PAP COMPLIANCE

BACK 2

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OBJECTIVES

Learning objectives for this presentation:

- **1. Discuss current Compliance requirements for Medicare, Medicaid, and BlueCross**
- **2. Understanding Compliance vs Adherence**
- **3. Review current Medicare and BlueCross PAP requirements**
- **4. Discuss an Ideal strategy for Adherence**
- **5. Discuss common compliance problems**
- **6. Evaluate strategies and methods to improve PAP compliance**
- **7. Discuss the current focus on Behavioral Modification on CPAP compliance**

BRIEF HISTORY OF CPAP COMPLIANCE

In the Beginning…….

- ✓ **CPAP compliance was NOT a primary consideration when it was first introduced 31 years ago.**
- ✓ **Insurance carriers usually purchased the machine at the time of setup.**
- ✓ **CPAP compliance was considered a private matter between the physician and his patient.**
- ✓ **There was no way to document compliance other than to accept the patient own words.**
- ✓ **It was trusted that the patient would never exaggerate their CPAP usage**
- ✓ **Medicare in March 2008 mandated "Proof" of compliance**

In other words…

There never was any problem with Compliance

……until it had to be proved

WHAT IS COMPLIANCE ?

Defined as The act of following given instructions, directives, rules, prescription or demands

- The term “Compliance” suggests a passive role in following the prescribed regimen

- Adherence like compliance refers to the degree that an individual follows a recommended illness-related recommendations, but while compliance suggests a passive role, adherence emphasizes an active role.

Compliance DOES NOT suggest adherence.

GENERAL CPAP COMPLIANCE REQUIREMENTS

After the patient starts CPAP treatment at home there must be documentation of patient compliance.

The trial is conducted for a maximum of 90 days of usage. The Medicaid trial is 120 days.

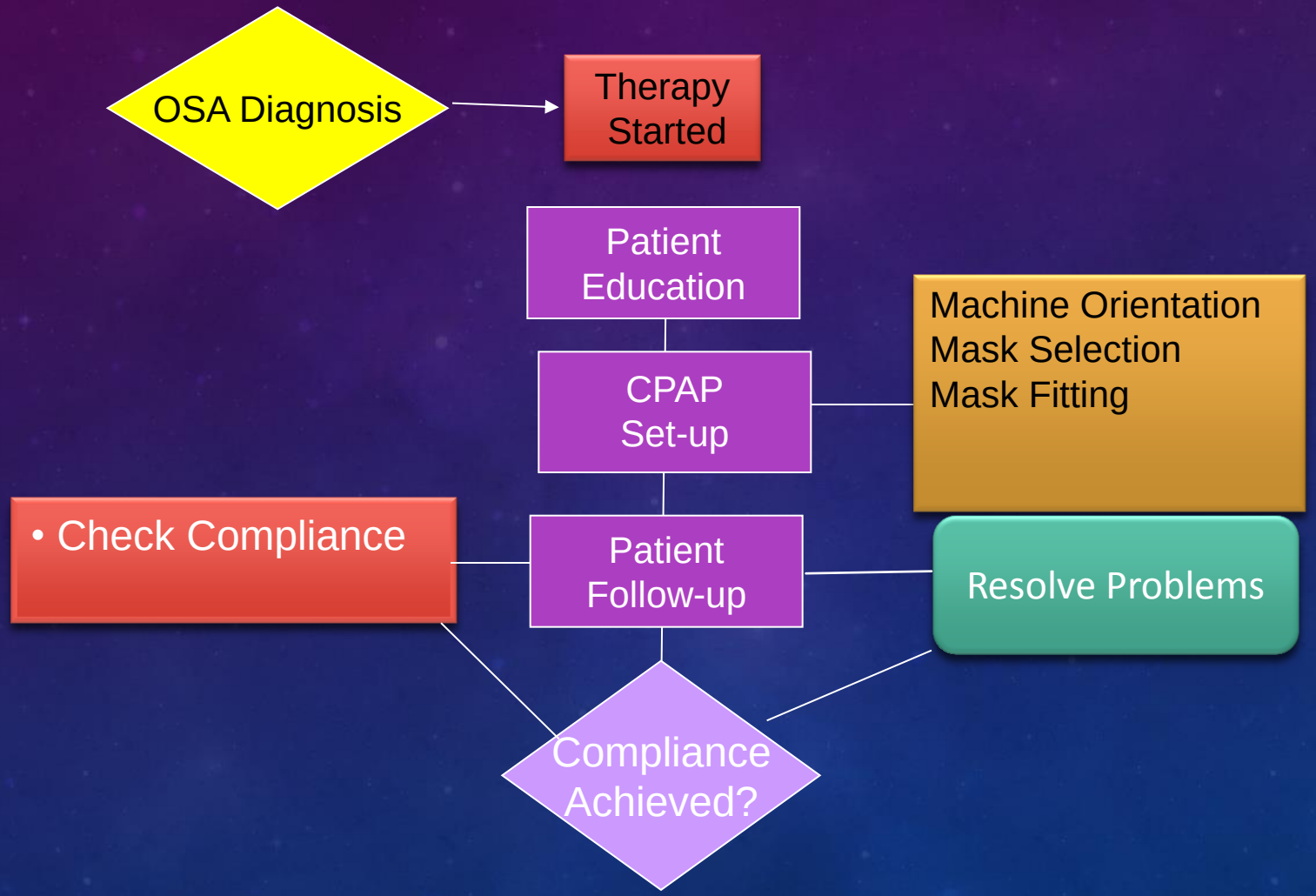
- **Objective evidence of adherence is defined as usage of the PAP device for 4 or more hours per night on 70% of nights during a consecutive 30-day period during the trial period.**
- **The treating physician must perform a clinical re-evaluation no sooner than the 31st day, but before the 91st day after initiating therapy, which documents the following:**
- **a. Adherence**
- **b. Benefit**

- **NOTE:** Documentation of *adherence* to PAP therapy must be determined through direct download or visual inspection of usage data with written documentation of *benefit* provided in a report to be reviewed by the treating physician and included in the patient's medical record.

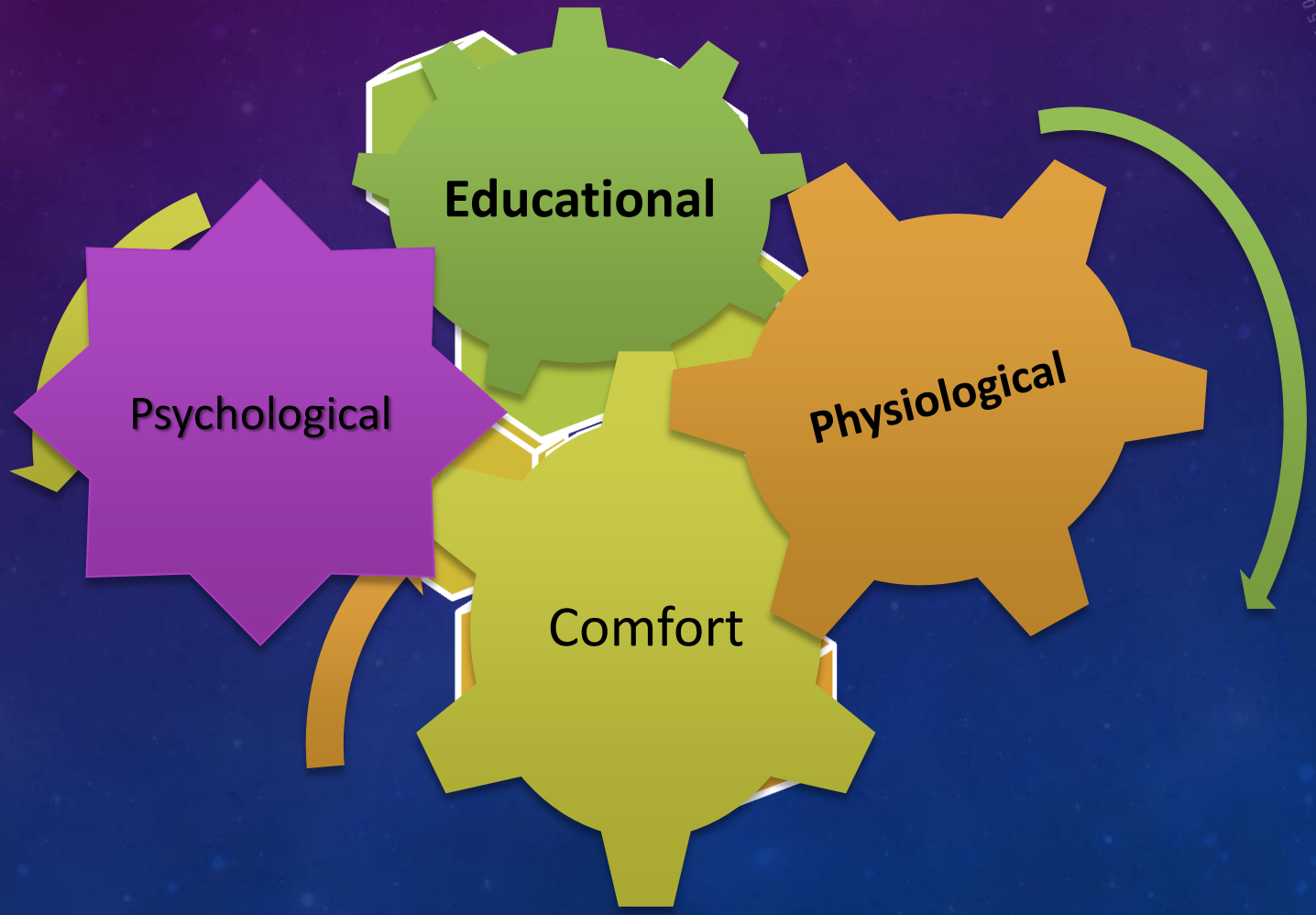
COMMON CPAP STATISTICS

- Sleep apnea is prevalent in as many as an estimated 18 million Americans alone.
- Approximately 1 in every 15 Americans, or 6.62% of the total American population have a case of sleep apnea.
- Note: the incident rate of OSA continues unchanged
- 80% of OSA diagnosed patients will attempt CPAP
- 50% of all OSA patients reject CPAP treatment option or discontinue use within the first week
- 25% of all new users abandon CPAP within the first year
- Since 2008, 78% of the major insurers have made CPAP Usage Compliance an essential requirement.
- National rate for CPAP compliance ranges from 29% -50% and hasn't changed in 10 years,

TYPICAL CPAP CLINICAL PATHWAY



4 CHALLENGES TO COMPLIANCE

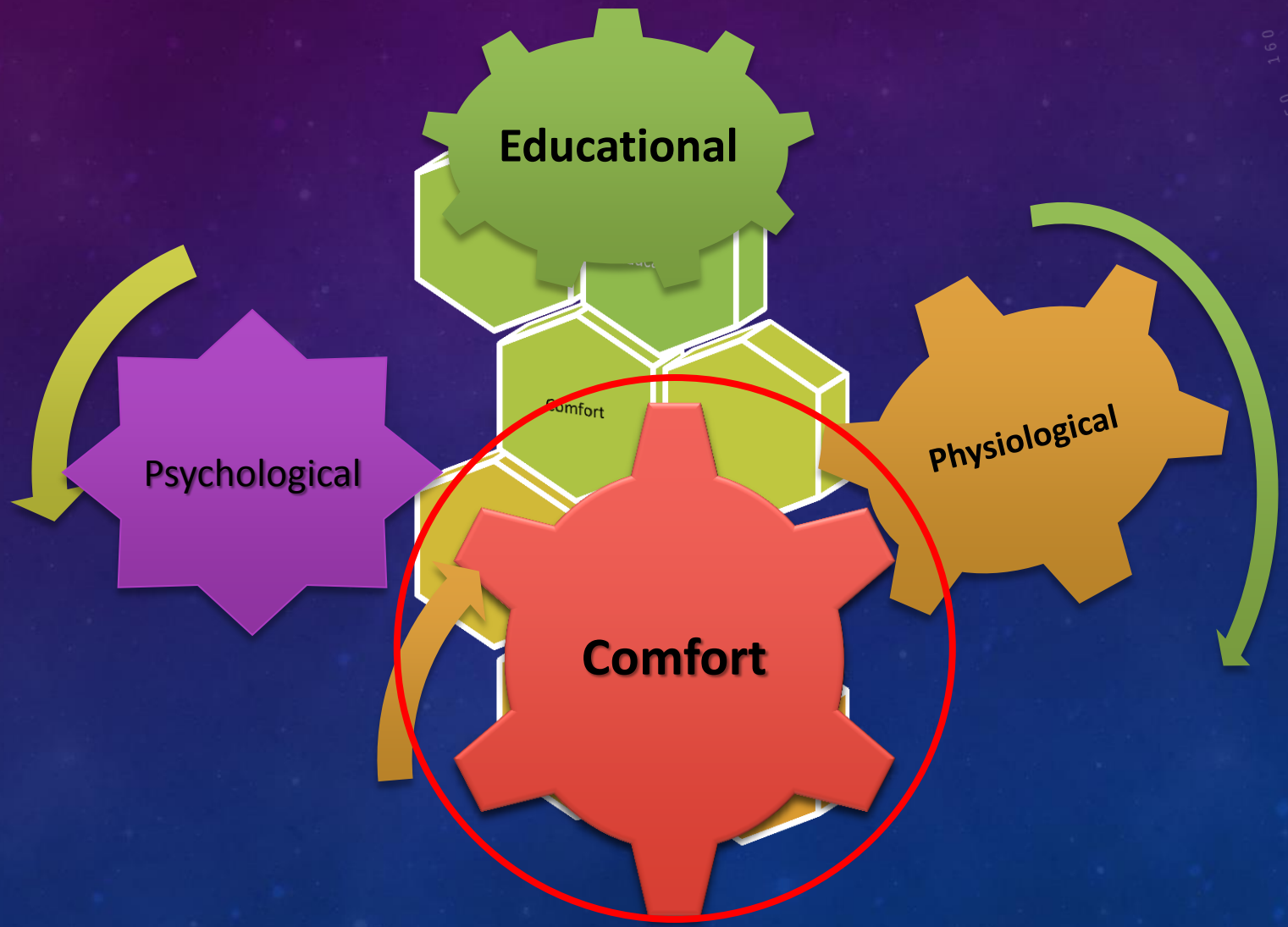


INCIDENCE OF PAP ASSOCIATED PROBLEMS

- **Comfort Problems** **30 -70%**
- **Psychological Problems** **10 -25%**
- **Physiological Problems** **5 - 10%**
- **Educational Problems** **3 – 5%**

COMFORT CHALLENGE TO COMPLIANCE

First CPAP Mask

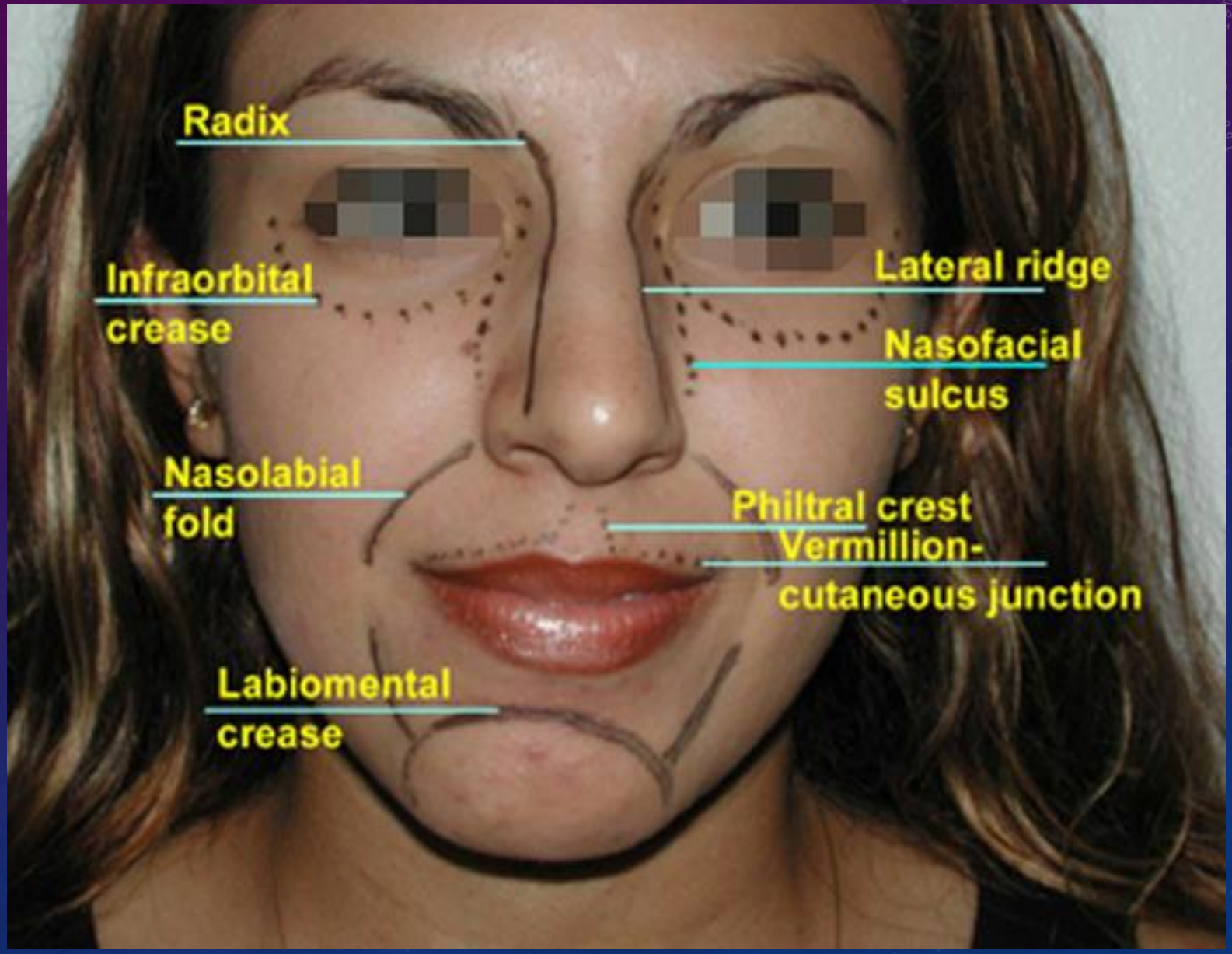


CPAP: PROBLEMS

Mask marks on face	48%
Nasal bridge discomfort or breakdown	33%
Nasal congestion	26%
Dry nose/dry or red eyes	21-22%
Machine noise	17%
Ear pain	8%
Prolific rhinitis	7%
Facial acne under mask	6%
Mouth Leaks	6%

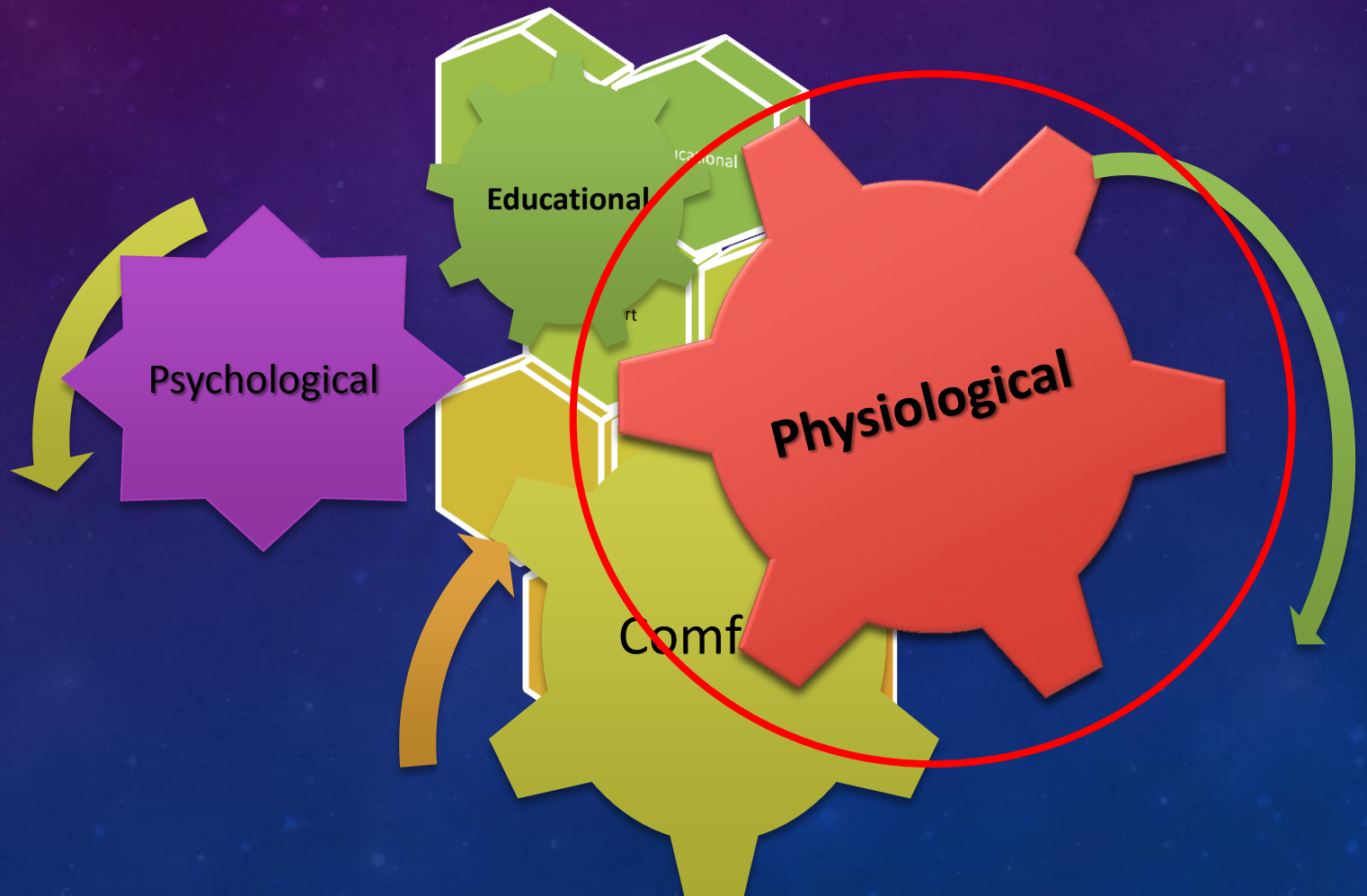
http://www.utdol.com based on data from Strollo PJ et al. Clin Chest Med 1998;19: 55

MAJOR POTENTIAL LEAK SOURCES



COMPLIANCE AIDES

PHYSIOLOGICAL CHALLENGES TO COMPLIANCE



PHYSIOLOGIC ISSUES

- Insomnia
- Chronic Pain
- Pressure Intolerance
- Aerophagia
- Complex Sleep Apnea
- Nose Bleeds
- Nasal Congestion
- Chronic Nasal Sinusitis
- Pressure sores
- Poor Sleep Hygiene
- Allergies Skin Irritation
- T M J
- Dentures

AEROPHAGIA

- **Aerophagia is defined very simply as the condition in which a person swallows too much air into the stomach. Aerophagia can cause bloating and discomfort, and can result in excessive burping, nausea and even vomiting.**
- .

AEROPHAGIA

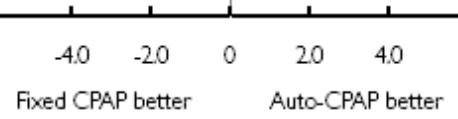
- As the chin of a CPAP user nears the chest, air has a greater change of entering the digestive tract. 2, 2. Where possible, keep chin up in relation to torso.
- Sleeping in a position different than normal helps keep the air out of the stomach. Try different sleeping positions. Left side, right side, inclined with pillows, or flat.
- Try a bed wedge to sleep with the head elevated.
- Try a custom CPAP pillow, neck pillow or memory foam pillow.
- Try an APAP machine. If already on APAP, reduce your top pressure, as long as your AHI (apnea hypopnea index) continues to remain low; or try the straight CPAP mode.
- Try a BiPAP machine or auto BiPAP machine.
- Have a gastroenterologist examine your lower esophageal sphincter -- it is this that is letting air into you stomach, and sometimes it needs medical or surgical intervention.

MetaAnalysis: AutoCPAP vs. Fixed CPAP

Study	Auto-CPAP N	Fixed CPAP N	Mean hrs/night (SE)	Weight (%)	Mean hrs/night (Fixed) 95% CI
Hudgel 2000	29	29	0.76 (0.65)	3.2	0.76 [-0.51, 2.03]
× Kendrick 2002	27	27	0.00 (0.00)	0.0	Not estimable
Massie 2003	44	44	0.58 (0.20)	33.2	0.58 [0.19, 0.97]
Randerath 2001	52	52	0.00 (0.31)	13.8	0.00 [-0.61, 0.61]
Rostig 2003	30	30	0.50 (0.24)	23.4	0.50 [0.03, 0.97]
Senn 2003	29	29	-0.10 (0.28)	16.9	-0.10 [-0.65, 0.45]
Teschler 2000	10	10	0.20 (0.64)	3.3	0.20 [-1.05, 1.45]
d'Ortho 2000	25	25	-0.60 (0.46)	6.2	-0.60 [-1.50, 0.30]
Total (95% CI)				100.0	0.29 [0.06, 0.51]

Test for heterogeneity chi-square=9.96 df=6 p=0.13 I^2 =39.8%

Test for overall effect z=2.48 p=0.01



Cochrane Database 2004

- **Average applied overnight pressure is significantly lower with AutoCPAP while comparably low AHIs are achieved**
- **No difference between the two modalities regarding compliance to therapy in unselected groups of OSA**

NASAL RESISTANCE/OBSTRUCTION

***Condition Occurrence in Adults*:**

- **Deviated Septum 30-40%**
- **Nasal Allergies 10%**
- **Polyps 1-4%**

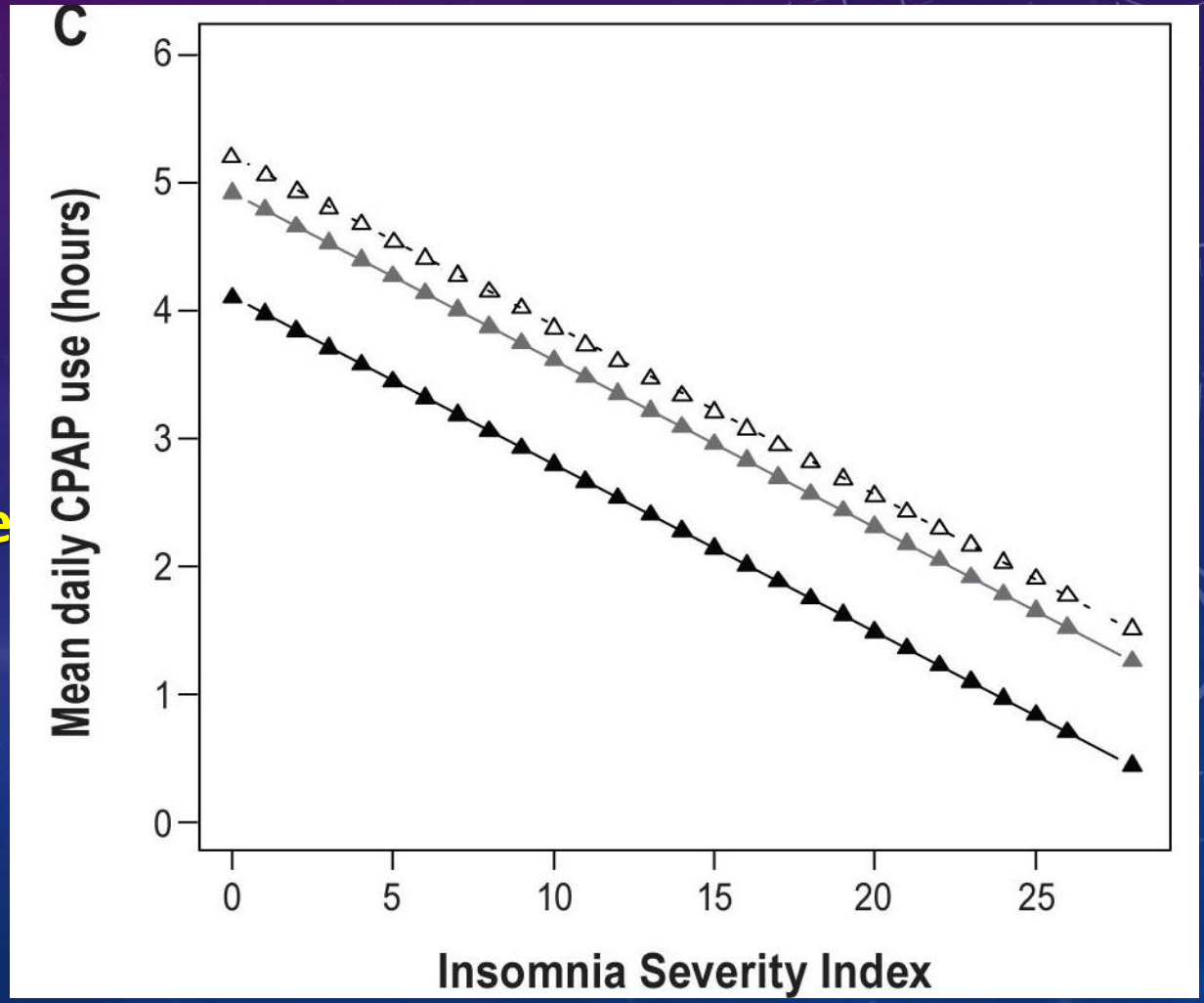
- **Increased Nasal resistance results in a 50% greater chance of rejecting CPAP.**

INSOMNIA

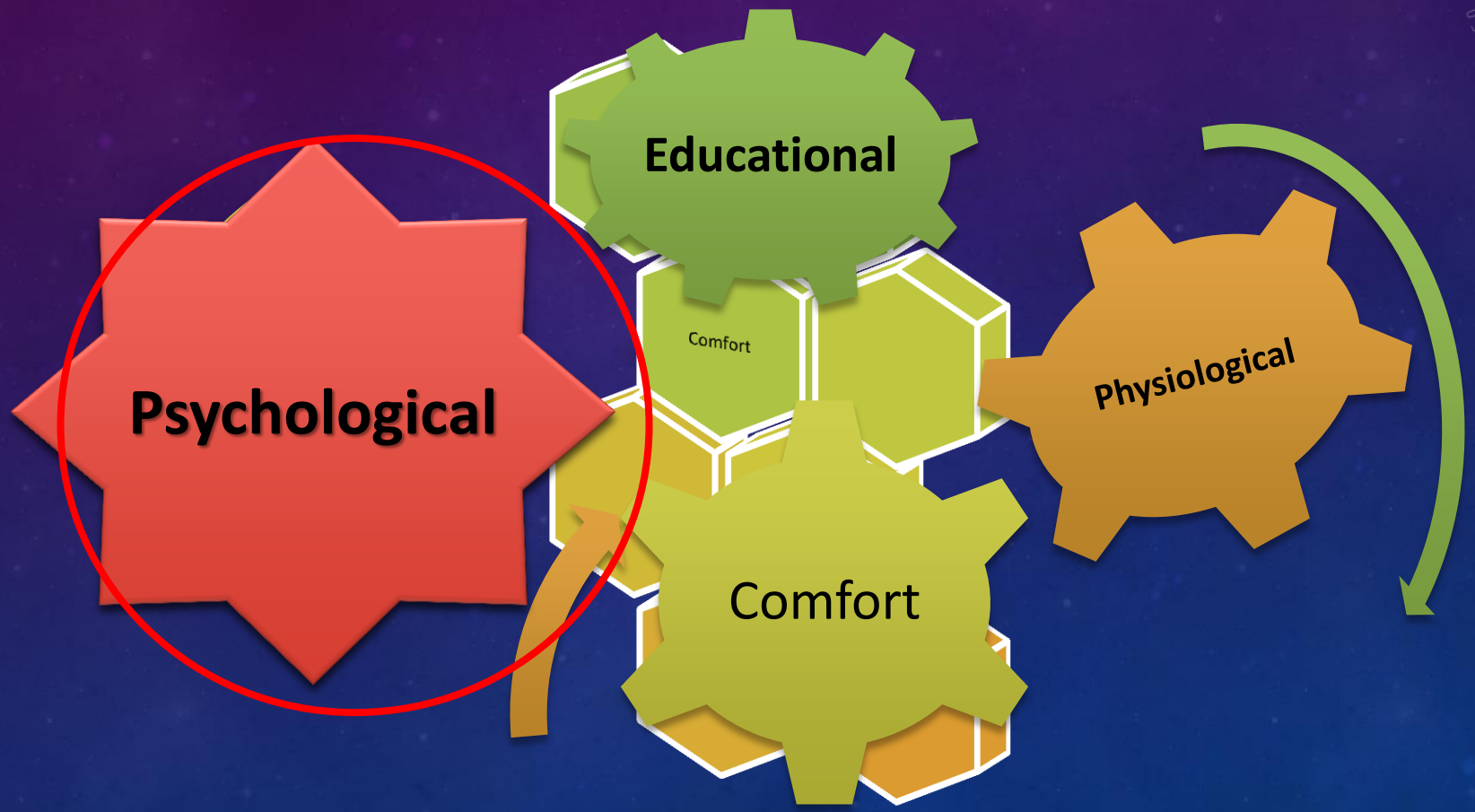
- **Difficulty initiating or maintaining sleep, or both, despite adequate opportunity and time to sleep, leading to impaired daytime functioning.**
- **Occurs as a Comorbidity in 40 -60 % of OSA cases**
- **80% of the Insomnia in OSA occurred in AHI < 10**
- **Should the Insomnia be treated before the OSA or Vice-versa?**

INSOMNIA SEVERITY INDEX

- 7 Self appraisal Questions
- Total score categories:
  0–7 = No clinically significant insomnia
  8–14 = Subthreshold insomnia
  15–21 = Clinical insomnia (moderate seve
  22–28 = Clinical insomnia (severe)



PSYCHOLOGICAL CHALLENGE TO COMPLIANCE



PSYCHOLOGICAL ISSUES

- Claustrophobia
- Anxiety
- “D” type personality type
- Alcohol – Drug Abuse
- Aversion
- Self Image
- Performance/Reward
- PsychoSocial Issues
- Psychological stress
- Denial

CLAUSTROPHOBIA

- ✓ A form of specific phobia that entails extreme anxiety and panic elicited by situations in which the individual experiences a sense of being closed in or entrapped.
- ✓ Claustrophobia is composed of two “core” fears: fear of restriction, and fear of suffocation.
- ✓ Claustrophobia is a common reaction reported in abut 15% of all patients.

❖ Progressive Mask Desensitization programs have proven successful

CLAUSTROPHOBIA

- Higher incidence than previously thought
- Mask Desensitization with Claustrophobia patients may be the only area of RT involvement but success is limited
- Other psychological issues are Not going to be resolved by the RT
- Best Chance for Resolution is Psychologist or Psychiatrist
- Should there be preliminary Screening of patients before the Sleep study

THE “D” (DISTRESSED) PERSONALITY TYPE

- **Occurs in 30% of OSA patients**
- **50% OF “D” personality types are noncompliant**
- **Negative emotions**
- **Social inhibition**
- **Higher incidence of complaints regarding therapy**

SOCIAL COGNITIVE THEORY (SCT)

Two major factors influencing the likelihood that one will become adherent to a therapy:

- **First, a person must believe that the benefits of performing the behavior outweigh the costs (i.e. a person should have more positive than negative outcome expectancies)**
- **Second, and perhaps most important, the person must have a sense of personal agency, or self-efficacy with respect to performing the preventive behavior must believe that he or she has the skills and abilities necessary for performing the behavior under a variety of circumstances."**

5 GENERAL CPAP COMPLIANCE OUTCOMES

- **Successful Usage, Face to Face Visit, Good chart note of Usage/Benefit**
- **Successful Usage, Face to Face Visit, Unacceptable chart note of Benefit**
- **Successful Usage, No face to Face Visit**
- **Unsuccessful Usage**
- ***No Attempt Made to Try***

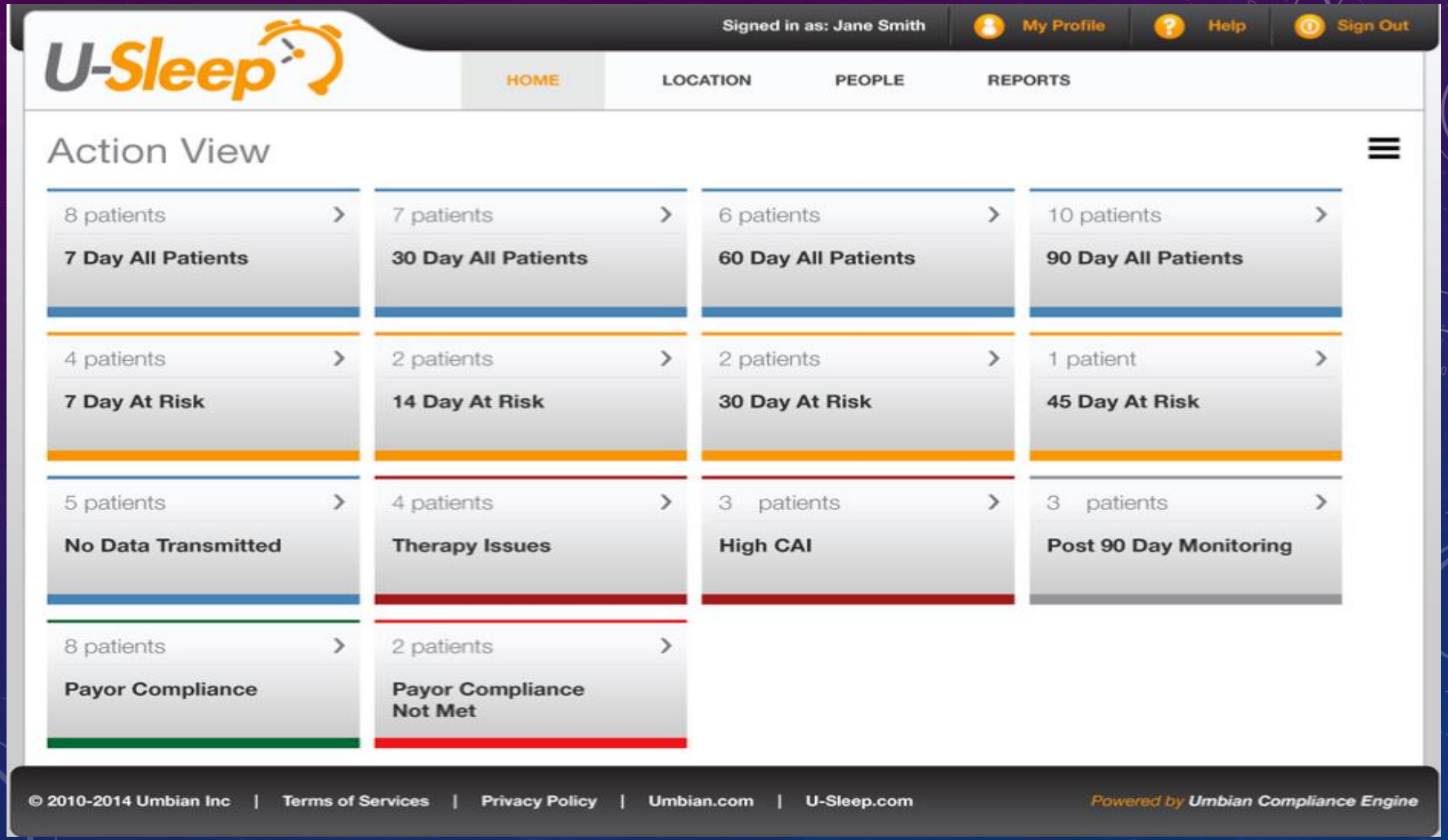
COMPONENTS OF A ENHANCED COMPLIANCE MONITORING

Following setup:

- **Frequent Contact with patient (phone, email or texting)**
- **Regular review of the manufacturer compliance report**
- **Providing patient feedback of performance**
- **Providing the patient encouragement**
- **Provide Education on Demand**
- **Timely Interventions to resolve common problems**
- **Effective Reminders to the patient regarding physician Face to Face appointment**
- **Review of the physician chart before submission to insurance company**

FIRST STEPS TOWARD AN ENHANCED APPROACH

- **U-SLEEP**
- **MY SLEEP**
- **SLEEP MAPPER**


U-Sleep
Signed in as: Jane Smith
My Profile
Help
Sign Out
HOME
LOCATION
PEOPLE
REPORTS
Action View
8 patients
7 Day All Patients
7 patients
30 Day All Patients
6 patients
60 Day All Patients
10 patients
90 Day All Patients
4 patients
7 Day At Risk
2 patients
14 Day At Risk
2 patients
30 Day At Risk
1 patient
45 Day At Risk
5 patients
No Data Transmitted
4 patients
Therapy Issues
3 patients
High CAI
3 patients
Post 90 Day Monitoring
8 patients
Payor Compliance
2 patients
Payor Compliance Not Met
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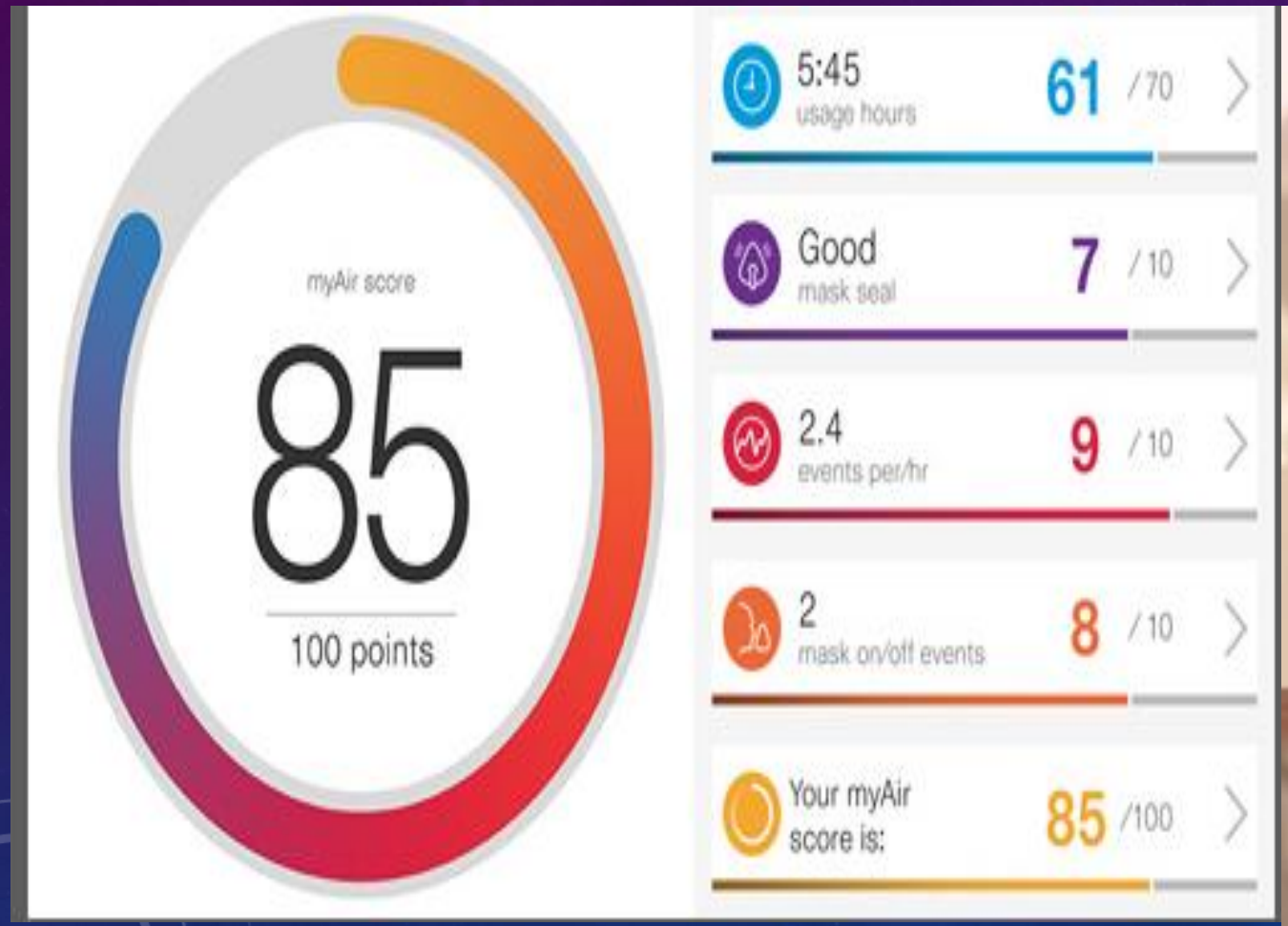
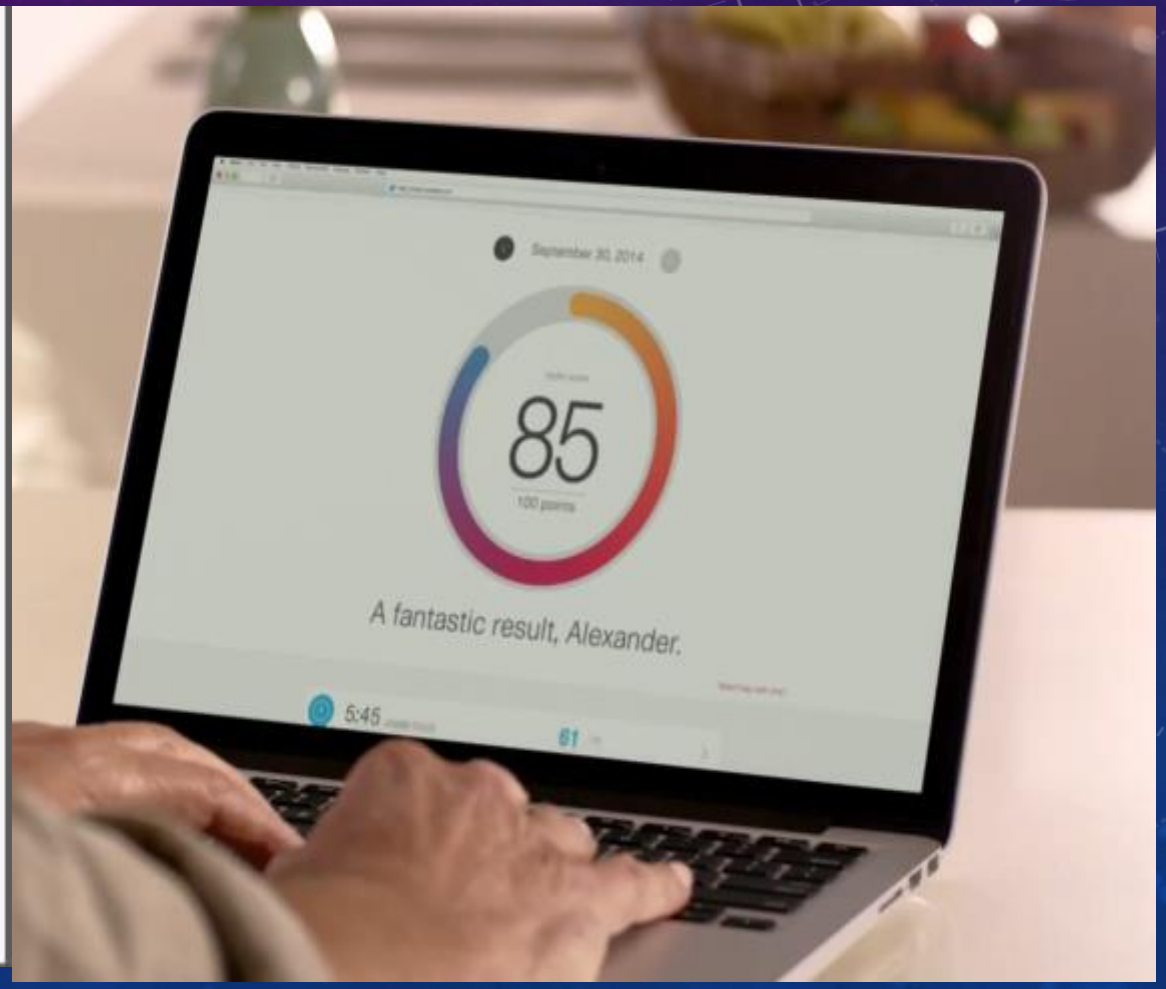
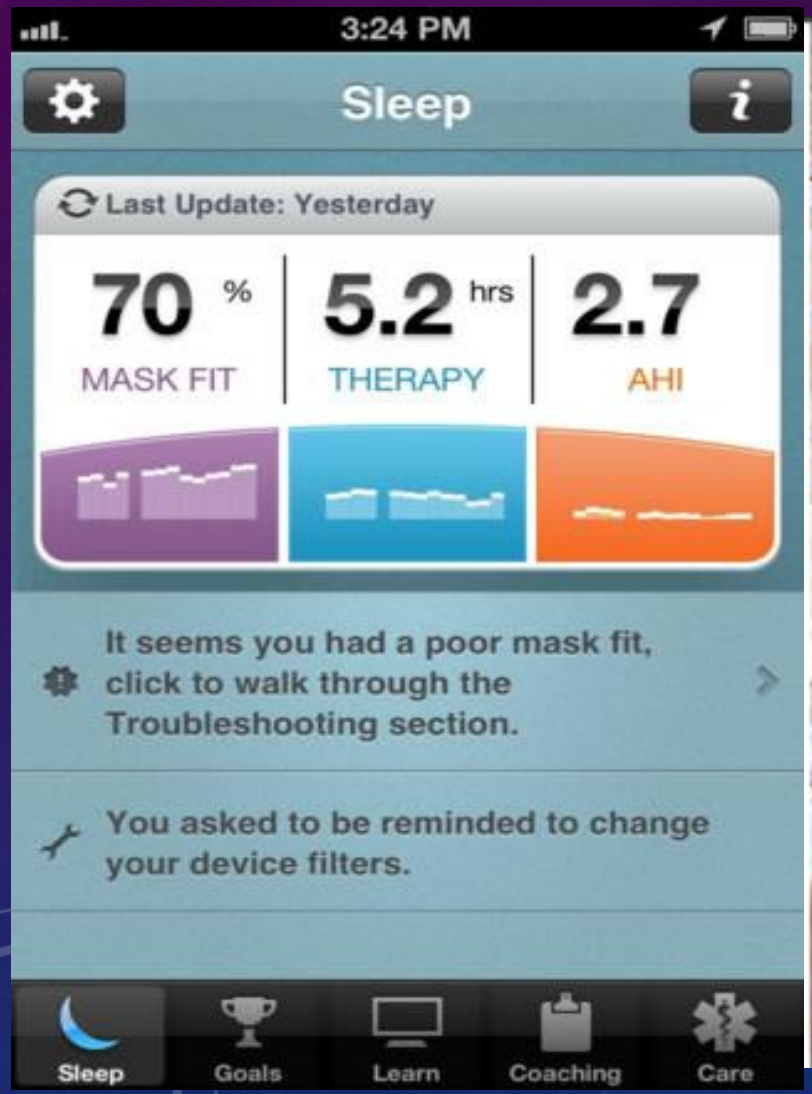
RESMED MY SLEEP





RESPIRONICS SLEEP MAPPER



COMPLIANCE RESEARCH 1991 – 2010 (1)

Table. Intervention studies to improve CPAP adherence

Study	Design	Sample (n)	Intervention	CPAP adherence metric	CPAP adherence outcome change (Y=yes; N=no)
Supportive interventions:					
Fletcher *et al*, 1991[34]	Crossover RCT	10	Positive reinforcement (weekly X3 followed by monthly X2 compared to no reinforcement)	Not defined	N at 3 months
Chervin *et al*, 1997[72]	RCT	33 [Experimental group (calls)=12; Experimental group (literature)=14; Control group =7]	Positive reinforcement (weekly telephone calls OR two printed documents compared with CPAP use alone)	Machine-on time	N at 2 months
Hui *et al*, 2000[73]	RCT	108 (Experimental group=54; Control group=54)	Augmented support (Basic support +video education, telephone support, and week 1&2 on CPAP interaction with sleep provider compared with basic support)	Mask-on time	N at 1 month and 3 months
DeMolles *et al*, 2004[74]	RCT	30 (Experimental group=15; Control group=15)	Support (Telephone-linked communications for CPAP use compared to usual care)	Mask-on time	N at 2 months
Smith *et al*, 2006[76]	RCT	19 (Experimental group=10; Control group=9; All subjects were identified as nonadherent during first three months of CPAP use)	Telehealth intervention (Telephone delivered intervention targeting current CPAP use and problems compared to receiving information about vitamins; Intervention and control group received telehealth contact 3X during week 1 of CPAP and weekly for remaining 11 wk of CPAP)	Machine-on time	Y at 12 wk 90% experimental group v 40% control group (P=0.03) used CPAP at least 4 h/night on 9 of 14 nights
Stepnowsky *et al*, 2007[75]	RCT	45 (Experimental group=20; Usual care group=20)	Telemonitoring of CPAP adherence (Frequency of supportive intervention pre-determined based on clinical pathway compared to usual care that included CPAP adherence data download at one month)	Mask-on time	N at 2 months Telemonitored group rated likelihood to continue CPAP higher than usual care group (4.8 v 4.3; P=0.05)
Educational interventions:					
Wiese *et al*, 2005[77]	RCT	100 (Experimental group=51; Control group=49)	Educational video (education focused on OSA, CPAP, CPAP experience by others shown pre-treatment compared to usual care which included physician provided information reinforced by respiratory therapist)	Not defined	N Rate of return at 1-month follow-up visit higher in experimental group than control group (72.9% v 48.9%; P=0.0174)

COMPLIANCE RESEARCH 1991 – 2010 (2)

Golay *et al*, 2006[79]	One-group pre-test, post-test	35 (All subjects on CPAP for one year or less)	Educational program (CPAP hands-on workshop, individual treatment goal identification, treatment purpose discussion, spouse roundtable followed by in-hospital CPAP titration study)	Machine-on time	N Avg CPAP use higher at three months than prior to intervention (4.4 h ± 03 v 5.1 h ± 0.4; no statistical significance reported)
Meurice *et al*, 2007[78]	RCT	112 (3 treatment groups, n=27, 30, 28; compared with Standard care group=27)	Three educational strategies (compared to standardized educational support)	Machine-on time	N
Cognitive behavioral interventions:					
Aloia *et al*, 2001[82]	RCT	12 (Experimental group=6; Control group=6)	Cognitive behavioral intervention (compared to control, placebo sessions)	Machine-on time	Y Experimental group with greater number of compliant users (χ^2=5.3, P<0.05)
Richards *et al*, 2007[84]	RCT	100 (CBT group=50; Usual care group=50)	Cognitive behavioral therapy (group therapy aimed at correcting distorted beliefs and promote positive outlook for CPAP delivered in 2-1 h sessions, included partners and 10 other CPAP users compared to usual care)	Mask-on time	Y at 7-days and 28-days Average nightly CPAP use higher in experimental group than usual care group at both 7-days and 28-days (P<0.0001, P<0.0001)
Aloia *et al*, 2007[83]	RCT	142 (3-group comparison; Motivational enhancement therapy=54; Education=47; Standard care=41)	Motivational enhancement therapy and education interventions (experimental conditions delivered in 2-45 min sessions after one-week CPAP treatment compared to standard care group that received print materials about OSA and CPAP and 8-10 wk follow-up clinical visit)	Mask-on time	Y at 1 month Standard care group more likely to discontinue CPAP (41%) than education group (30%) and motivational enhancement therapy group (26%); χ^2=6.61; P=0.04

Compliance Research 1991 – 2010 (3)

Study	Design	Sample (n)	Intervention	CPAP adherence metric	CPAP adherence outcome change (Y=yes; N=no)
Mixed strategy interventions:					
Hoy *et al*, 1999[69]	RCT	80 (Experimental group=40; Control group=40)	Intensive support (CPAP education at home, 3-night in-lab CPAP trial, home visits compared with usual care)	Mask-on time	Y at 6 months CPAP use higher for intervention group compared to usual care group (5.4 h±0.3 v 3.8 h±0.4; *P*=0.003)
Smith *et al*, 2008[85]	RCT	97 (Experimental group=55; Control group=42)	CPAP intervention packet to promote habitual adherence (20-min music audiotape with spoken directions for nightly CPAP preparation and use, educational written literature, reminder placards, and 4-wk diary record of CPAP use compared with control condition, a placebo intervention focused on daily vitamin treatment)	Mask-on time	Y at 1 month; N at 3 and 6 months Intervention group had more adherers than control group at 1 month (χ^2=14.67, *P*<0.01) but no difference at 3 (χ^2=0.065, P=0.79) or 6months (X^2=0.118, *P*=0.73). 100% of experimental group identified that audiotape helped them relax to sleep using CPAP; only 24.8% of group identified that they would use audiotape beyond 1 month

WEEK 1 ADHERENCE BY TREATMENT INTERVENTION

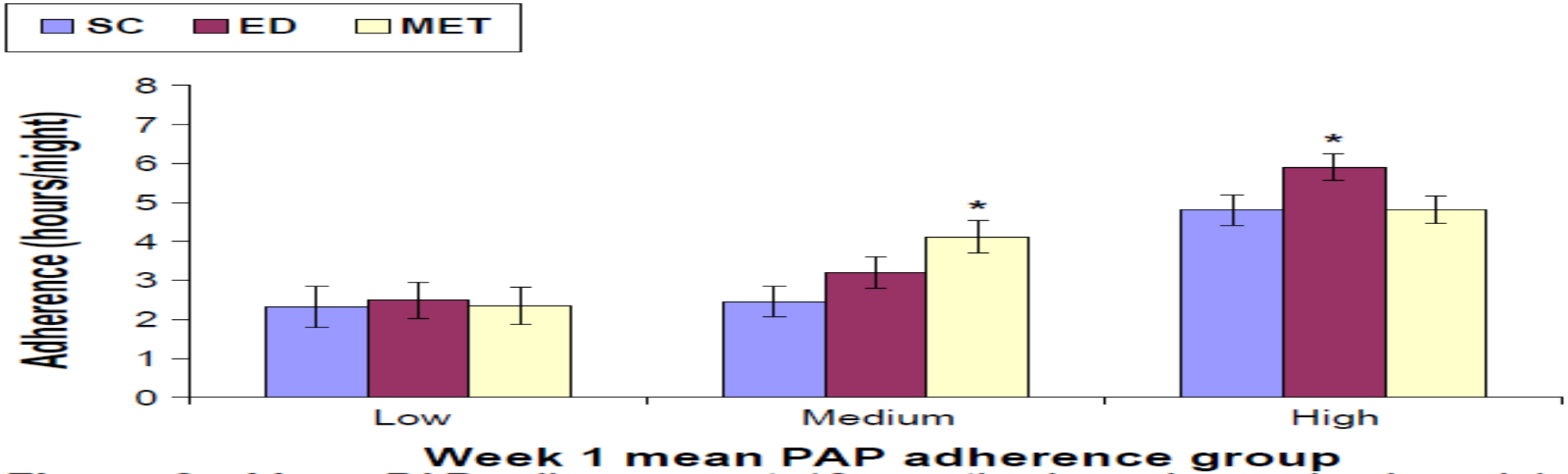


Figure 2—Mean PAP adherence at 12 months based on mixed model fit, by treatment group and week 1 adherence average (low: less than 2 h/night, medium: at least 2 but less than 6 h/night, high: at least 6 h/night). Error bars extend 1 SE above and below means. See methods for description of variables in the mixed model. *P < 0.01 for comparison of this group versus average of other groups within the week 1 user group. SC, standard care; ED, education; MET, motivational enhancement therapy.

ALOIA COMPLIANCE PATTERNS

- Conducted 2 studies (2008 -2011)
- Able to Identify distinct Behavioral Patterns in CPAP usage

1. Good Users	24.0 %
2. Slow Improvers	13.0 %
3. Slow Decliners	14.0 %
4. Variable Users	17.0 %
5. Occasional Attempters	8.0 %
6. Early Drop Outs	13.0 %
7. Non-Users	11.0 %

ALOIA COMPLIANCE BEHAVIOR PATTERNS

- Conducted 2 studies (2008 -2011) with near identical results
- Able to Identify distinct Behavioral Patterns in CPAP usage

• 1. Good Users	24.0 %	
• 2. Slow Improvers	13.0 %	51% Successful by Day 14
• 3. Slow Decliners	14.0 %	
• 4. Variable Users	17.0 %	
• 5. Occasional Attempters	8.0 %	38 % Require Skilled Intervention
• 6. Early Drop Outs	13.0 %	
• 7. Non-Users	11.0 %	Never Participate

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Psychology Press
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Abstract: Identifying Longitudinal Patterns of Adherence to Treatment for Obstructive Sleep Apnea

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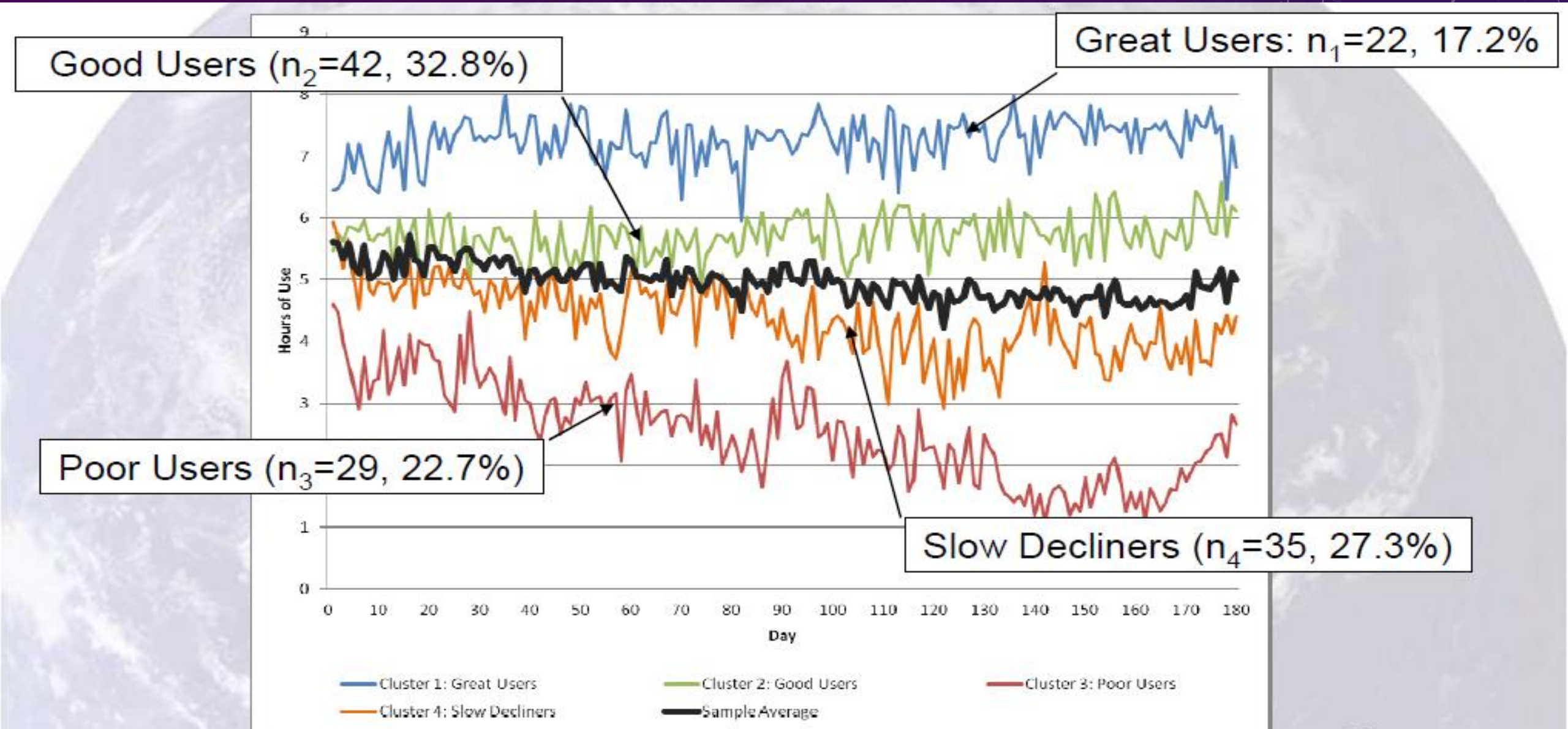
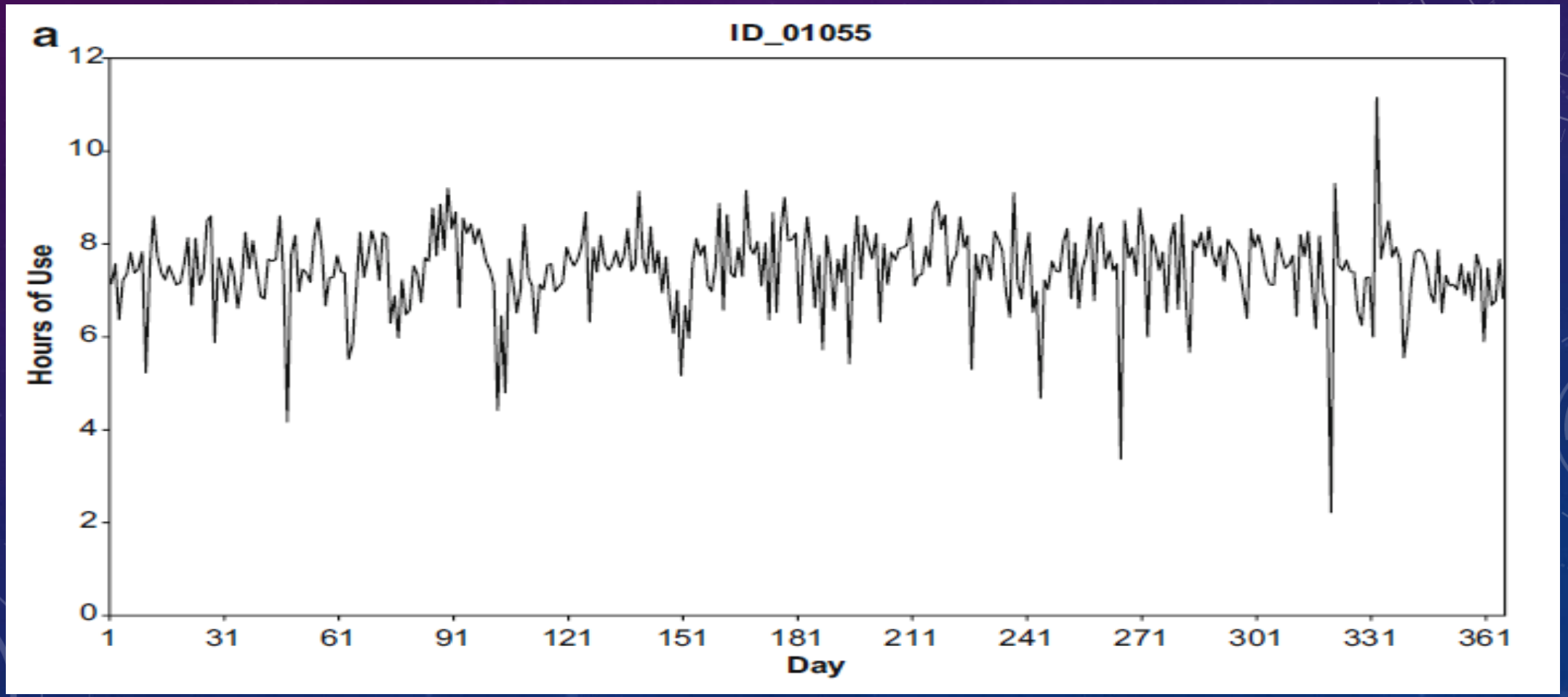
University of Rhode Island
Mark S. Aloia
National Jewish Health and Philips/Respironics, Inc.
Clete A. Kushida
Stanford University

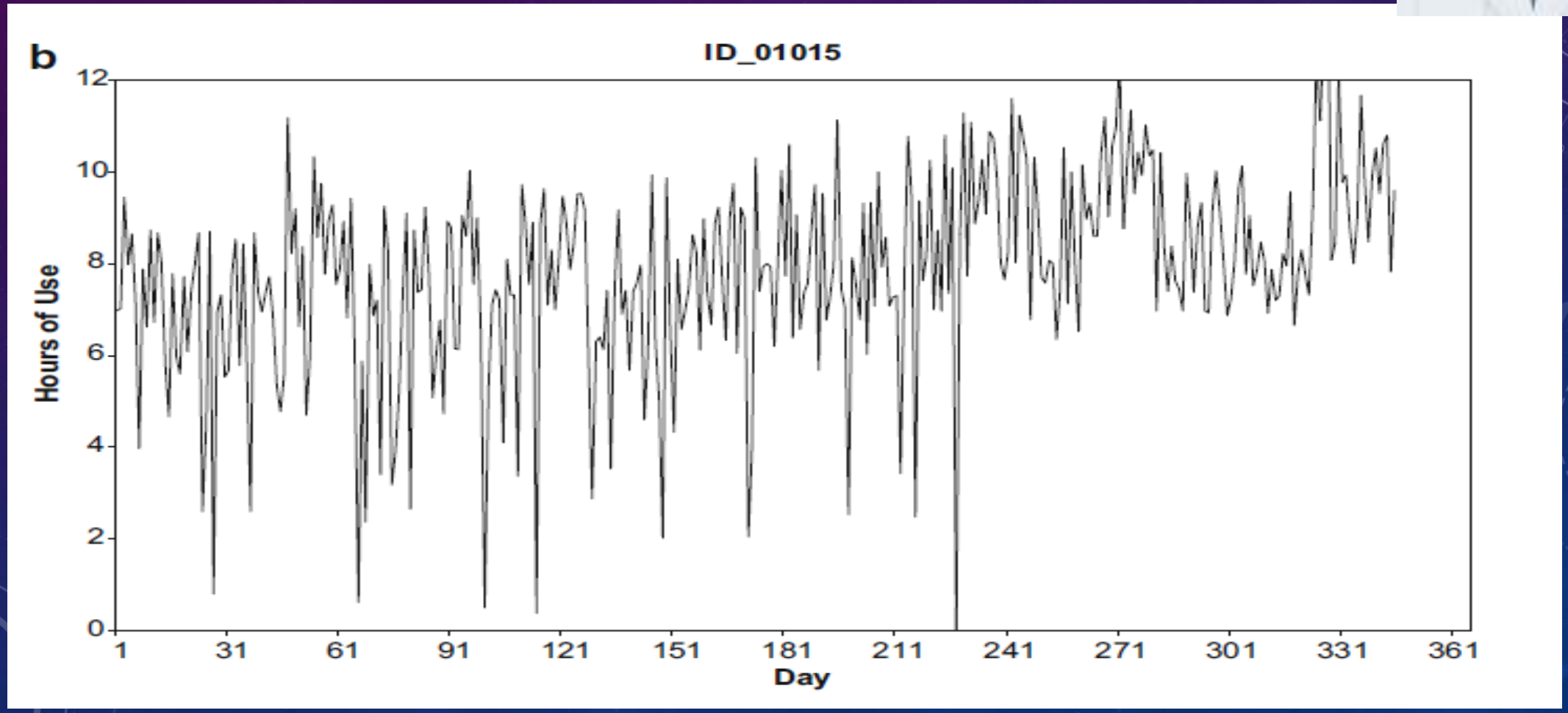
ALOIA: COMPLIANCE BEHAVIOR PATTERNS



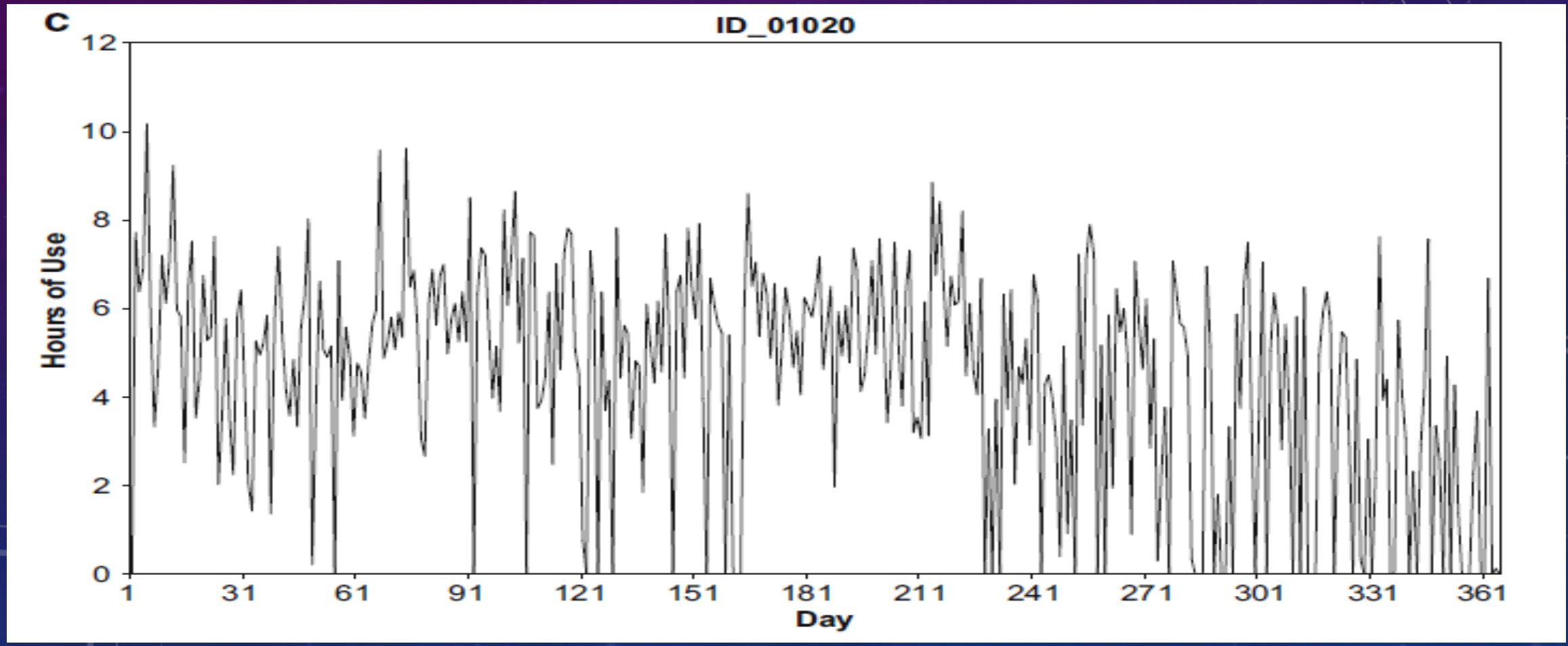
GOOD USERS
94% USAGE – AVERAGE 7 HOURS/NIGHT



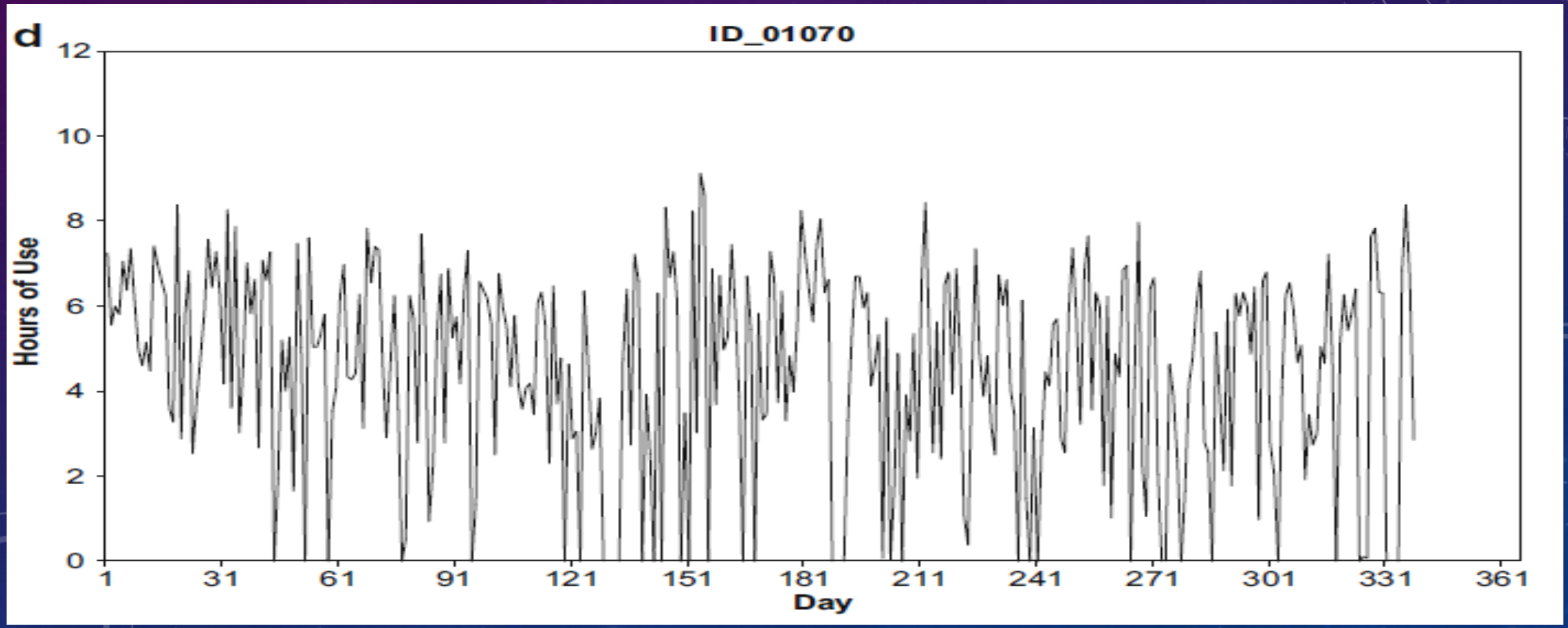
SLOW IMPROVERS
90% USAGE



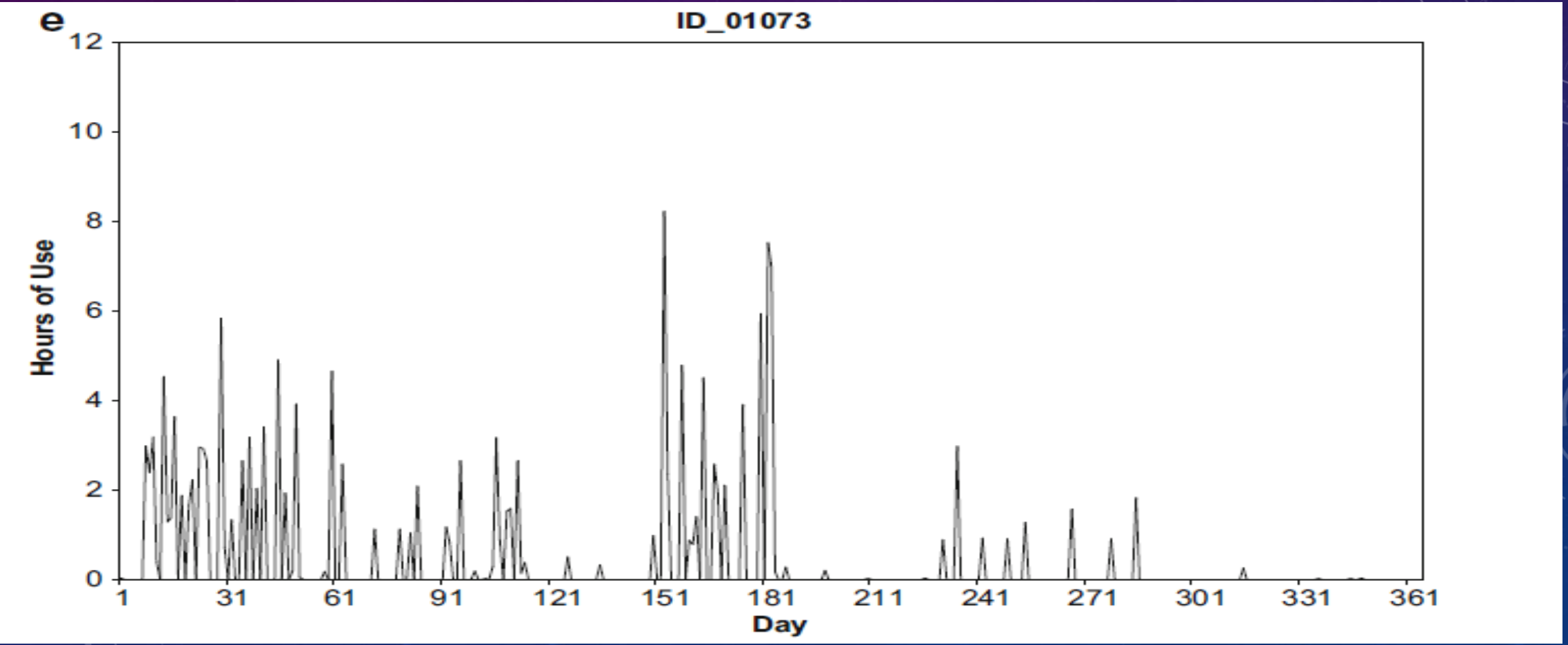
SLOW DECLINERS
USAGE 76% - AVERAGE 5.5 HOURS/NIGHT



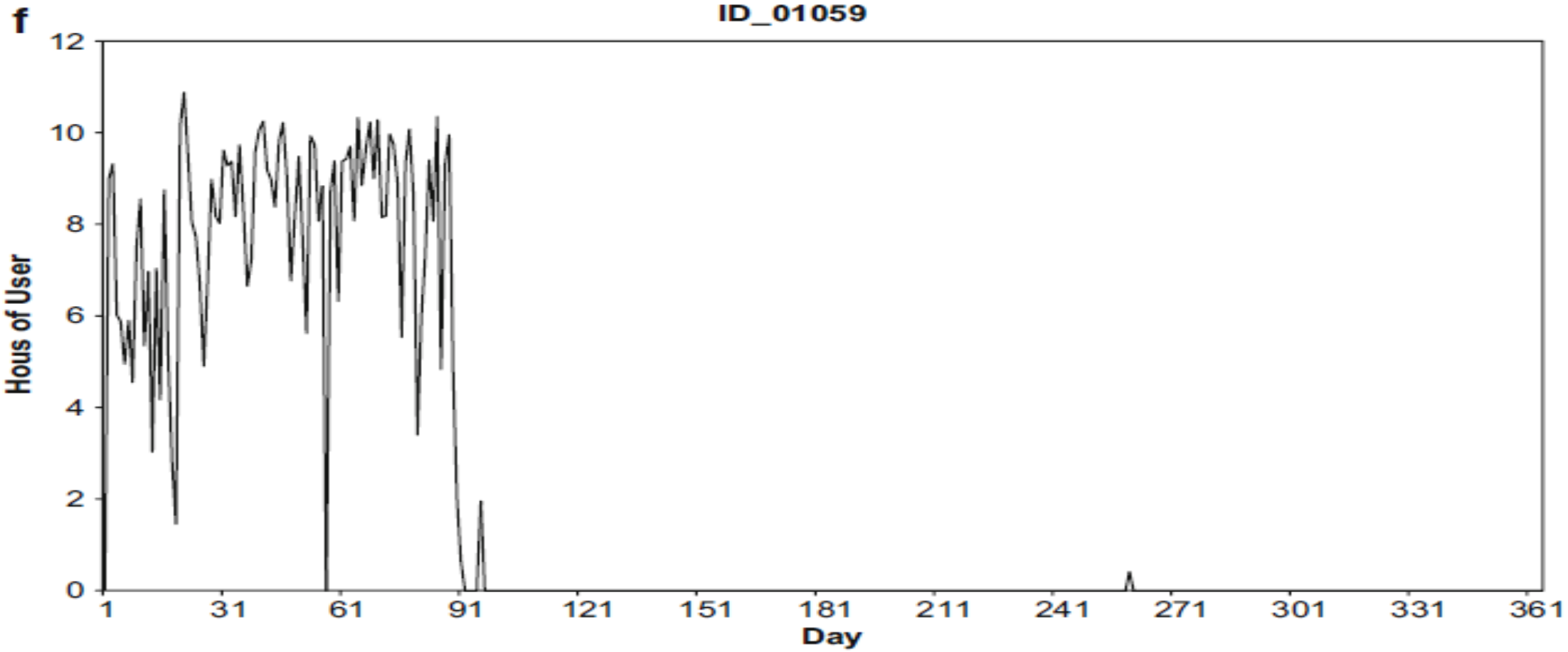
VARIABLE USERS-
USAGE 77% - AVERAGE 4.9 HOURS/NIGHT



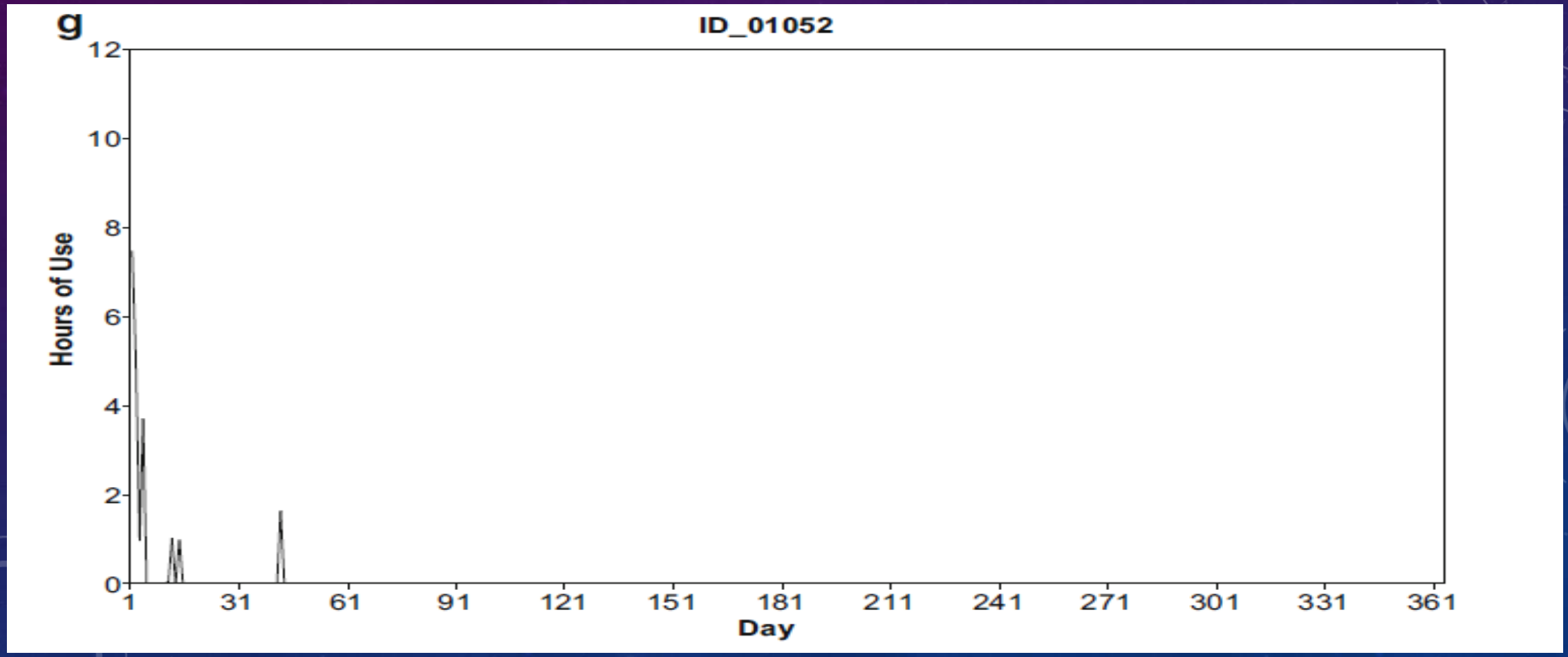
OCCASIONAL USERS – USAGE 32% - AVERAGE 3.24 HOURS/NIGHT



EARLY DROP-OUTS
USAGE 14% - AVERAGE XX HOURS / NIGHT



NON-USERS
AVERAGED 12 DAYS -3%



CPAP Adherence Patterns

- Consistent and inconsistent users can be distinguished within the first week (Weaver et al, 1997; Aloia et al 2007)
- Adherence in week 1 associated with:
  - adherence at 6 months (Aloia et al 2007)
- Adherence at 1 mo is associated with:
  - adherence at 3 months (Kribbs et al, 1993)
  - adherence at 6 months (Reeves-Hoche et al, 1994)
- Adherence at 3 mo is associated with:
  - adherence at 22 months (McArdle et al, 1999)

MOTIVATIONAL ENHANCED TREATMENT

- ✓ A Dynamic Behaviors Changing Strategy
- ✓ Targeted to specific subgroups of non-adherers patients
- ✓ Tailored or patient-centered interventions
- ✓ The Goal is to build Patient Confidence through non-conventional methods

COGNITIVE BEHAVIORAL THERAPY (CBT)

- 3 P's: Predisposing, Percipitating, Perpetuating
- Behavioral: Relaxation Technique, Stimulus Center, Sleep Restriction
- Cognitive: Belief and Attitude
- Educational: Sleep Hygiene, Risk factors

An innovative online program using Cognitive Behavioral Therapy for insomnia.

With the largest evidence base of long-term sleep improvements among all online insomnia programs on the market.

How It Works

The National Institutes of Health and the American Academy of Sleep Medicine recommend Cognitive Behavioral Therapy for Insomnia (CBT-I) as one of the first treatment choices for insomnia. Unlike medications, CBT-I helps people overcome the underlying cause of the sleep problem, and the beneficial effects of CBT-I typically last well beyond the end of therapy.

SHUTi is based on CBT-I and is organized into six structured, weekly online sessions. Each week you will:

- Complete a 45-minute interactive learning module
- Enter brief daily online sleep diaries
- Use the techniques and strategies you've learned in SHUTi to improve your sleep behaviors, thoughts and habits
- Receive personalized sleep recommendations and feedback

SHUTi has been proven in multiple research trials to be highly effective in helping individuals who are experiencing sleep difficulties. Research participants:

- ✔ Fell asleep over 40% faster, typically in under 20 minutes

SHUTi can be completed in a little as 5 weeks. Get started today and put yourself on the path to better sleep.

START USING SHUTI TODAY | INSOMNIA SEVERITY TEST

weekly sessions. Each week a new concept is introduced and all are completed online from the privacy and convenience of home.

- Introductory Overview
- Sleep Restriction
- Stimulus Control
- Cognitive Restructuring
- Sleep Education
- Relapse Prevention

The program starts with a **How To Use Tutorial** to give you an overview of the program and then you will begin with the **Overview Session** to help you evaluate your own sleep problems and treatment goals.

There are five more sessions, or Cores, each focused on specific methods for improving the quantity and quality of your sleep.

Each of these Cores takes about 45 – 60 minutes to complete. Once you've completed a Core, you'll work over the next 7 days to incorporate the strategies and techniques you have learned into your daily routine. Then, a new Core will be unlocked. You'll be able review your completed Cores and print out helpful materials for the full length of your subscription.

Sleepio is a clinically proven sleep improvement program.

Test your sleep now

or see pricing

Available via Boots NHS choices health apps library

Works with UP by JAWBONE fitbit

How Sleepio works

We test your sleep.

Using answers to our in-depth sleep test and (if you have one) sleep data from your UP, Fitbit or Bodymedia tracker we create your tailored program.

We test your sleep.

Using answers to our in-depth sleep test and (if you have one) sleep data from your UP, Fitbit or Bodymedia tracker we create your tailored program.

You visit The Prof, your virtual sleep expert.

The Prof is your guide through the Sleepio program, there when you need him day or night.

The Prof teaches you proven sleep improvement techniques.

You learn personalized Cognitive Behavioral Therapy (CBT) techniques to get your sleep schedule, thoughts, lifestyle and bedroom into shape.

A range of tools help you put your techniques into practice.

From the Thought Checker to your Daily Schedule, you have the tools you need to put the techniques into action.

GENERAL COMPLIANCE BEHAVIORAL PATTERNS

Consistent
Ambivalent
Low Usage
Poor User

CONSISTENT USERS OF PAP

- These individuals are more easliy convinced that PAP is beneficial
- They are confidence that they can use PAP effectively and consistently
- Consistent users not likely to need explaination of Benefits
- Their use was more than 5 h per night
- These patients appear to benefit most from an intervention that focus on the consequences and Risks of OSA

AMBIVALENT USERS OF PAP

- Motivational intervention may be a better fit for this group of patients
- More likely to struggle with barriers to treatment
- Motivational intervention uses a specific set of intervention skills to help patients resolve their ambivalence about using PAP.
- Patients are not confronted about their nonadherence.
- The counselor is trained to ask strategic questions that help patients reflect on their level of adherence and how that level is connected to important values and goals in their lives.
- Personalized feedback on health and health outcomes related to OSA.
- The Best approach is to communicate to patients ia collaborative, nonconfrontational manner so that patients can interpret the implications of their choice to use or not use in a nondefensive manner.
- Counselors are instructed to “roll” withpatient resistance to maximize the person's involvement in his/her own health behavior change.
-

LOW USERS IN OUR STUDY

- ✓ Low users average (< 2 h/night in week 1)
- ✓ They do not seemed not to respond to either MET or ED over traditional SC. This finding suggests that there may need to be a different approach for these individuals.
- ✓ They believe that they do not need this treatment at all. low users may have little social support for their behavior change,
- ✓ They feel in poor control of their health,
- ✓ they may have an anxiety reaction to the treatment, or
- ✓ they may have low perceptions of the risks of untreated sleep apnea. Conversely, they may simply have needed more counseling time to benefit from either type of counseling, MET or ED.
- ✓ Among this low user group, any counseling could be perceived as confrontational, because their initial experience with treatment may have been negative.
- ✓ It is hypothesized that earlier intervention, either at the time of the sleep study or at least prior to the initiation of PAP, could result in improved adherence outcomes..

POOR PAP USERS

- **Do not easily subscribe into belief regarding the Benefit of PAP Therapy**
- **They are Not invested in treatment**
- **Do not appreciate the risks of poor adherence**
- **Did not benefit from behavioral intervention**
- **These participants require longer, more intense counseling sessions to do better.**

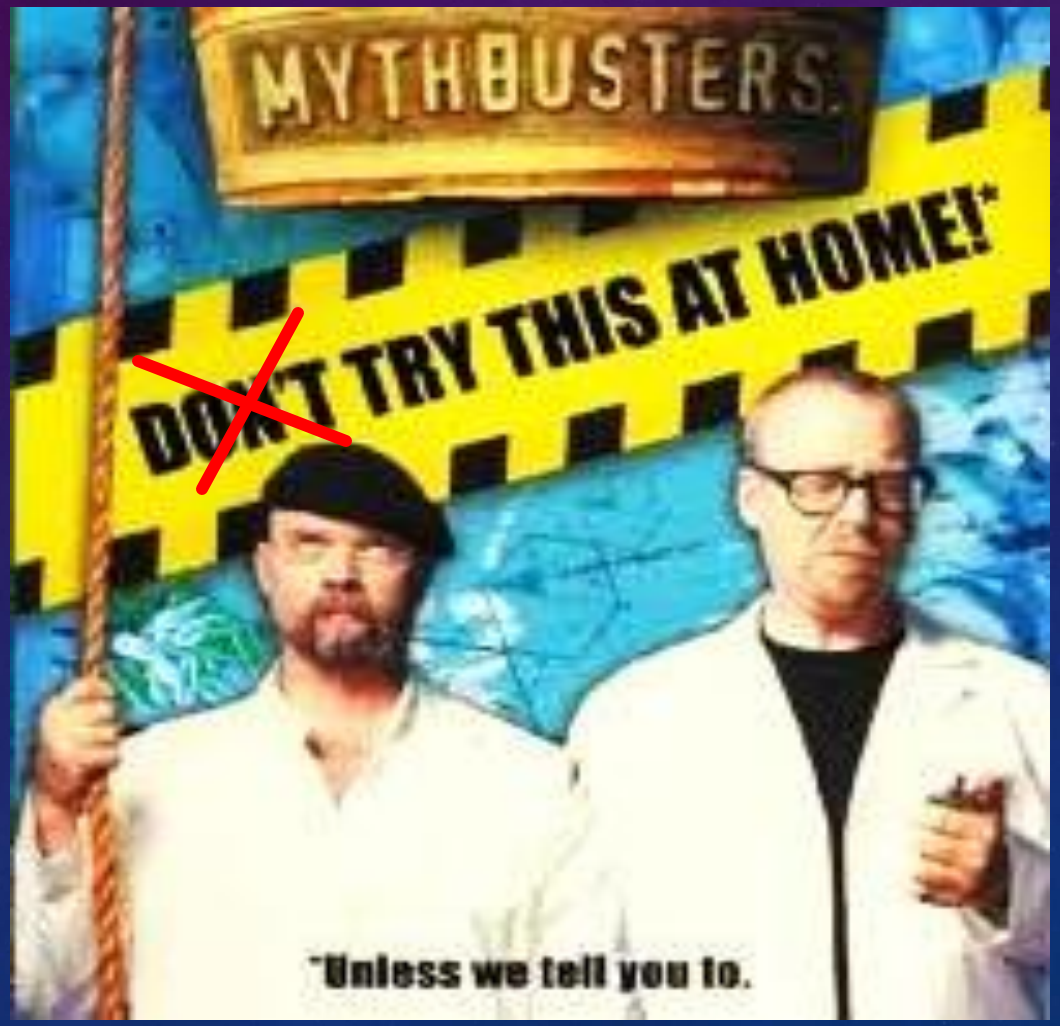
LETS SUMMARIZE

- Compliance vs. Adherence
- Standard Compliance Follow Up
- 4 Problems Areas: Comfort, Physiological, Psychological, Educational
- Components of Enhanced Compliance Monitoring
- Focus of Current Compliance Research – Interventions
- Aloia's - 7 Compliance Behavioral Models
- Motivational Enhanced Treatment
- 4 General User Profiles- Consistent, Ambivalent, Low User, Poor User

11 % SOLUTION

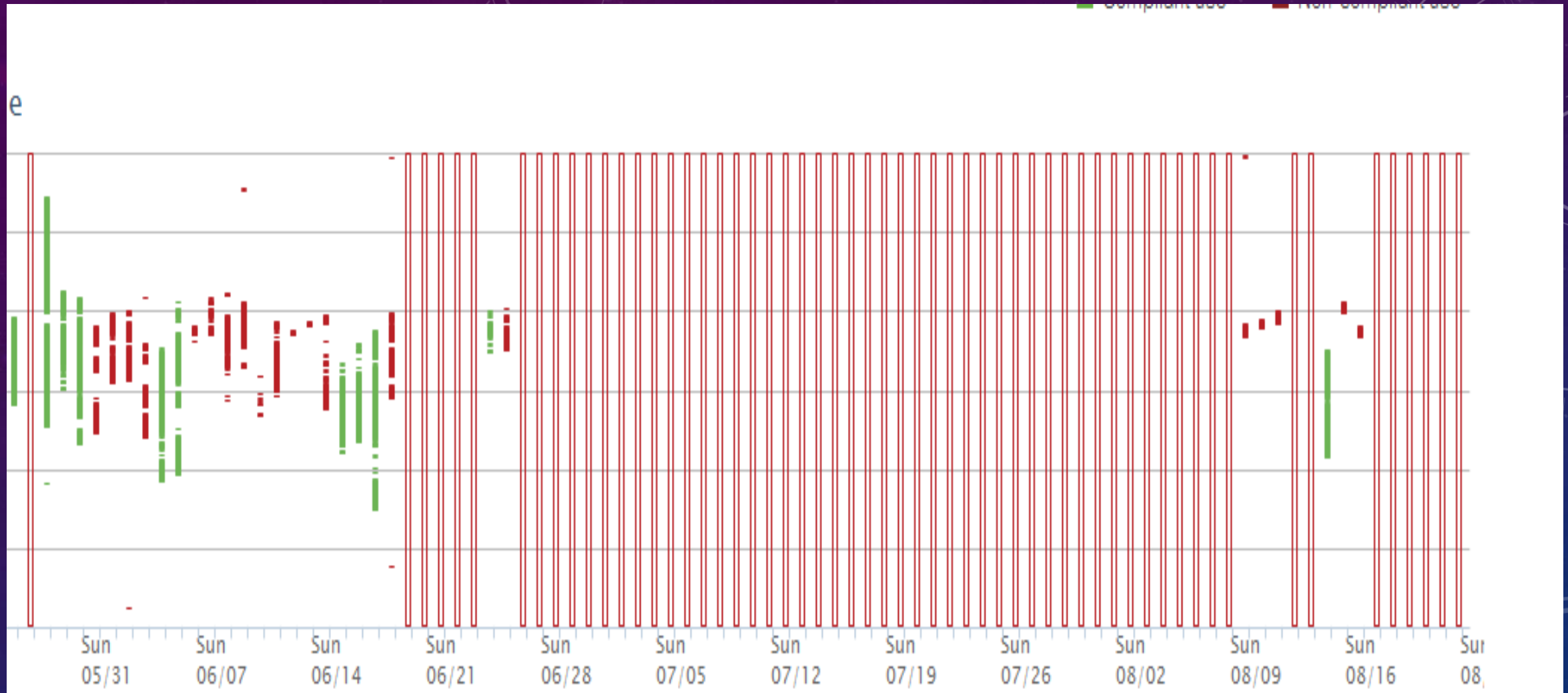
- A Compliance Study by Dr. R. Bart Sangal
- 151 Subject with a resultant 92% Compliance
- Dr Sangal stated that that without Medication –he would have only achieved 79% Compliance
- Factors
  - Unlimited Mask Exchange in first 30 days
  - Extensive Education of the Patient by the Physician on the Benefits of CPAP and Risk of Untreated OSA
  - Monitoring of Compliance
  - Follow up at 5 weeks
  - 25% of patients had Insomnia and were treated Medication
  - 55% given Trazadone
  - 38% Mirtazapine
  - 7% Doxepin

CPAP ADHERENCE:
“DO TRY THIS AT HOME”



CASE STUDIES #1

- An 85 year old male has a history of COPD, heart problems and severe OSA.
- He had been treated with CPAP @ 18 cm H2O for the past 15 years.
- He develops symptoms of Complex Sleep Apnea and undergoes a Titration Study.
- The Attending Physician orders an ASV device at
- He is fitted with Resmed Quattro Mirage Full Face Mask
- After 3 days he complains about the mask and asks for
- He is fitted with the Resmed Airfit F10.
- The compliance Report shows that he uses the machine every night for 1-2 hours but stops
- Upon questioning , the patient claims that he takes his mask off at night
- Review of the chart reveals that the patient is prescribed medication for sleep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Sun 08/02
Sun 08/09
Sun 08/16

CASE STUDIES #2

- A 48 year old Female is Diagnosed with OSA.
- Her prescription is for CPAP @ 18 cmH2O.
- During her initial setup, the woman states that she cannot tolerate Full Face Mask
- Instead she is fitted with the Resmed Airfit N10 and a chin strap.
- A week later the patient calls to complain that she cannot tolerate the pressure and the leaking of the mask causes her to wake up frequently
- The Airview Report reveals information high leak
- The patient is switched to AutoCPAP
- After 3 days, the average night pressure is 8.5, the AHI is 1.5,and the mask leak is 6-12
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