



THE SLEEP NAVIGATOR: OSA MANAGEMENT WHEN LIFE HANGS IN THE BALANCE

Matthew Anastasi, BS RST RPSGT
CEO, Limina Sleep Consulting, LLC
Chair, Standards & Guidelines Committee, AAST
Sec/Treas, CoA PSG Tech Education, CAAHEP
Past President, Pennsylvania Sleep Society
Member, COVID-19 Task Force, AASM
LiminaSleepConsulting@Gmail.com

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X

I wish to disclose the following potential conflicts of interest:

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Grant/Research Support	
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Other	

X

The material presented in this lecture has no relationship with any of these potential conflicts

**“THE SECRET OF
CHANGE IS TO FOCUS
ALL OF YOUR ENERGY,
NOT ON FIGHTING THE
OLD, BUT ON BUILDING
THE NEW.”**

– SOCRATES

BLUEPRINT FOR SLEEP TECHNOLOGIST CHANGE

SLEEP NAVIGATOR: A CASE STUDY IN SLEEP TECHNOLOGIST CHANGE

- **PROCEDURAL TO OUTCOMES BASED CARE**
- **↑ MEDICALLY COMPLEX PATIENTS**
- **SLEEP TECH ‘TRADE’ TO ‘PROFESSION’**
- **THE ‘TRAILBLAZERS’ AMONG US**

APPROVED

MAR 23 2010

Barack Obama



CHANGE DRIVERS

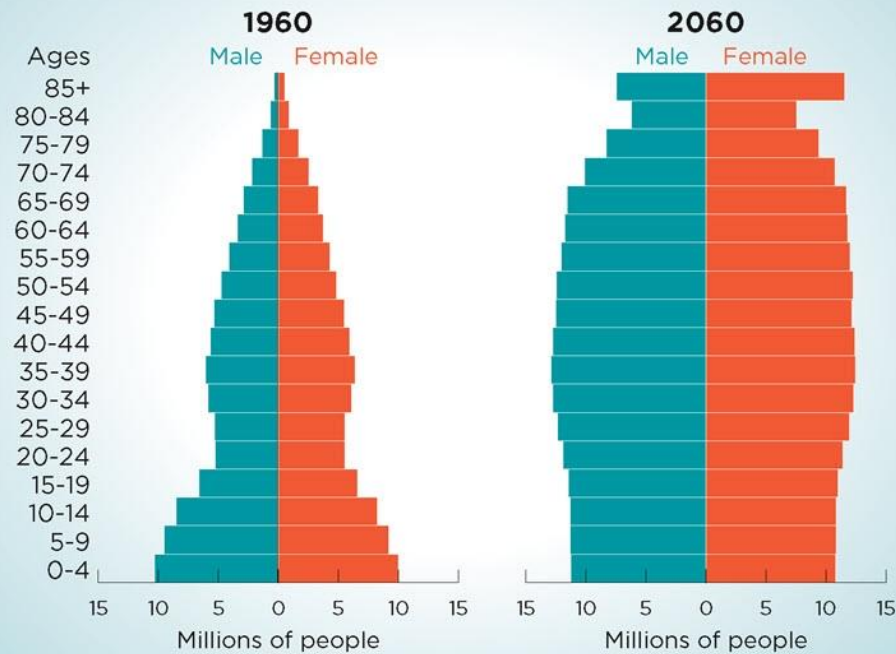
HIGHER ACUITY
PATIENTS

SLEEP
TECHNOLOGY:
FROM "TRADE"
TO "PROFESSION"

TRANSFORMED
ROLES &
RESPONSIBILITIES

From Pyramid to Pillar: A Century of Change

Population of the United States



United States™
Census
Bureau

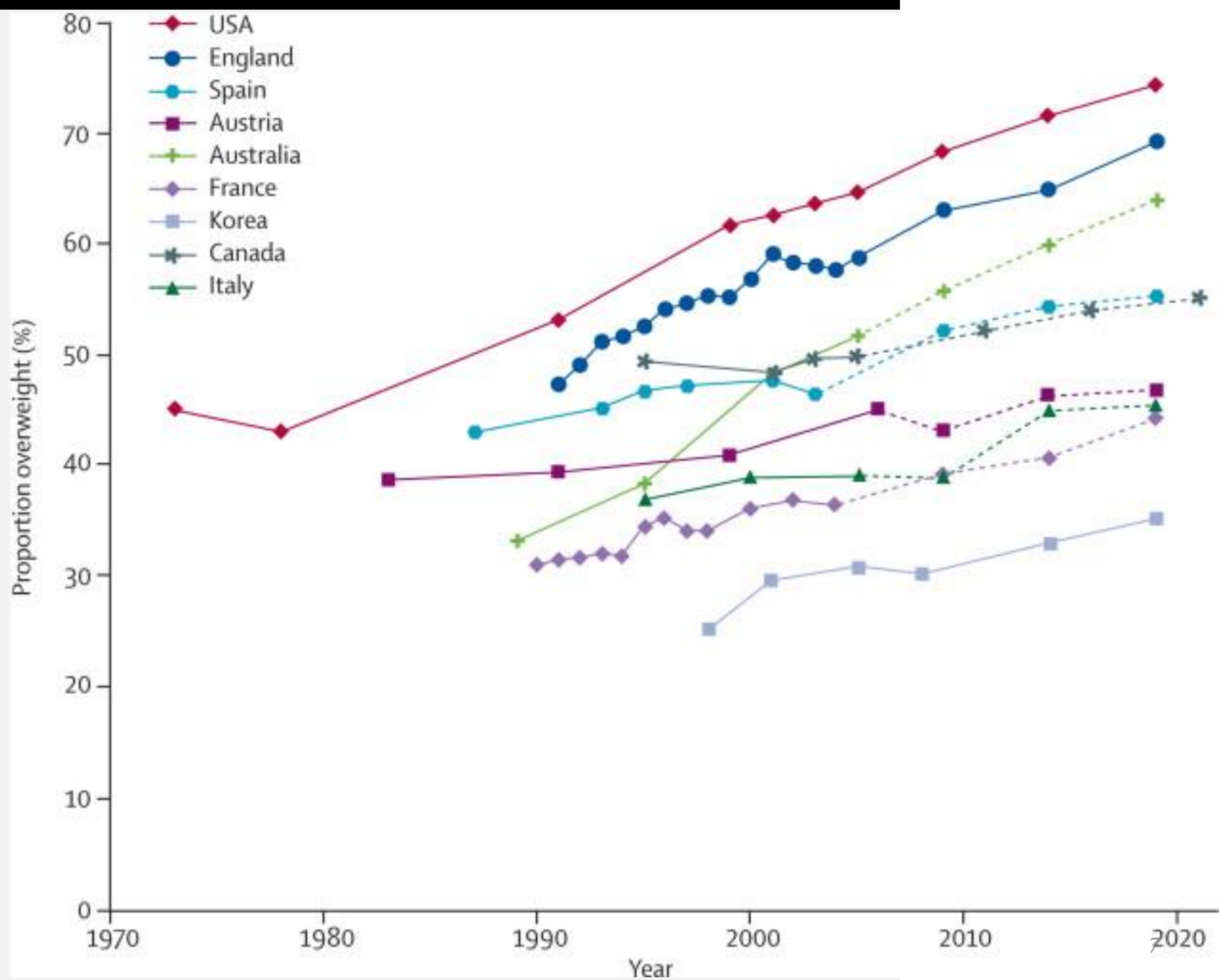
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
[census.gov](https://www.census.gov)

Source: National Population
Projections, 2017
www.census.gov/programs-surveys/popproj.html

OLDER AMERICANS TO OUTNUMBER CHILDREN

FIRST TIME IN OUR HISTORY

WORLD PREVALENCE OF OVERWEIGHT



GENERAL DOWNSTREAM EFFECTS ON COMORBIDITIES



OBESITY IS LINKED TO AN INCREASED RISK OF DEATH FROM ALL CAUSES



BESIDES OSA, STRONG LINK TO DIABETES, CARDIOVASCULAR DISEASE AND CANCER

Whitlock, G, et al. (2009). Body-mass index and cause-specific mortality in 900 000 adults: collaborative analyses of 57 prospective studies. Lancet;373(9669), 1083

WHY THIS MATTERS FOR SLEEP TECHNOLOGISTS



STANDARDIZED JOB
DESCRIPTIONS MEET
MINIMUM COMPETENCY



OPPORTUNITY FOR UPWARD
MOBILITY AND PROMOTION



ASSUME NEW JOBS THAT
REFLECT EXPANDING TECH
ROLES

TRENDING SLEEP JOBS



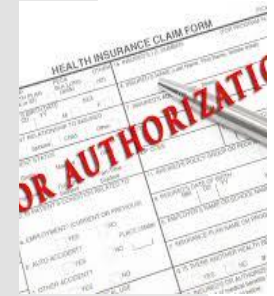
SLEEP NAVIGATOR



SLEEP HEALTH EDUCATOR



PULMONARY CLINIC RPSGT



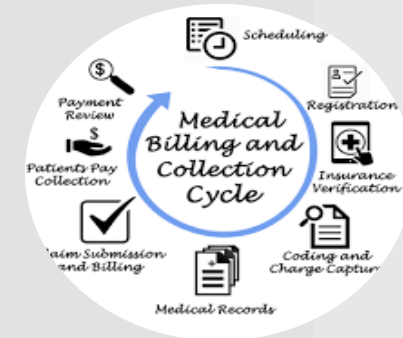
PRE-AUTH SPECIALIST



SLEEP PROGRAM ANCILLARY STAFF



SLEEP COACH (BSM)



CODING & COMPLIANCE SPECIALIST



Everything we know, we learned
from someone else!

— *John Wooden* —

AZ QUOTES

SLEEP TECHNOLOGY: “TRADE” TO “PROFESSION”



- HIGHER PATIENT ACUITY DEMANDS HIGHER STAFF COMPETENCY:
 - HIGHER EDUCATION
 - MINIMUM SLEEP CREDENTIALS
 - BROADER SET OF SKILLS



An occupation becomes a full-time occupation



The establishment of a training or university school

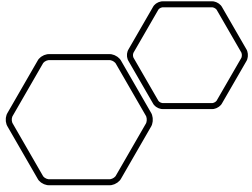


The establishment of a local and national association of professional ethics



The establishment of state licensing laws

Bullock, A & Trombley, S. The New Fontana Dictionary of Modern Thought, London: Harper-Collins, 1999, p.689
Profession. (2019, June 19). Retrieved June 29, 2019, from https://en.wikipedia.org/wiki/Profession#cite_note-11



PILLAR # 2: EDUCATION



BACKGROUND IN BASIC
THINKING AND
COMMUNICATION SKILLS



FOR NOW, SLEEP RECOGNIZES
SUPPLEMENTARY PROGRAMS



THERE ARE 42 ACCREDITED PSG
PROGRAMS, 7 ARE ONLINE



PILLAR #3: ASSOCIATION & CREDENTIALS

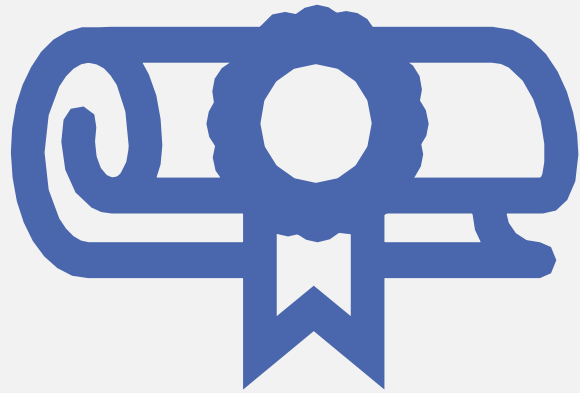


STATE LICENSING (PILLAR #4):

- MANY STATES REQUIRE LICENSURE WITH RPSGT CREDENTIAL
- OTHERS PRACTICE UNDER A RESPIRATORY ACT AND EXEMPT SLEEP TECHS
- A FEW DO NOT DEFINE SLEEP TECH IN ANY PART OF THEIR LICENSURE ACT
- TREND IS TOWARD INCREASED REGULATION / LICENSURE



STAYING AHEAD OF THE CURVE: THE PRACTICAL PITCH FOR SLEEP PROFESSIONALS



1. ACQUIRE AT LEAST ONE CERTIFIED SLEEP CREDENTIAL (RPSGT, ETC.)
2. WORK TOWARDS ASSOCIATE'S DEGREE IN PSG
3. NETWORK AND BECOME A SUBJECT MATTER EXPERT THROUGH YOUR NATIONAL AND LOCAL PROFESSIONAL ORGANIZATION

AFFORDABLE CARE & IMPROVED OUTCOMES



SLEEP LABS

PREAUTHORIZATIONS

- SHIFTS HEALTHY PATIENTS TO THE HOME
- HIGH ACUITY PATIENTS TO THE LAB



HOSPITALS

PENALTIES

- PATIENT SAFETY
- PATIENT SATISFACTION

COCHRANE REVIEW



Most exhaustive meta-analysis of compliance research.

24 studies; 1007 participants



Compared the efficacy of mechanical vs. psychological/educational interventions.



“The evidence in support of Bi-PAP, self-titration and humidification is lacking.”



“THERE IS SOME EVIDENCE THAT PSYCHOLOGICAL/EDUCATIONAL INTERVENTIONS IMPROVE CPAP USAGE.”

CLINICAL SLEEP EDUCATOR



PATIENT
EDUCATION AND
COMPLIANCE



TEACHES AND
USES PRINCIPLES
OF BEHAVIORAL
SLEEP MEDICINE
(BSM)



COORDINATES
INSURANCE PRE-
AUTHS AND DME
SUPPLY



CCSH
CERTIFICATION //
BACHELORS-
PREFERRED

SLEEP APNEA SELF- MANAGEMENT EDUCATION (SASME)



**STANDARDIZED EDUCATIONAL
APPROACH**

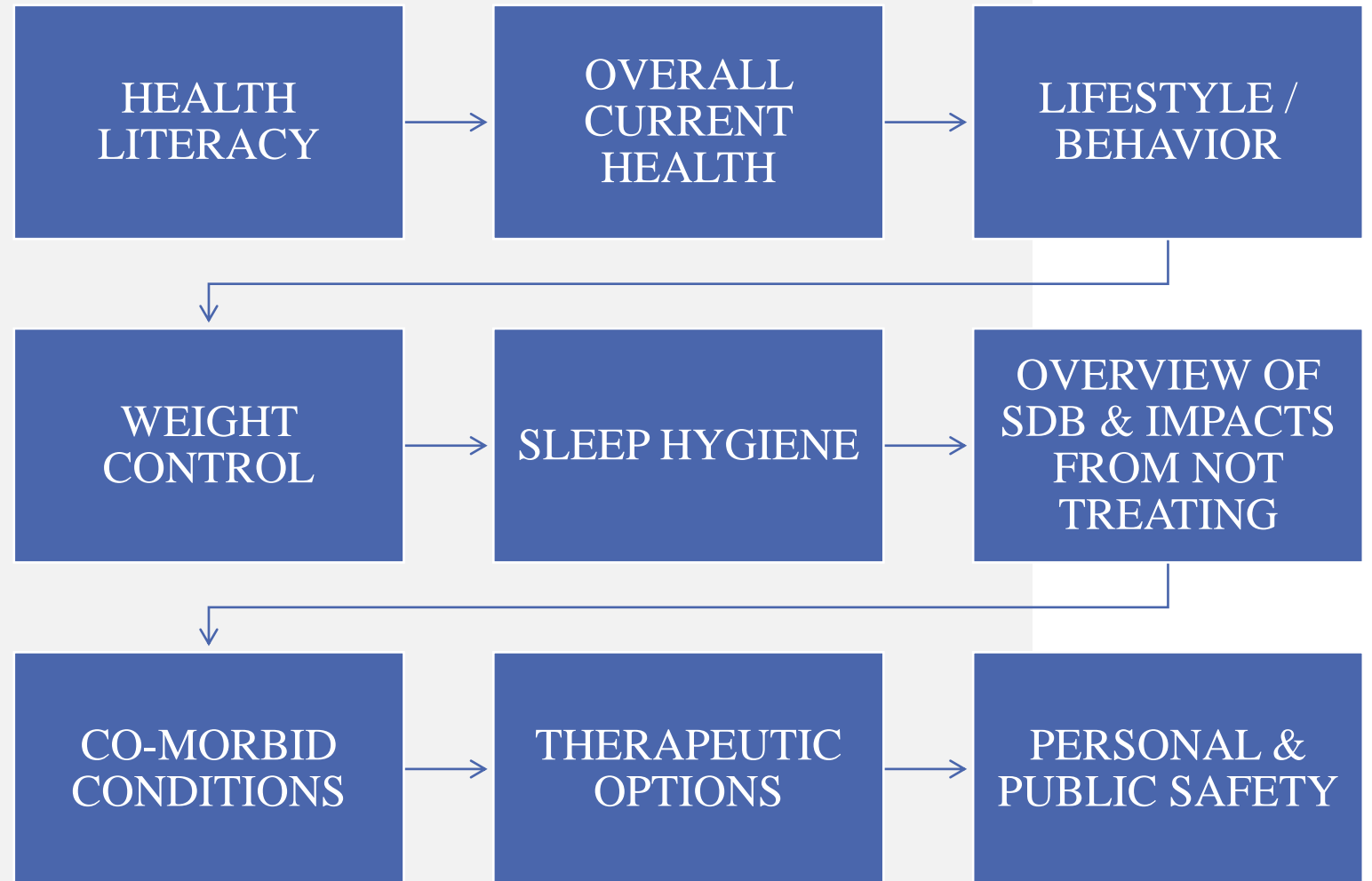


DOCUMENTED IN PATIENT EMR



**BEGINS AT INITIAL
INTERACTION WITH PATIENT**

SASME: TEMPLATE FOR HEALTH EDUCATION



<https://www.aastweb.org/sleephealtheducator>



CHRONIC HEALTH CONDITIONS RIPE FOR CHANGE

Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change* (2nd ed.). New York: Guilford.

- ALCOHOL
- WEIGHT LOSS
- SMOKING CESSATION
- DIABETES CARE
- PAP COMPLIANCE
- ANY HEALTH CHANGE
- WELLNESS
- ADDICTION
- **CPAP ADHERENCE!**

TREATMENT MINDSET (TECH) → CHANGE MINDSET (EDUCATOR)



GOAL IS TO INCREASE
THE **IMPORTANCE** OF
CHANGE



BUT NOT DIRECTLY
ADVOCATE FOR
CHANGE



KEEP A **NEUTRAL**
STANCE



KNOWLEDGE ALONE IS
NOT THE SOLUTION



APPLYING KNOWLEDGE
IS KEY TO CHANGING
HEALTH BEHAVIORS

AFFORDABLE CARE & IMPROVED OUTCOMES

HOSPITALS

PENALTIES

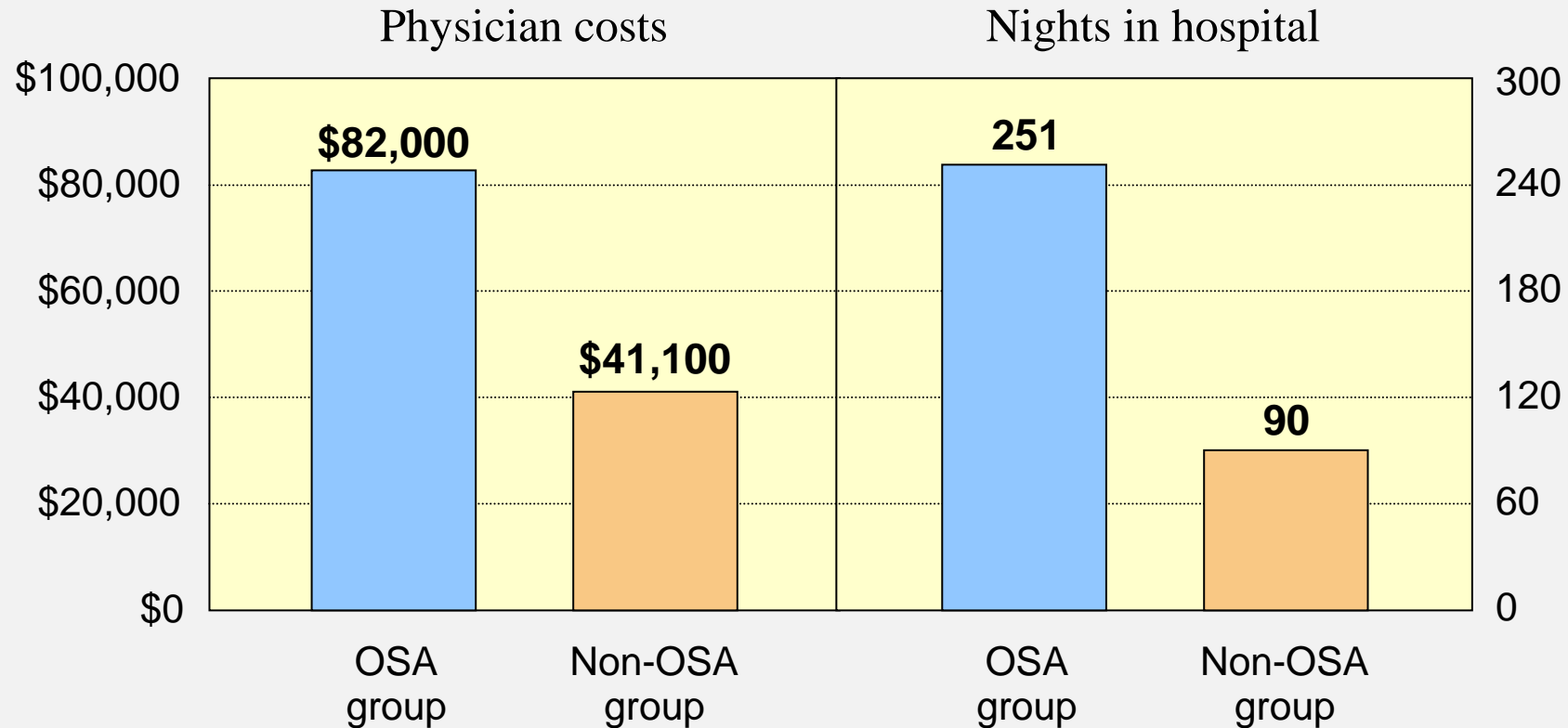
- **PATIENT SAFETY**
 - HOSPITAL READMISSIONS REDUCTION PROGRAM (HRRP)
 - HOSPITAL ACQUIRED ILLNESS
- **PATIENT SATISFACTION**
 - PATIENT EVALUATIONS



Press VG, Konetzka RT, White SR. Insights about the economic impact of chronic obstructive pulmonary disease readmissions post implementation of the hospital readmission reduction program. *Curr Opin Pulm Med.* 2018;24(2):138-146. doi:10.1097/MCP.0000000000000454

Schwab P, Dhamane AD, Hopson SD, et al. Impact of comorbid conditions in COPD patients on health care resource utilization and costs in a predominantly Medicare population. *Int J Chron Obstruct Pulmon Dis.* 2017;12:735-744. Published 2017 Feb 23. doi:10.2147/COPD.S112256

OSA = ↑ COSTS, ↑ LOS (LENGTH OF STAY)



Gladden, K & Arrington, T. (Aug. 2020) Sleep Navigator: Defining World Class Sleep Medicine Delivery, SLEEP2020, American Academy of Sleep Medicine.

Patients meeting at least three STOP-BANG criteria have higher postoperative complications and an increased length of hospital stay than patients using CPAP. J Anesth. 2014; 28: 891–897. et al

WE'RE ALL IN THIS TOGETHER

- AFFORDABLE CARE ↔ PROFESSIONAL TRANSFORMATION

- SLEEP LABS ↔ HOSPITALS

SLEEP NAVIGATOR



OSA MANAGEMENT WHEN
LIFE HANGS IN THE
BALANCE



PRE-, AND POST-
OPERATIVE MANAGEMENT
OF OSA



SLEEP TECHNOLOGIST AND
/ OR CLINICAL SLEEP
EDUCATOR

PERIOPERATIVE MANAGEMENT



Preoperative
Evaluation



Intraoperative
Management



Postoperative
Management

HOW TO IDENTIFY PATIENTS WITH SLEEP APNEA



Nocturnal Pulse Oximetry

THE GOLD STANDARD
DIFFICULT TO IMPLEMENT ON
THE IMPATIENT SETTING



Home Sleep Apnea Testing

ONLY WITH PATIENTS WITH
HIGH PRE-TEST PROBABILITY
OF OSA



Questionnaires

STOP BANG CUTOFF ≥ 4

STOP *Bang* QUESTIONNAIRE

Snoring - Do you Snore Loudly (loud enough to be heard through closed doors or your bed-partner elbow you for snoring at night)? Yes No

Tired - Do you often feel Tired, Fatigued, or Sleepy during the daytime (such as falling asleep during driving)? Yes No

Observed - Has anyone Observed you Stop Breathing or Choking/Gasping during your sleep? Yes No

Pressure - Do you have or are being treated for High Blood Pressure? Yes No

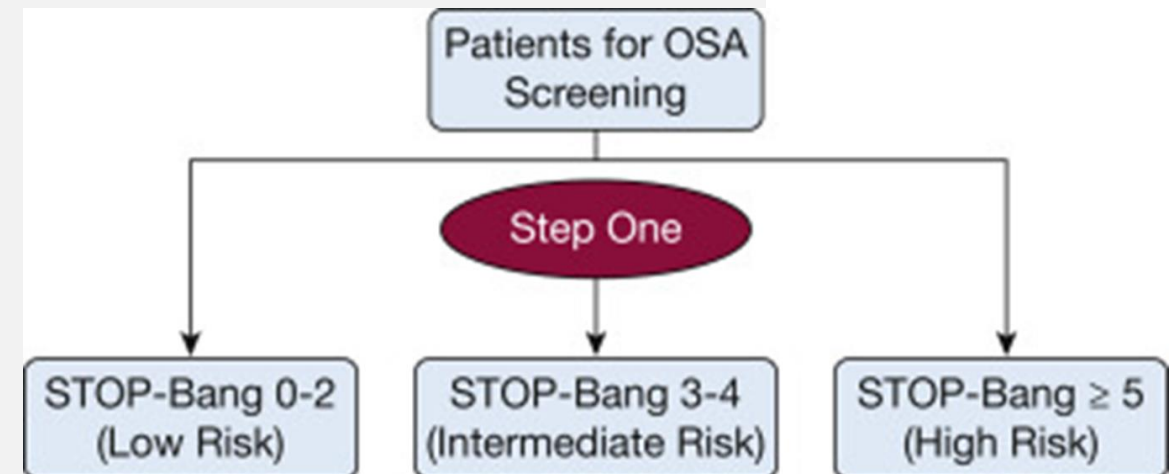
Body Mass Index - more than 10% over ideal range. Yes No

Age - Older than 50? Yes No

Neck Size - (Measure around Adams apple)
Male is your shirt collar 17" or larger? Female, is your shirt collar 16" or larger? Yes No

Gender = Male? Yes No

After you have completed the **STOP-BANG** questionnaire, please return it to the front desk for a quick risk assessment of possible sleep apnea.





AAST Technical Guidelines



Pre- and Post-Operative Monitoring of the OSA Patient

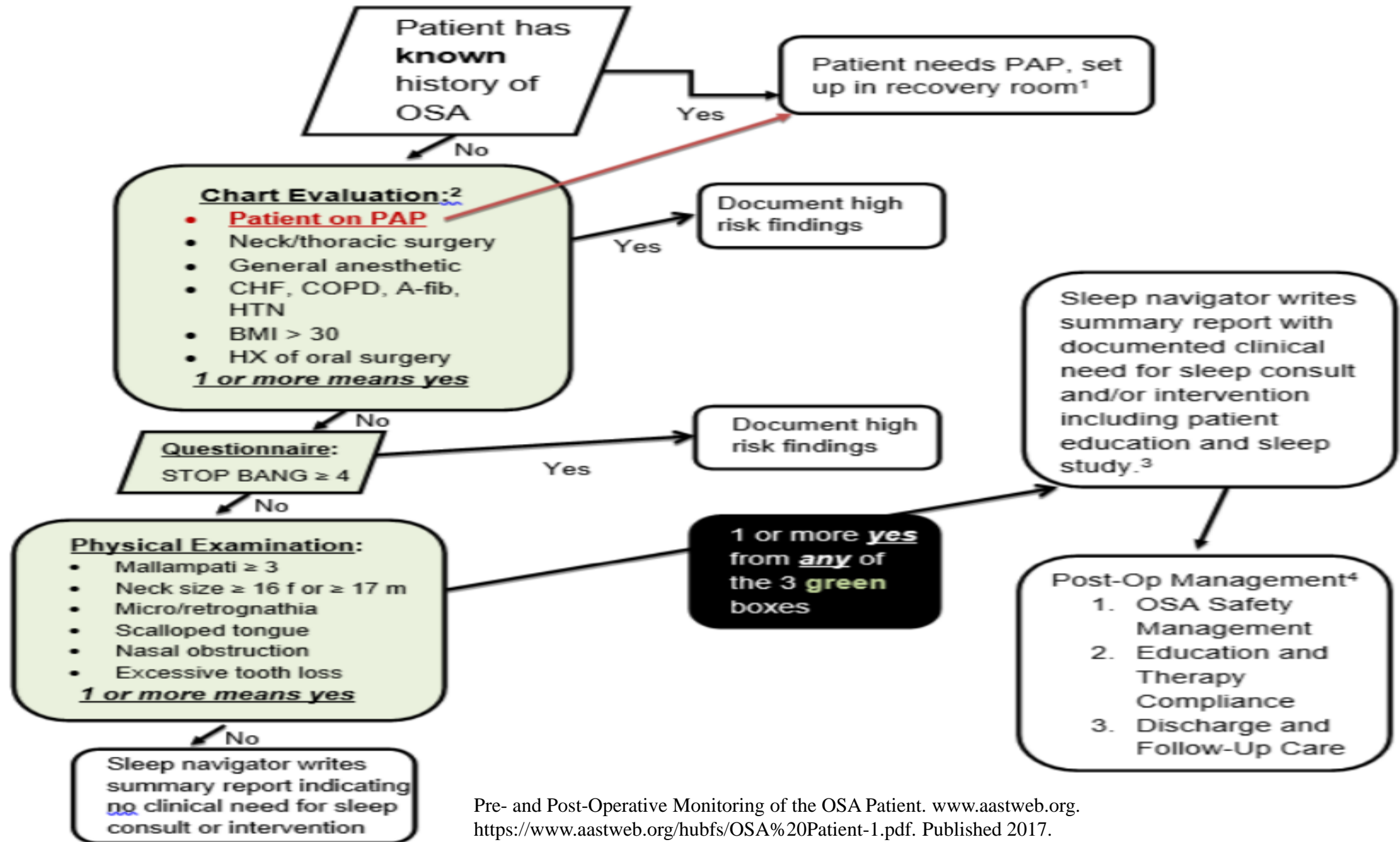
January 2020

Introduction:

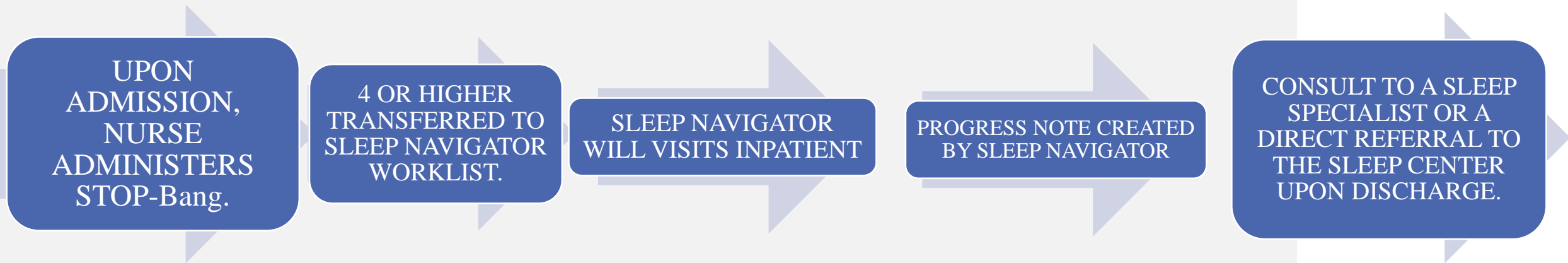
Obstructive Sleep Apnea (OSA) is a sleep disorder associated with substantially increased adult post-surgical risks and complications (Poeran, 2019). Anesthesia-induced unconsciousness precipitates decreased muscle activation that predisposes the upper airway to collapse. To date, the largest study (Memtsoudis et al., 2011) from the National Inpatient Sample (data from 1998 to 2007) examined 65,774 patients with sleep apnea undergoing orthopedic procedures and 51,509 sleep apnea patients undergoing general surgical procedures for perioperative complications. Sleep apnea was associated with a significantly higher adjusted occurrence of developing pulmonary complications, including aspiration pneumonia, acute respiratory distress syndrome, and intubation/mechanical ventilation, after both orthopedic and general surgical procedures respectively (Memtsoudis et al., 2011).



Flowsheet: Pathway for Pre- and Post-Operative OSA Management



WORKFLOW: INPATIENT MANAGEMENT OF OSA



SLEEP NAVIGATOR: FLAGGING OSA



EARLY IDENTIFICATION OF
HIGH-RISK OSA



STOP-BANG AT PRE-OP
TESTING OR ADMISSION

Wolfe R, Pomerantz J, Miller D, et al. (2016). Obstructive Sleep Apnea: Preoperative Screening and Postoperative Care. Journal of the American Board of Family Medicine. 29, 263-275.

Chung F. (2011). Program and Speaker Abstracts: Who are the Patients that Require Postoperative Monitoring. Society of Anesthesia & Sleep Medicine.

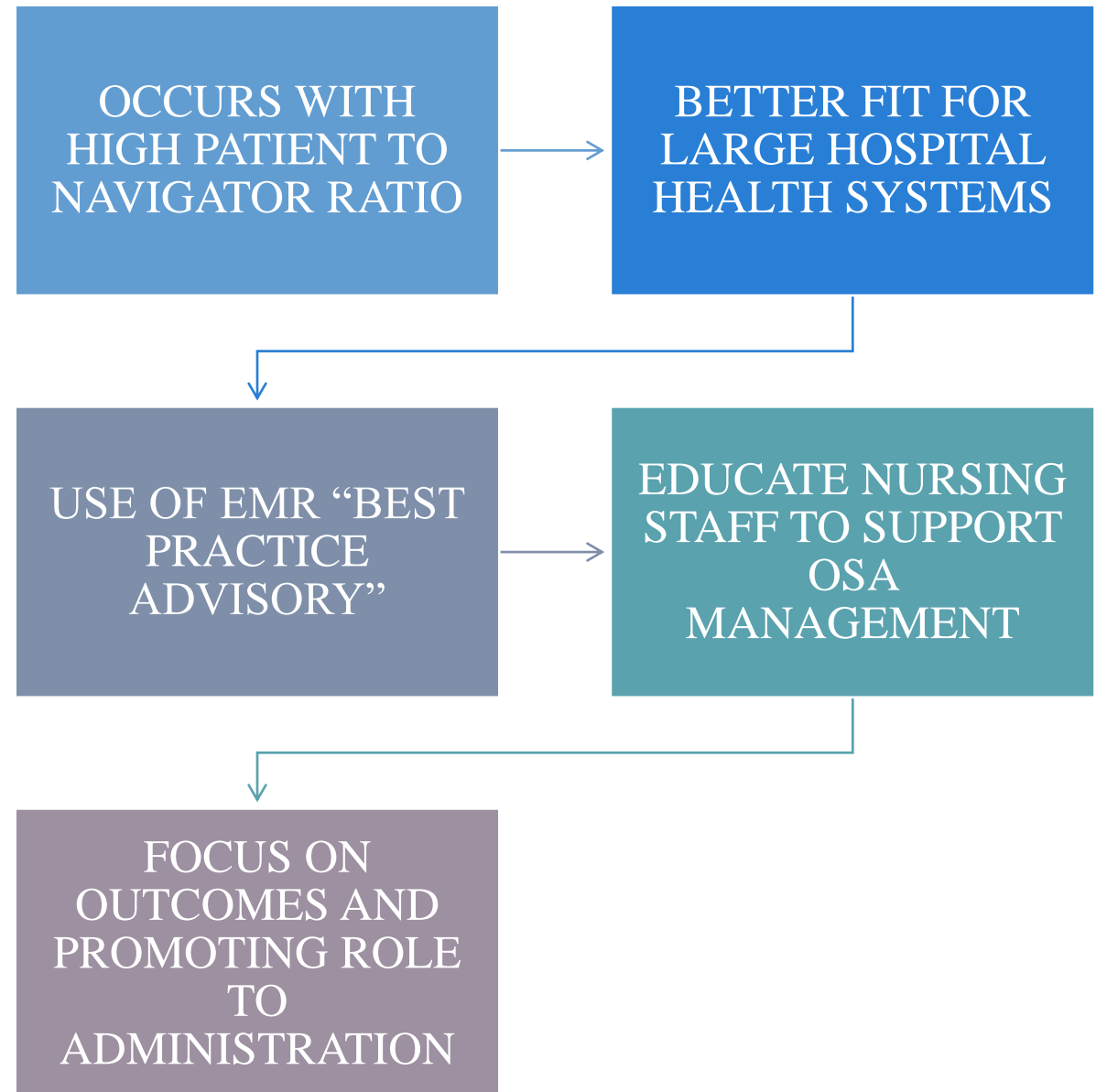
SLEEP NAVIGATOR: “IN THE TRENCHES” ROLE



- STOP BANG ≥ 4 TRIGGERS VISIT TO FLOOR
- SUMMARY REPORT
- 30 MINUTES / PT, “ROUND” UP TO 15 PTS / DAY



SLEEP NAVIGATOR: “BIRD’S EYE” WORKFLOW



MANAGING OSA POST- OPERATIVELY



SAFETY & COMPLIANCE

Poeran J, et al. (2019). Impact of obstructive sleep apnea on perioperative complications among patients undergoing hysterectomy: a population-based analysis. *Sleep Med.* 56, 117-122.

NAVIGATOR WORKFLOWS ON THE FLOOR



1:1 EDUCATION



PROVIDE A VARIETY OF
INTERFACES AND PAP
MACHINES IN RECOVERY

HIGH-LEVEL NAVIGATOR WORKFLOWS



COLORED WRISTBAND OR
SURGICAL HAT FOR OSA-
IDENTIFICATION



TRAINING OF HEALTHCARE
PERSONNEL IN OSA AND PAP
TREATMENTS & INTERFACE USAGE



DATA TRACKING OF TRENDS,
OUTCOMES AND READMISSION FOR
SLEEP NAVIGATOR JUSTIFICATION



MAXIMIZING THE ROLE: HIGH-LEVEL VS. ON THE GROUND



IDEAL LOCATION FOR
NAVIGATOR → ON THE FLOOR



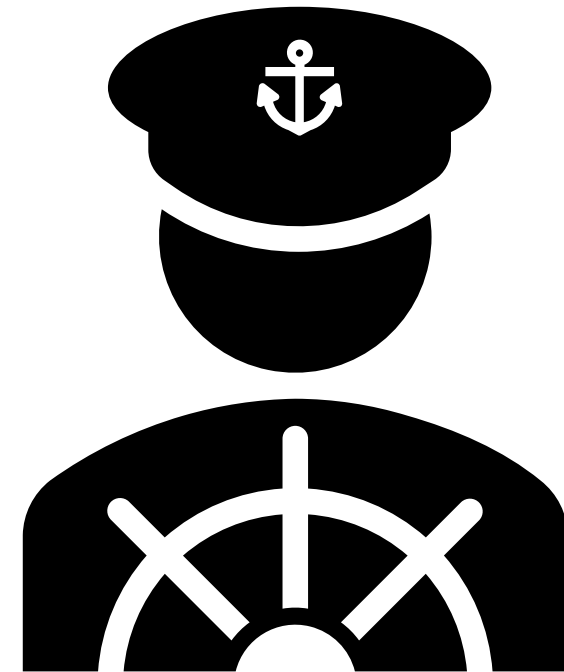
EASIER TO DEVELOP PROCESS,
TRACK OUTCOMES AND
JUSTIFY PROGRAM FROM
ABOVE



HEAT LEADS TO CHANGE, NOT
LIGHT

JUSTIFYING THE NAVIGATOR FOR YOUR HOSPITAL

- HRRP 3% PAYMENT REDUCTION FOR THE FOLLOWING 30-DAY READMISSION CAUSES:
 - Acute Myocardial Infarction (AMI)
 - Chronic Obstructive Pulmonary Disease (COPD)
 - Heart Failure (HF)
 - Pneumonia
 - Coronary Artery Bypass Graft (CABG) Surgery
 - Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA/TKA)



Centers for Medicare & Medicaid Services. (2019, August 2). Hospital Readmission Reduction Program. Retrieved from <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/HRRP/Hospital-Readmission-Reduction-Program.html>

THE SLEEP NAVIGATOR ROLE ALREADY SHOWING VALUE!


- FIRST TRIAL IN JUNE/JULY OF 2020.
- A TOTAL OF 57 INPATIENTS SCREENED, 12 REFERRED PATIENTS COMPLETED A CONSULT OR SLEEP STUDY.
- 92% POSITIVE FOR SLEEP DISORDERED BREATHING
- TO DATE (AUG 31, 2020), NO READMITS.



Gladden, K & Arrington, T. (Aug. 2020) Sleep Navigator: Defining World Class Sleep Medicine Delivery, SLEEP2020, American Academy of Sleep Medicine.

MORE JUSTIFICATION FOR SLEEP NAVIGATOR ROLE

- ROLE ATTRIBUTED TO 30% REDUCTION IN HOSPITAL READMISSIONS OVER 5 YEARS (WEAVER, 2018)
- MINIMAL COST FOR EMR TEAM TO ADD AN OSA RISK INDICATOR



Weaver K. (2018). In-hospital sleep apnea screening decreases readmissions and improves quality of life. Poster presented at the AAST 2018 Annual Meeting, Indianapolis



THE NEXT STEP IN YOUR CAREER?



JOB DESCRIPTIONS: RPSGT WITH
CCSH



THE IMPORTANCE OF EDUCATION



CHRONIC CARE MANAGEMENT



SLEEP NAVIGATOR OF WHERE OUR
FIELD IS HEADED

PARTING CHECKOFF QUESTIONS FOR SLEEP PROFESSIONALS TO CONSIDER:



- As a potential applicant, do you think your employer would prefer someone with formalized education?
- Would your education and credential be more valuable at sleep disorders center which handles acute patient populations and provides a wide range of sleep services?
- Would your education and credential be a predictor for success in one of the new sleep roles such as clinical sleep educator or sleep navigator?

Become a navigator for
CHANGE at **YOUR** sleep
centers and hospitals!

***THE SLEEP NAVIGATOR: OSA
MANAGEMENT WHEN LIFE
HANGS IN THE BALANCE***

**MATTHEW ANASTASI, BS RST RPSGT
CEO, LIMINA SLEEP CONSULTING, LLC
LIMINASLEEPCONSULTING@GMAIL.COM
WWW.LIMINASLEEPCONSULTINGLLC.WEEBLY.COM**



MATT ANASTASI, RPSGT
[LiminaSleepConsulting](mailto:LiminaSleepConsulting@gmail.com)
[@Gmail.com](mailto:LiminaSleepConsulting@gmail.com)

**WITH GRATEFUL
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**AAST, Standards & Guidelines Committee
(T. “Massey” Arrington; Kala Bingham; Lata
Casturi; Julie DeWitte; Lisa Endee; Laree
Fordyce; Cynthia Roth; Russell Rozensky)**

Karen Rowe & the CoA PSG Board

Peter Allen, BSRC, RRT-NPS-SDS, RST, RPSGT

Andy Davis, MHA RPSGT

Kelly Gladden, RRT, RPSGT, CCSH

Byron Jamerson, RPSGT CCSH

Andrea Ramberg, BA CCSH RPSGT

Kristina Weaver, RPSGT EMT-P

**Michael DiDomenico, &
YOU!**