Today Is Not Tomorrow in Sleep Technology”

Laura Linley, RPSGT, RST, CRT
Objectives

• Discuss changes in sleep testing standards.

• Describe the specific job responsibilities that sleep technologists will fulfill.

• Differentiate the current sleep technologist from the future sleep technologist.

• Review the AAST Facing the Future Needs Assessment
Unlock the Secrets of Sleep: a Physician’s Introduction to the Field of Sleep Medicine

70 MILLION
Americans suffering from sleep problems. Nearly 60% of them have a chronic disorder.
(NCDDR)

30-35%
Global population affected by transient insomnia symptoms. The full clinical syndrome of chronic insomnia disorder occurs in about 10% of people.
(CS3-1)

$63.2 BILLION
Estimated cost in lost work performance each year in the U.S. associated with insomnia.
(SLEEP)

69%
U.S. high school students that fail to get the recommended 8 to 10 hours of sleep per night.
(CDC)

35%
U.S. adults that fail to get the recommended 7 or more hours of sleep per night.
(CDC)

6,400
Estimated total of fatal crashes caused by drowsy driving in the U.S. each year.
(AAA Foundation for Traffic Safety)
Change is Here

• Pay attention to the changes occurring in the healthcare environment!

• These changes will affect...
  • How sleep centers are structured
  • The role of the sleep technologist
The Future of Sleep Technology: A Report from AAST Summit Meeting 9/21/2013

Regulatory and Economic Pressures

- Pre-Authorizations
- HSAT Utilization

Focus Shift from Diagnosis to Outcomes

- Patient Education
- Monitoring/Follow-up
- Sleep Team
$12.4 billion spent DX and TX for OSA

5.9 U.S. adults tested

$49.5 billion needed to care for the 23.5 million undiagnosed OSA.

Direct cost of diagnosis and treatment vs. costs of untreated OSA

Bundled payment; outcomes based care
Prevalence and Treatment of OSA

Source: AASM 2016  www.sleep.education.org
Undiagnosed Sleep Apnea: A Hidden Health Crisis

In the U.S. the estimated economic cost of undiagnosed obstructive sleep apnea was nearly $150 billion in 2015.

- Workplace Accidents: $6.5 billion
- Motor Vehicle Accidents: $26.2 billion
- Comorbid Diseases: $30 billion
- Lost Productivity: $86.9 billion

Total: $149.6 billion

Source: American Academy of Sleep Medicine, 2016 | www.sleepeducation.org
In an Age of Constant Activity, The Solution to Improving the Nation's Health May Lie in Helping it Sleep Better: 2016 AASM Frost & Sullivan
Key Factors Driving Diagnostic Changes

- Driving movement to HSAT with a focus on managing utilization and cost
- Considering HSAT opportunity and evaluating conflict
- Pushing HSAT at the payor, DME and PCP level
- Receptive to HSAT models
September 2017, the consensus statement outlines five key areas of the prior authorization process that are in need of reform:

- Selective application of prior authorization
- Prior authorization program review and volume adjustment
- Transparency and communication regarding prior authorization
- Continuity of patient care
- Automation to improve transparency and efficiency

American Hospital Assoc : Americas Health Insurance Plans : America Medical Association : American Pharmacy Assoc : BCBS Assoc and Medical Group Management Assoc

Clinical Practice Guideline for Diagnostic Testing for Adult Obstructive Sleep Apnea: An American Academy of Sleep Medicine Clinical Practice Guideline

March 15 issue of the Journal of Clinical Sleep Medicine

A new clinical practice guideline from the AASM established clinical practice recommendations for the diagnosis of obstructive sleep apnea in adults, describes the circumstances under which attended polysomnography in an accredited sleep center or a home sleep apnea test (HSAT) should be performed for suspected OSA.

Recommendations:

• We recommend that clinical tools, questionnaires and prediction algorithms not be used to diagnose OSA in adults, in the absence of polysomnography or home sleep apnea testing. (STRONG)

• We recommend that polysomnography, or home sleep apnea testing with a technically adequate device, be used for the diagnosis of OSA in uncomplicated adult patients presenting with signs and symptoms that indicate an increased risk of moderate to severe OSA. (STRONG)

• We recommend that if a single home sleep apnea test is negative, inconclusive, or technically inadequate, polysomnography be performed for the diagnosis of OSA. (STRONG)
• We recommend that polysomnography, rather than home sleep apnea testing, be used for the diagnosis of OSA in patients with significant cardiorespiratory disease, potential respiratory muscle weakness due to neuromuscular condition, awake hypoventilation or suspicion of sleep related hypoventilation, chronic opioid medication use, history of stroke or severe insomnia. (STRONG)

• We suggest that, if clinically appropriate, a split-night diagnostic protocol, rather than a full-night diagnostic protocol for polysomnography be used for the diagnosis of OSA. (WEAK)

• We suggest that when the initial polysomnogram is negative and clinical suspicion for OSA remains, a second polysomnogram be considered for the diagnosis of OSA. (WEAK)
American Academy of Sleep Medicine Position Paper for the Use of a Home Sleep Apnea Test for the Diagnosis of OSA in Children

Position Statement

Use of a home sleep apnea test is not recommended for the diagnosis of obstructive sleep apnea in children.

The ultimate judgment regarding propriety of any specific care must be made by the clinician, in light of the individual circumstances presented by the patient, available diagnostic tools, accessible treatment options, and resource

Follow Up Statement

Oct. 15 issue of the Journal of Clinical Sleep Medicine, comprises the following positions:

Only a physician can diagnose medical conditions such as OSA and primary snoring.

The need for, and appropriateness of, an HSAT must be based on the patient’s medical history and a face-to-face examination by a physician, either in person or via telemedicine.

An HSAT is a medical assessment that must be ordered by a physician to diagnose OSA or evaluate treatment efficacy.

An HSAT should not be used for general screening of asymptomatic populations.

Diagnosis, assessment of treatment efficacy, and treatment decisions must not be based solely on automatically scored HSAT data, which could lead to sub-optimal care that jeopardizes patient health and safety.

The raw data from the HSAT device must be reviewed and interpreted by a physician who is either board-certified in sleep medicine or overseen by a board-certified sleep medicine physician.
Physician Supply Pipeline Shortages

Sleep Specialist

National Average for board certified sleep MDs is 0.019/1,000 with a great state and regional variability.

Recommendation is 1-4 specialist/1,000 population

Half of sleep specialists are in clinical private practices and a third are in academic medical centers.

Heat map of the geographic distribution of American Board of Medical Specialties (ABMS) board-certified sleep medicine physicians (BCSMPs) across the United States.
Workforce

- **Nurse Practitioners**
  - Projected 35% increase 2014-2024

- **Physician Assistance**
  - Projected 30% increase 2014-2024

- **Specialist Care (vs. Primary Care)**
  - 48% NP/57% PAs in specialty care 2010
  - 40% of sleep centers have NP/PA 2012

- Uneven geographic distribution of the health care workforce creates problems with access to care

Patient Centered Care

**Sleep Team**
- Multidisciplinary collaboration
- PCP and HSAT utilization
- Telemedicine: PAP assessment—Insomnia (CBT) --RLS
Hub and Spoke Model for Integrating Primary Care Providers (PCP) into Established Sleep Centers

- Patient evaluation and home sleep apnea testing (HSAT) might be accomplished in the PCP office and interpreted by board-certified sleep medicine physicians in the sleep center hub.
- More complex patients, and those with indeterminate HSATs, would be referred to the sleep center.
- Patients would be referred back to the PCP for long-term management once their complex issues are addressed and treatment is stable.

The Future

Sleep medicine is shifting
• from an emphasis on diagnosis to a focus on disease-management

In lab PSG will be reserved for the more complex sleep patients
Expanding Services Thru Telemedicine

American Academy of Sleep Medicine (AASM) Position Paper for the Use of Telemedicine for the Diagnosis and Treatment of Sleep Disorders

• The practice of telemedicine should aim to promote a care model in which sleep specialists, patients, primary care providers, and other members of the healthcare team aim to improve the value of healthcare delivery in a coordinated fashion.

• Telemedicine utilization for sleep medicine is likely to rapidly expand, as are broader telehealth applications in general; further research into the impact and outcomes of these are needed

The Future

• New technologies and wearable devices will continue to change testing even more.

• There is a new emphasis on
  • patient education
  • assisting in follow-up
  • and outcomes management

• Expand your horizons- our roles are expanding!
Traditional RPSGT Skills

PSG

- Application
- Impedance Levels

PT Setup

- Diagnostic
- MSLT
- MWT
- CPAP / BiPAP

Collection Titration

- Adult
- Pediatrics

Scoring
New Essential Skills

RPSGT

- VAPS
- ASV
- Dead Space Therapy
- MatRx \ Provent

PT SETUP
- APPLICATION
- IMPEDANCE LEVELS

Enhanced Diagnostics
- Clinical Assessment
- Capnography
- Transcutaneous Monitoring

Complex Therapy Protocols
<table>
<thead>
<tr>
<th>Role</th>
<th>Roles for Technologists</th>
<th>Educational Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test Evaluation</td>
<td>• Vital signs • Blood glucose testing • Pulmonary function tests • Screening tests • Pre-test risk assessment • Patient education</td>
<td>• Clinical evaluation skills • Risk factor analysis • Monitoring and interpretation of blood glucose testing • Assessing results of pulmonary function and screening tests • Documentation requirements</td>
</tr>
<tr>
<td>Diagnostic Testing</td>
<td>• Out of center testing • Actigraphy • CO₂ monitoring • Evaluation of high risk patients</td>
<td>• Home sleep testing provision and interpretation • Actigraphy monitoring and interpretation • Age appropriate care • Evaluation and management of comorbidities</td>
</tr>
<tr>
<td>Provision of Treatment</td>
<td>• Mask fitting • Patient education • Advanced PAP platforms • Appropriate use of oxygen • Alternative therapies</td>
<td>• Basic pulmonary physiology • Ventilation • Cardiac physiology and arrhythmias • Goals of therapy • Evidence based medicine • Critical care pathways • Practice parameters</td>
</tr>
<tr>
<td>Follow-Up</td>
<td>• Monitoring adherence • Behavioral and motivational therapies</td>
<td>• Monitoring techniques • Basics of health psychology • Group and individual patient education methods</td>
</tr>
<tr>
<td>Long-Term Care</td>
<td>• Equipment monitoring • Compliance and outcomes tracking • Replenishment of consumables</td>
<td>• Understanding chronic care models • Health maintenance • Age appropriate care • Database management • Coding and billing</td>
</tr>
</tbody>
</table>
The range of services provided includes:

- comprehensive evaluation and treatment of sleep disorders
- diagnostic and therapeutic interventions,
- comprehensive patient care and direct patient education.

This broad range of services requires that the sleep technologist exercise:

- critical thinking and independent judgment, and
- possess an advanced knowledge of sleep technology,
- sleep/wake disorders
- associated co-morbid conditions such as cardiac disease, pulmonary disorders and diabetes.
In order to attain competence and adequate knowledge of sleep/wake disorders and their treatment, the AAST has adopted the position that individuals performing sleep testing procedures and patient care services possess at minimum the following:

- Successful completion of an accredited education program leading to a certificate or associate degree with an emphasis in sleep technology. Bachelor’s Degree and experience in the sleep technology profession is preferred.

OR

- An Associate’s Degree or higher from an accredited college or university.

AND

- Certification by a nationally recognized certification board and holds the Registered Sleep Technologist (RST), Registered Polysomnographic Technologist (RPSGT), or Sleep Disorders Specialist (SDS) credential. If the individual is not credentialed at the time of hire, a deadline for obtaining the credential, established by the employer, is strongly recommended.

AND

- A license to practice sleep technology in any state that has enacted licensure requirements.
Recognized as a Profession

This position supports best practice and encourages credentialing bodies for the Sleep Technology profession to require a minimum education level for entry into the profession, thus eliminating the clinical experience pathway for credentialing examination eligibility.

Sleep technology does not become a profession until minimum education levels are established.
Education Requirement—how does that look?

• What would the field of sleep technologists look like if this change were to take effect?

• Would the current pipeline of future professionals be robust enough to meet the market’s demand for sleep technologists?

• How would the change affect institutions with sleep technologist training programs? Would they have enough capacity?

• And perhaps most importantly, would the change lead to higher quality of service in the field?
Needs Assessment

The American Association of Sleep Technologists (AAST) retained McKinley Advisors (McKinley) to conduct member research to explore the state of the sleep technologist profession and how changes to education requirements for certification could affect current and future professionals.
Needs Assessment

The American Association of Sleep Technologists (AAST) retained McKinley Advisors (McKinley) to conduct member research to explore the state of the sleep technologist profession and how changes to education requirements for certification could affect current and future professionals.

Most respondents were AAST members (63%) and, on average, reported being a member for 6 to 10 years. The modal age was in the 46 to 55-year-old range and 32% of respondents reported being in sleep technology for more than 20 years.

30% held a bachelor’s degree and 26% an associate’s degree. These demographics indicate an experienced, senior level sleep technologist was most likely to respond to the survey.
FACING THE FUTURE:
A CALL FOR HIGHER EDUCATION IN SLEEP MEDICINE
<table>
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<th>Statement</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
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<tbody>
<tr>
<td>Sleep technology practitioners vary significantly in their level of skill and competency</td>
<td>83%</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>My facility is highly selective when hiring sleep technology practitioners</td>
<td>78%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>My facility has difficulty recruiting qualified applicants for sleep technology positions</td>
<td>63%</td>
<td>13%</td>
<td>24%</td>
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<tr>
<td>My facility provides financial support to employees seeking additional education and/or training</td>
<td>60%</td>
<td>9%</td>
<td>30%</td>
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<tr>
<td>My facility has difficulty retaining employees in sleep technology positions</td>
<td>25%</td>
<td>17%</td>
<td>58%</td>
</tr>
<tr>
<td>My facility has difficulty training applicants for sleep technology positions</td>
<td>22%</td>
<td>28%</td>
<td>50%</td>
</tr>
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</table>
What do You Think Will be the Critical Competencies or Skills a Sleep Technology Practitioner Will Need to Have to be Successful in the Next Five Years?

N = 100 (Coded From A Random Sample Of 308 Responses)

- Technical skills/knowledge: 57%
- Soft skills (communication, presentation, etc.): 29%
- Knowledge of complex patients/cases: 20%
- Critical thinking/problem solving: 10%
- Adaptability: 8%
- Credential/certification: 7%
- Formal education/degree: 5%
- Other: 4%
- Unsure/not applicable: 4%
How Important is Each of the Following When Assessing an Applicant for an Open Position in Your Facility?

N = 358

Scale 1 (Not at all Important) To 5 (Extremely Important)

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<th>1</th>
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<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Professional ethics/values</td>
<td>16%</td>
<td></td>
<td></td>
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<td>77%</td>
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<tr>
<td>Soft skills (communication, interpersonal, etc.)</td>
<td>28%</td>
<td></td>
<td></td>
<td></td>
<td>62%</td>
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<tr>
<td>Technical skills</td>
<td>32%</td>
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<td>57%</td>
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<tr>
<td>Problem-solving ability</td>
<td>27%</td>
<td></td>
<td></td>
<td></td>
<td>62%</td>
</tr>
<tr>
<td>Critical thinking skills</td>
<td>23%</td>
<td></td>
<td></td>
<td></td>
<td>65%</td>
</tr>
<tr>
<td>Clinical knowledge</td>
<td>29%</td>
<td></td>
<td></td>
<td></td>
<td>58%</td>
</tr>
<tr>
<td>Credential in an area of expertise</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
<td>58%</td>
</tr>
<tr>
<td>Work experience in the field</td>
<td>30%</td>
<td></td>
<td></td>
<td></td>
<td>37%</td>
</tr>
<tr>
<td>Education</td>
<td>30%</td>
<td></td>
<td></td>
<td></td>
<td>31%</td>
</tr>
</tbody>
</table>
Core Competency Model

- Clinical Practices
- Professional Ethics
- Comorbidities
- Management and Leadership
- Business Practices
- Critical Thinking/Problem Solving
Hurdles

- Concerns in not having appropriate access to AAS Polysomnography programs
- Many technologist already have AAS and feel the Bachelor's Degree would have a greater impact
- Education requirement would prevent talented technicians who aren’t able to get through school
What the AAST Can Do

• Communicate changes in educational requirements
• Provide information and advocacy for current credential holders
• Provide an increased number and variety of online educational programs
• Support the accreditation of more schools of sleep technology
• Provide access to list of accredited schools
• Give membership access to resources to obtain education
• Advocate for membership with insurance and reimbursement providers
• Promote the profession of sleep technology

https://www.aastweb.org/technical-guidelines
Patient Education Curriculum for the Sleep Health Educator

- This document provides learning goals for the patient educator including an introduction and background; general patient education requirements; discussion points for the first visit after diagnosis; key elements of follow-up visits; documentation using a standardized care plan; and a list of references for additional information. An example case study is provided.

- The curriculum is intended to provide a standard for educational programs to use. The AAST intends to develop a variety of educational resources to support the curriculum. These materials will include reference texts, case studies, clinical simulations and self-assessment tools.
Facing the Future

• Development of Patient Education Curriculum for the Sleep Health Educator

  • This curriculum is intended to provide a standard for educational programs and provides learning goals including:
    • Introduction and background
    • General patient education requirements
    • Discussion points for the first visit after diagnosis
    • Key elements of follow-up visits
    • Documentation using a standardized care plan
    • List of references for additional information
    • An example case study is provided

AAST intends to develop a variety of educational resources to support this curriculum in the future.
Conclusion

AAST to work with credentialing bodies and CoA PSG

Continued focused support for the CCSH

Develop PBL training to sharpen critical thinking skills

Technical Guidelines and competencies for Advanced Therapy, Telemedicine and Outcome Management
Predictions for the Profession

Predictions for the Sleep Technology Profession in 2018

We’ve reached out to 16 influencers in the sleep technology world to find out what they think 2018 will hold, and also asked for their advice for keeping current in the profession.
SLEEP EDUCATION FOR THE SLEEP COMMUNITY

2018 ANNUAL MEETING
SEPTEMBER 28-30 | INDIANAPOLIS, IN

AAST THE COMMUNITY FOR SLEEP-CARE PROFESSIONALS
AAST is uniquely made up of knowledge seeking and sharing individuals, with a thumb on the pulse of changes within the sleep field.

Join our community
www.aastweb.org