP TIME



SLEEP EFFICIENCY



PRE-POST COMPARISON

Pre-Treatment

- **SOL** **240 min**
- **WASO** **60 min**
- **TST** **6.5 hrs**
- **SE** **58%**
- **EDS** **?**

Post-Treatment

- **SOL** **10 min**
- **WASO** **10 min**
- **TST** **7.6 hrs**
- **SE** **96%**
- **EDS** **?**

SO ?



WHO'S AWESOME?

CBT-I IS AWESOME !!

BREAK





The University of Pennsylvania



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Director, Upenn Behavioral Sleep Medicine Program

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